

E	2,06E+11	6,68044E+29							
Dados para cálculo para aplicação da metodologia da Curva Mestre com temperatura - 40°C									
E	206	E	206	E	206				
b ₀	0,02	b ₀	0,04	b ₀	0,08				
σ _{ys}	504000	σ _{ys}	504000	σ _{ys}	504000				
M	40	M	40	M	40				
E*b ₀ *σ _{ys}	51912	E*b ₀ *σ _{ys}	103824	E*b ₀ *σ _{ys}	207648				
K _{JC(limite)}	227,8420506	K _{JC(limite)}	322,21732	K _{JC(limite)}	455,6841				
Temperatura	-91	Temperatura	-91	Temperatura	-91				
Espessura	1 pol	Espessura	2 pol	Espessura	4 pol				
Dados para cálculo para aplicação da metodologia da Curva Mestre com temperatura - 20°C									
E	206	E	206	E	206	E	206		
b ₀	0,02	b ₀	0,04	b ₀	0,08	b ₀	0,16		
σ _{ys}	475000	σ _{ys}	475000	σ _{ys}	475000	σ _{ys}	475000		
M	40	M	40	M	40	M	40		
E*b ₀ *σ _{ys}	48925	E*b ₀ *σ _{ys}	97850	E*b ₀ *σ _{ys}	195700	E*b ₀ *σ _{ys}	391400		
K _{JC(limite)}	221,1899636	K _{JC(limite)}	312,80985	K _{JC(limite)}	442,37993	K _{JC(limite)}	625,6196928		
Temperatura	-91	Temperatura	-91	Temperatura	-91	Temperatura	-91		
Espessura	1 pol	Espessura	2 pol	Espessura	4 pol	Espessura	8 pol		

E	2,06E+11	E	6,68044E+29						
Dados para cálculo para aplicação da metodologia da Curva Mestra com temperatura - 40°C									
E	206	E	206	E	206				
b ₀	0,02	b ₀	0,04	b ₀	0,08				
σ _{ys}	504000	σ _{ys}	504000	σ _{ys}	504000				
M	60	M	60	M	60				
E*b ₀ *σ _{ys}	34608	E*b ₀ *σ _{ys}	69216	E*b ₀ *σ _{ys}	138432				
K _{JC(limite)}	186,0322553	K _{JC(limite)}	263,08934	K _{JC(limite)}	372,06451				
Temperatura	-91	Temperatura	-91	Temperatura	-91				
Espessura	1 pol	Espessura	2 pol	Espessura	4 pol				
Dados para cálculo para aplicação da metodologia da Curva Mestra com temperatura - 20°C									
E	206	E	206	E	206	E	206		
b ₀	0,02	b ₀	0,04	b ₀	0,08	b ₀	0,16		
σ _{ys}	475000	σ _{ys}	475000	σ _{ys}	475000	σ _{ys}	475000		
M	60	M	60	M	60	M	60		
E*b ₀ *σ _{ys}	32616,66667	E*b ₀ *σ _{ys}	65233,333	E*b ₀ *σ _{ys}	130466,67	E*b ₀ *σ _{ys}	260933,3333		
K _{JC(limite)}	180,600849	K _{JC(limite)}	255,40817	K _{JC(limite)}	361,2017	K _{JC(limite)}	510,8163401		
Temperatura	-91	Temperatura	-91	Temperatura	-91	Temperatura	-91		
Espessura	1 pol	Espessura	2 pol	Espessura	4 pol	Espessura	8 pol		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
25	-91	19,9	4.099,400	64,03	Válido					16805080,36	30,6932	547518,0287
25	-91	21,3	4.387,800	66,24	Válido					19252788,84	30,6932	627265,6106
25	-91	23,1	4.758,600	68,98	Válido					22644273,96	30,6932	737761,9134
25	-91	23,7	4.882,200	69,87	Válido					23835876,84	30,6932	776584,9387
25	-91	29,1	5.994,600	77,42	Válido					35935229,16	30,6932	1170787,965
25	-91	29,4	6.056,400	77,82	Válido					36679980,96	30,6932	1195052,356
25	-91	38,6	7.951,600	89,17	Válido					63227942,56	30,6932	2059998,389
25	-91	39,7	8.178,200	90,43	Válido					66882955,24	30,6932	2179080,553
25	-91	42,3	8.713,800	93,35	Válido					75930310,44	30,6932	2473847,968
25	-91	46,3	9.537,800	97,66	Válido					90969628,84	30,6932	2963836,577
25	-91	47,3	9.743,800	98,71	Válido					94941638,44	30,6932	3093246,662
25	-91	48,9	10.073,400	100,37	Válido					101473387,6	30,6932	3306054,356
25	-91	51,4	10.588,400	102,90	Válido					112114214,6	30,6932	3652737,889
25	-91	52	10.712,000	103,50	Válido					114746944	30,6932	3738513,547
25	-91	55,9	11.515,400	107,31	Válido					132604437,2	30,6932	4320319,718
25	-91	56,6	11.659,600	107,98	Válido					135946272,2	30,6932	4429198,394
25	-91	59,4	12.236,400	110,62	Válido					149729485	30,6932	4878262,448
25	-91	63,3	13.039,800	114,19	Válido					170036384	30,6932	5539871,504
25	-91	68,5	14.111,000	118,79	Válido					199120321	30,6932	6487440,899
25	-91	70,2	14.461,200	120,25	Válido					209126305,4	30,6932	6813440,939
25	-91	70,6	14.543,600	120,60	Válido					211516301	30,6932	6891308,204
25	-91	71,4	14.708,400	121,28	Válido					216337030,6	30,6932	7048370,016
25	-91	76	15.656,000	125,12	Válido					245110336	30,6932	7985818,878
25	-91	76,5	15.759,000	125,53	Válido					248346081	30,6932	8091241,089
25	-91	76,6	15.779,600	125,62	Válido					248995776,2	30,6932	8112408,487
25	-91	76,8	15.820,800	125,78	Válido					250297712,6	30,6932	8154826,236
25	-91	77	15.862,000	125,94	Válido					251603044	30,6932	8197354,593
25	-91	77,2	15.903,200	126,11	Válido					252911770,2	30,6932	8239993,557
25	-91	93,9	19.343,400	139,08	Válido					374167123,6	30,6932	12190554,38
25	-91	112,8	23.236,800	152,44	Válido					539948874,2	30,6932	17591807,77
25	-91	124,3	25.605,800	160,02	Válido					655656993,6	30,6932	21361636,9
											<i>Soma dos K0</i>	174856140,8
											<i>Somatoria ^{1/4}</i>	114,992687
											anterior + 0	114,992687
											Kjc Médio	104,9193276
											-30	74,91932764
											/70	1,070276109
											Ln	0,067916661
											T-T0	3,574453875
											T0	-94,57445388
50	-91	14,9	3.069,400	55,40	Válido	55,40	1,189207	65,88	65,88	18842432,72	33,6932	559235,4754
50	-91	18,3	3.769,800	61,40	Válido	61,40	1,189207	73,02	73,02	28422784,08	33,6932	843576,273

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
50	-91	18,8	3.872,800	62,23	Válido	62,23	1,189207	74,01	74,01	29997159,68	33,6932	890303,0784
50	-91	20,2	4.161,200	64,51	Válido	64,51	1,189207	76,71	76,71	34631170,88	33,6932	1027838,581
50	-91	22,4	4.614,400	67,93	Válido	67,93	1,189207	80,78	80,78	42585374,72	33,6932	1263916,004
50	-91	24,6	5.067,600	71,19	Válido	71,19	1,189207	84,66	84,66	51361139,52	33,6932	1524377,011
50	-91	27,7	5.706,200	75,54	Válido	75,54	1,189207	89,83	89,83	65121436,88	33,6932	1932776,848
50	-91	30,2	6.221,200	78,87	Válido	78,87	1,189207	93,80	93,80	77406658,88	33,6932	2297397,068
50	-91	30,4	6.262,400	79,14	Válido	79,14	1,189207	94,11	94,11	78435307,52	33,6932	2327926,927
50	-91	30,6	6.303,600	79,40	Válido	79,40	1,189207	94,42	94,42	79470745,92	33,6932	2358658,303
50	-91	31,7	6.530,200	80,81	Válido	80,81	1,189207	96,10	96,10	85287024,08	33,6932	2531282,991
50	-91	34,3	7.065,800	84,06	Válido	84,06	1,189207	99,96	99,96	99851059,28	33,6932	2963537,428
50	-91	41,5	8.549,000	92,46	Válido	92,46	1,189207	109,96	109,96	146170802	33,6932	4338287,904
50	-91	41,6	8.569,600	92,57	Válido	92,57	1,189207	110,09	110,09	146876088,3	33,6932	4359220,505
50	-91	45,3	9.331,800	96,60	Válido	96,60	1,189207	114,88	114,88	174164982,5	33,6932	5169143,402
50	-91	46,1	9.496,600	97,45	Válido	97,45	1,189207	115,89	115,89	180370823,1	33,6932	5353330,141
50	-91	46,5	9.579,000	97,87	Válido	97,87	1,189207	116,39	116,39	183514482	33,6932	5446632,614
50	-91	47,3	9.743,800	98,71	Válido	98,71	1,189207	117,39	117,39	189883276,9	33,6932	5635655,767
50	-91	48,7	10.032,200	100,16	Válido	100,16	1,189207	119,11	119,11	201290073,7	33,6932	5974204,696
50	-91	52,7	10.856,200	104,19	Válido	104,19	1,189207	123,91	123,91	235714156,9	33,6932	6995897,002
50	-91	54,6	11.247,600	106,05	Válido	106,05	1,189207	126,12	126,12	253017011,5	33,6932	7509438,448
50	-91	55,6	11.453,600	107,02	Válido	107,02	1,189207	127,27	127,27	262369905,9	33,6932	7787028,419
50	-91	57,4	11.824,400	108,74	Válido	108,74	1,189207	129,31	129,31	279632870,7	33,6932	8299385,951
50	-91	58,7	12.092,200	109,96	Válido	109,96	1,189207	130,77	130,77	292442601,7	33,6932	8679573,376
50	-91	59,1	12.174,600	110,34	Válido	110,34	1,189207	131,22	131,22	296441770,3	33,6932	8798267,019
50	-91	67	13.802,000	117,48	Válido	117,48	1,189207	139,71	139,71	380990408	33,6932	11307635,01
50	-91	75,7	15.594,200	124,88	Válido	124,88	1,189207	148,50	148,50	486358147,3	33,6932	14434905,18
50	-91	76,2	15.697,200	125,29	Válido	125,29	1,189207	148,99	148,99	492804175,7	33,6932	14626220,59
50	-91	78,6	16.191,600	127,25	Válido	127,25	1,189207	151,32	151,32	524335821,1	33,6932	15562066,56
50	-91	81	16.686,000	129,17	Válido	129,17	1,189207	153,61	153,61	556845192	33,6932	16526931,01
50	-91	86	17.716,000	133,10	Válido	133,10	1,189207	158,29	158,29	627713312	33,6932	18630267
50	-91	86,5	17.819,000	133,49	Válido	133,49	1,189207	158,74	158,74	635033522	33,6932	18847527,75
50	-91	100,5	20.703,000	143,89	Válido	143,89	1,189207	171,11	171,11	857228418	33,6932	25442178,78
50	-91	117,8	24.266,800	155,78	Válido	155,78	1,189207	185,25	185,25	1177755164	33,6932	34955277,76
											Soma dos K0	275199900,9
											Somatoria ^{1/4}	128,7988746
											anterior + 0	128,7988746
											Kjc Médio	117,5160932
											-30	87,51609317
											/70	1,250229902
											Ln	0,223327456
											T-T0	11,75372403
											T0	-102,753724
100	-91	19,6	4.037,600	63,54	Válido	63,54	1,414214	89,86	89,86	65208855,04	29,6932	2196087,153

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
100	-91	19,7	4.058,200	63,70	Válido	63,70	1,414214	90,09	90,09	65875948,96	29,6932	2218553,371
100	-91	21,6	4.449,600	66,71	Válido	66,71	1,414214	94,34	94,34	79195760,64	29,6932	2667134,584
100	-91	23,3	4.799,800	69,28	Válido	69,28	1,414214	97,98	97,98	92152320,16	29,6932	3103482,284
100	-91	25,4	5.232,400	72,34	Válido	72,34	1,414214	102,30	102,30	109512039	29,6932	3688118,459
100	-91	25,9	5.335,400	73,04	Válido	73,04	1,414214	103,30	103,30	113865972,6	29,6932	3834749,122
100	-91	27,7	5.706,200	75,54	Válido	75,54	1,414214	106,83	106,83	130242873,8	29,6932	4386286,212
100	-91	29,5	6.077,000	77,96	Válido	77,96	1,414214	110,25	110,25	147719716	29,6932	4974866,838
100	-91	32	6.592,000	81,19	Válido	81,19	1,414214	114,82	114,82	173817856	29,6932	5853793,326
100	-91	32,1	6.612,600	81,32	Válido	81,32	1,414214	115,00	115,00	174905915	29,6932	5890436,701
100	-91	32,9	6.777,400	82,32	Válido	82,32	1,414214	116,43	116,43	183732603	29,6932	6187699,643
100	-91	33	6.798,000	82,45	Válido	82,45	1,414214	116,60	116,60	184851216	29,6932	6225372,004
100	-91	33,4	6.880,400	82,95	Válido	82,95	1,414214	117,31	117,31	189359616,6	29,6932	6377204,769
100	-91	35,8	7.374,800	85,88	Válido	85,88	1,414214	121,45	121,45	217550700,2	29,6932	7326616,874
100	-91	35,9	7.395,400	86,00	Válido	86,00	1,414214	121,62	121,62	218767764,6	29,6932	7367604,86
100	-91	37,6	7.745,600	88,01	Válido	88,01	1,414214	124,46	124,46	239977277,4	29,6932	8081893,411
100	-91	39,6	8.157,600	90,32	Válido	90,32	1,414214	127,73	127,73	266185751	29,6932	8964535,686
100	-91	40,1	8.260,600	90,89	Válido	90,89	1,414214	128,53	128,53	272950049,4	29,6932	9192341,999
100	-91	40,6	8.363,600	91,45	Válido	91,45	1,414214	129,33	129,33	279799219,8	29,6932	9423006,609
100	-91	41,1	8.466,600	92,01	Válido	92,01	1,414214	130,13	130,13	286733262,2	29,6932	9656529,517
100	-91	41,3	8.507,800	92,24	Válido	92,24	1,414214	130,44	130,44	289530643,4	29,6932	9750739,003
100	-91	41,3	8.507,800	92,24	Válido	92,24	1,414214	130,44	130,44	289530643,4	29,6932	9750739,003
100	-91	42,3	8.713,800	93,35	Válido	93,35	1,414214	132,01	132,01	303721241,8	29,6932	10228646,35
100	-91	42,7	8.796,200	93,79	Válido	93,79	1,414214	132,64	132,64	309492537,8	29,6932	10423010,58
100	-91	45,6	9.393,600	96,92	Válido	96,92	1,414214	137,07	137,07	352958883,8	29,6932	11886859,07
100	-91	46,6	9.599,600	97,98	Válido	97,98	1,414214	138,56	138,56	368609280,6	29,6932	12413929,14
100	-91	47,6	9.805,600	99,02	Válido	99,02	1,414214	140,04	140,04	384599165,4	29,6932	12952432,39
100	-91	49,2	10.135,200	100,67	Válido	100,67	1,414214	142,37	142,37	410889116,2	29,6932	13837818,63
100	-91	53,7	11.062,200	105,18	Válido	105,18	1,414214	148,74	148,74	489489075,4	29,6932	16484887,97
100	-91	126,4	26.038,400	161,36	Válido	161,36	1,414214	228,20	228,20	2711993098	29,6932	91333810,38
											Soma dos K0	316679185,9
											Somatoria ^{1/4}	133,3997083
											anterior + 0	133,3997083
											Kjc Médio	121,7138939
											-30	91,71389386
											/70	1,310198484
											Ln	0,27017864
											T-T0	14,21950183
											T0	-105,2195018
200	-91	13,8	2.842,800	53,32	Válido	53,32	1,681793	89,67	89,67	64652094,72	14,6932	4400137,119
200	-91	20,4	4.202,400	64,83	Válido	64,83	1,681793	109,02	109,02	141281326,1	14,6932	9615422,514
200	-91	23	4.738,000	68,83	Válido	68,83	1,681793	115,76	115,76	179589152	14,6932	12222603,11
200	-91	23,2	4.779,200	69,13	Válido	69,13	1,681793	116,27	116,27	182726021,1	14,6932	12436094,32

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
200	-91	25,4	5.232,400	72,34	Válido	72,34	1,681793	121,65	121,65	219024078,1	14,6932	14906492,67
200	-91	25,6	5.273,600	72,62	Válido	72,62	1,681793	122,13	122,13	222486855,7	14,6932	15142164,79
200	-91	25,8	5.314,800	72,90	Válido	72,90	1,681793	122,61	122,61	225976792,3	14,6932	15379685,32
200	-91	30,2	6.221,200	78,87	Válido	78,87	1,681793	132,65	132,65	309626635,5	14,6932	21072784,38
200	-91	33,9	6.983,400	83,57	Válido	83,57	1,681793	140,54	140,54	390143004,5	14,6932	26552623,29
200	-91	36,9	7.601,400	87,19	Válido	87,19	1,681793	146,63	146,63	462250255,7	14,6932	31460148,62
200	-91	38,8	7.992,800	89,40	Válido	89,40	1,681793	150,36	150,36	511078814,7	14,6932	34783356,57
200	-91	40,9	8.425,400	91,79	Válido	91,79	1,681793	154,37	154,37	567898921,3	14,6932	38650458,8
200	-91	44,6	9.187,600	95,85	Válido	95,85	1,681793	161,20	161,20	675295950,1	14,6932	45959760,3
200	-91	44,8	9.228,800	96,07	Válido	96,07	1,681793	161,56	161,56	681365995,5	14,6932	46372879,67
200	-91	50,7	10.444,200	102,20	Válido	102,20	1,681793	171,87	171,87	872650509,1	14,6932	59391453,81
Total de Válidos					15						<i>Soma dos K0</i>	388346065,3
Total de Censurados					0						<i>Somatoria</i> ^{1/4}	140,3798349
											anterior + 0	140,3798349
											Kjc Médio	128,0825614
											-30	98,08256136
											/70	1,401179448
											Ln	0,337314345
											T-T0	17,75285397
											T0	-108,752854
25	-60	34	7.004,000	83,689904	Válido					49056016	56,6932	865289,241
25	-60	40,2	8.281,200	91,001099	Válido					68578273,44	56,6932	1209638,43
25	-60	46,9	9.661,400	98,292421	Válido					93342649,96	56,6932	1646452,308
25	-60	52	10.712,000	103,49879	Válido					114746944	56,6932	2023998,363
25	-60	54,2	11.165,200	105,66551	Válido					124661691	56,6932	2198882,6
25	-60	56,1	11.556,600	107,50163	Válido					133555003,6	56,6932	2355749,959
25	-60	62,3	12.833,800	113,28636	Válido					164706422,4	56,6932	2905223,597
25	-60	67,4	13.884,400	117,83208	Válido					192776563,4	56,6932	3400347,191
25	-60	68	14.008,000	118,3554	Válido					196224064	56,6932	3461156,964
25	-60	69	14.214,000	119,22248	Válido					202037796	56,6932	3563704,218
25	-60	74,6	15.367,600	123,96612	Válido					236163129,8	56,6932	4165634,146
25	-60	78,2	16.109,200	126,92202	Válido					259506324,6	56,6932	4577380,085
25	-60	81,3	16.747,800	129,41329	Válido					280488804,8	56,6932	4947485,851
25	-60	81,4	16.768,400	129,49286	Válido					281179238,6	56,6932	4959664,273
25	-60	82,3	16.953,800	130,20676	Válido					287431334,4	56,6932	5069943,74
25	-60	90	18.540,000	136,16167	Válido					343731600	56,6932	6063012,848
25	-60	90,4	18.622,400	136,46391	Válido					346793781,8	56,6932	6117026,059
25	-60	100,3	20.661,800	143,74213	Válido					426909979,2	56,6932	7530179,62
25	-60	112,2	23.113,200	152,03026	Válido					534220014,2	56,6932	9422999,835
25	-60	120,3	24.781,800	157,42236	Válido					614137611,2	56,6932	10832650,32
25	-60	123,4	25.420,400	159,43776	Válido					646196736,2	56,6932	11398134,81
25	-60	127,4	26.244,400	162,00123	Válido					688768531,4	56,6932	12149050,17
25	-60	129	26.574,000	163,01534	Válido					706177476	56,6932	12456123,06
25	-60	140,9	29.025,400	170,36842	Válido					842473845,2	56,6932	14860227,42

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
25	-60	141,9	29.231,400	170,97193	Válido					854474746	56,6932	15071908,91
25	-60	142,5	29.355,000	171,33301	Válido					861716025	56,6932	15199636,38
25	-60	143,1	29.478,600	171,69333	Válido					868987858	56,6932	15327902,78
25	-60	191,8	39.510,800	198,77324	Válido					1561103317	56,6932	27535988,74
25	-60	193,2	39.799,200	199,49737	Válido					1583976321	56,6932	27939441,07
25	-60	261	53.766,000	231,87497	Válido					2890782756	56,6932	50989938,05
25	-60	284,9	58.689,400	242,25895	Válido					3444445672	56,6932	60755887,34
Total de Válidos					31							
Total de Censurados					0							
50	-60	46,7	9.620,200	98,082618	Válido	98,0826	1,189207	116,640547	116,6405475	185096496,1	33,6932	5493586,127
50	-60	48	9.888,000	99,438423	Válido	99,4384	1,189207	118,25288	118,2528803	195545088	33,6932	5803695,939
50	-60	49,9	10.279,400	101,38738	Válido	101,387	1,189207	120,570589	120,5705888	211332128,7	33,6932	6272248,665
50	-60	52,9	10.897,400	104,39061	Válido	104,391	1,189207	124,142059	124,1420592	237506653,5	33,6932	7049097,548
50	-60	59,4	12.236,400	110,61826	Válido	110,618	1,189207	131,548025	131,5480248	299458969,9	33,6932	8887816,234
50	-60	63,1	12.998,600	114,0114	Válido	114,011	1,189207	135,583172	135,5831716	337927203,9	33,6932	10029537,23
50	-60	68,1	14.028,600	118,44239	Válido	118,442	1,189207	140,852534	140,8525342	393603235,9	33,6932	11681978,44
50	-60	68,2	14.049,200	118,52932	Válido	118,529	1,189207	140,955912	140,9559122	394760041,3	33,6932	11716311,93
50	-60	69,2	14.255,200	119,39514	Válido	119,395	1,189207	141,985553	141,9855527	406421454,1	33,6932	12062417,76
50	-60	75,1	15.470,600	124,38087	Válido	124,381	1,189207	147,914612	147,9146116	478678928,7	33,6932	14206989,21
50	-60	76,2	15.697,200	125,28847	Válido	125,288	1,189207	148,993937	148,9939366	492804175,7	33,6932	14626220,59
50	-60	76,5	15.759,000	125,53486	Válido	125,535	1,189207	149,286944	149,2869436	496692162	33,6932	14741614,39
50	-60	80,6	16.603,600	128,85496	Válido	128,855	1,189207	153,235232	153,2352319	551359065,9	33,6932	16364105,1
50	-60	81,9	16.871,400	129,88995	Válido	129,89	1,189207	154,466057	154,4660568	569288275,9	33,6932	16896236,51
50	-60	82,9	17.077,400	130,68053	Válido	130,681	1,189207	155,406212	155,4062119	583275181,5	33,6932	17311361,98
50	-60	86,1	17.736,600	133,17883	Válido	133,179	1,189207	158,377209	158,3772088	629173959,1	33,6932	18673618,39
50	-60	86,2	17.757,200	133,25614	Válido	133,256	1,189207	158,469155	158,4691549	630636303,7	33,6932	18717020,16
50	-60	94,4	19.446,400	139,45035	Válido	139,45	1,189207	165,835348	165,8353479	756324945,9	33,6932	22447406,18
50	-60	95,1	19.590,600	139,96642	Válido	139,966	1,189207	166,449068	166,4490679	767583216,7	33,6932	22781546,92
50	-60	96,8	19.940,800	141,2119	Válido	141,212	1,189207	167,930193	167,9301932	795271009,3	33,6932	23603308,95
50	-60	97	19.982,000	141,3577	Válido	141,358	1,189207	168,103585	168,1035853	798560648	33,6932	23700944,05
50	-60	98,6	20.311,600	142,51877	Válido	142,519	1,189207	169,484336	169,4843361	825122189,1	33,6932	24489279,41
50	-60	109,7	22.598,200	150,32698	Válido	150,327	1,189207	178,769911	178,7699106	1021357286	33,6932	30313454,54
50	-60	112,9	23.257,400	152,50377	Válido	152,504	1,189207	181,358569	181,3585689	1081813310	33,6932	32107763,87
50	-60	127,4	26.244,400	162,00123	Válido	162,001	1,189207	192,653021	192,6530208	1377537063	33,6932	40884720,44
50	-60	129,1	26.594,600	163,07851	Válido	163,079	1,189207	193,934123	193,9341229	1414545498	33,6932	41983115,24

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
50	-60	129,9	26.759,400	163,58301	Válido	163,583	1,189207	194,534075	194,5340752	1432130977	33,6932	42505044,84
50	-60	142,3	29.313,800	171,21273	Válido	171,213	1,189207	203,6074	203,6074005	1718597741	33,6932	51007257,87
50	-60	147,4	30.364,400	174,25384	Válido	174,254	1,189207	207,223904	207,2239038	1843993575	33,6932	54728953,46
50	-60	147,8	30.446,800	174,49011	Válido	174,49	1,189207	207,504885	207,5048855	1854015260	33,6932	55026392,88
50	-60	163,2	33.619,200	183,35539	Válido	183,355	1,189207	218,047537	218,0475375	2260501217	33,6932	67090725,05
50	-60	164,7	33.928,200	184,19609	Válido	184,196	1,189207	219,047302	219,0473022	2302245510	33,6932	68329678,11
50	-60	176,8	36.420,800	190,84234	Válido	190,842	1,189207	226,951073	226,9510725	2652949345	33,6932	78738420,37
50	-60	198	40.788,000	201,96039	Válido	201,96	1,189207	240,172735	240,1727353	3327321888	33,6932	98753513,71
											Soma dos K0	989025382,1
											Somatoria [^] 1/4	177,3380217
											anterior + 0	177,3380217
											Kjc Médio	161,803211
											Kjc Médio-30	131,803211
											-70	1,882903014
											LN	0,632814742
											T - T0	33,30503989
											T0	-93,30503989
100	-60	30,4	6.262,400	79,135327	Válido	79,1353	1,414214	111,914253	111,9142529	156870615	29,6932	5283048,477
100	-60	57,5	11.845,000	108,83474	Válido	108,835	1,414214	153,915561	153,9155613	561216100	29,6932	18900492,37
100	-60	63,3	13.039,800	114,19194	Válido	114,192	1,414214	161,491795	161,4917955	680145536,2	29,6932	22905767,52
100	-60	64	13.184,000	114,8216	Válido	114,822	1,414214	162,382265	162,382265	695271424	29,6932	23415173,31
100	-60	68,5	14.111,000	118,78973	Válido	118,79	1,414214	167,994048	167,9940475	796481284	29,6932	26823693,1
100	-60	82,8	17.056,800	130,60168	Válido	130,602	1,414214	184,698674	184,6986735	1163737705	29,6932	39192060,98
100	-60	86,1	17.736,600	133,17883	Válido	133,179	1,414214	188,343304	188,3433036	1258347918	29,6932	42378319,56
100	-60	88,3	18.189,800	134,86957	Válido	134,87	1,414214	190,73437	190,7343703	1323475296	29,6932	44571662,74
100	-60	89,4	18.416,400	135,70704	Válido	135,707	1,414214	191,918733	191,9187328	1356655156	29,6932	45689085,58
100	-60	94,5	19.467,000	139,52419	Válido	139,524	1,414214	197,317004	197,3170038	1515856356	29,6932	51050622,9
100	-60	102,2	21.053,200	145,09721	Válido	145,097	1,414214	205,198441	205,1984405	1772948921	29,6932	59708920,59
100	-60	106,3	21.897,800	147,97905	Válido	147,979	1,414214	209,273983	209,2739831	1918054579	29,6932	64595751,87
100	-60	107,7	22.186,200	148,95033	Válido	148,95	1,414214	210,647573	210,647573	1968909882	29,6932	66308443,74
100	-60	112,3	23.133,800	152,09799	Válido	152,098	1,414214	215,099047	215,099047	2140690810	29,6932	72093637,93
100	-60	113	23.278,000	152,57129	Válido	152,571	1,414214	215,768394	215,7683943	2167461136	29,6932	72995202,13
100	-60	115,5	23.793,000	154,2498	Válido	154,25	1,414214	218,142155	218,1421555	2264427396	29,6932	76260807,05
100	-60	128,1	26.388,600	162,44568	Válido	162,446	1,414214	229,732888	229,7328884	2785432840	29,6932	93807095,22
100	-60	131,1	27.006,600	164,33685	Válido	164,337	1,414214	232,407401	232,4074009	2917425774	29,6932	98252319,53
100	-60	132,7	27.336,200	165,33663	Válido	165,337	1,414214	233,821299	233,8212993	2989071322	29,6932	100665180
100	-60	150,2	30.941,200	175,90111	Válido	175,901	1,414214	248,761733	248,7617334	3829431430	29,6932	128966612,9
100	-60	153,5	31.621,000	177,82295	Válido	177,823	1,414214	251,479621	251,4796214	3999550564	29,6932	134695841,6
100	-60	160,8	33.124,800	182,0022	Válido	182,002	1,414214	257,389976	257,3899765	4389009500	29,6932	147811940,1
100	-60	168,9	34.793,400	186,52989	Válido	186,53	1,414214	263,793101	263,7931007	4842322734	29,6932	163078507,3
100	-60	191,9	39.531,400	198,82505	Válido	198,825	1,414214	281,18108	281,1810804	6250926344	29,6932	210517099,7
100	-60	225,7	46.494,200	215,62514	Válido	215,625	1,414214	304,939994	304,9399941	8646842535	29,6932	291206152,7

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
100	-60	230	47.380,000	217,66947	Válido	217,669	1,414214	307,831123	307,8311225	8979457600	29,6932	302407877,9
100	-60	241,9	49.831,400	223,22948	Válido	223,229	1,414214	315,694156	315,6941558	9932673704	29,6932	334510046,2
100	-60	265,4	54.672,400	233,8213	Válido	233,821	1,414214	330,673253	330,6732526	11956285287	29,6932	402660719,9
100	-60	282,6	58.215,600	241,27909	Válido	241,279	1,414214	341,220164	341,2201635	13556224333	29,6932	456543058,1
100	-60	415,3	85.551,800	292,49239	Válido	292,492	1,414214	413,646709	413,6467092	29276441933	29,6932	985964528,3
											<i>Soma dos K0</i>	4583259669
											<i>Somatoria ^1/4</i>	260,1918062
											anterior + 0	260,1918062
											Kjc Médio	237,3990039
											Kjc Médio-30	207,3990039
											-70	2,962842913
											LN	1,086149251
											T - T0	57,16403509
											T0	-117,1640351
25	-60	38,4	7.910,400	88,94043	Válido					62574428,16	56,6932	1103737,806
25	-60	46,1	9.496,600	97,4505	Válido					90185411,56	56,6932	1590762,412
25	-60	55	11.330,000	106,44247	Válido					128368900	56,6932	2264273,317
25	-60	63,6	13.101,600	114,46222	Válido					171651922,6	56,6932	3027733,883
25	-60	64,1	13.204,600	114,91127	Válido					174361461,2	56,6932	3075526,891
25	-60	77,7	16.006,200	126,51561	Válido					256198438,4	56,6932	4519032,943
25	-60	78,7	16.212,200	127,32714	Válido					262835428,8	56,6932	4636101,487
25	-60	87,8	18.086,800	134,48717	Válido					327132334,2	56,6932	5770221,724
25	-60	89,1	18.354,600	135,47915	Válido					336891341,2	56,6932	5942358,892
25	-60	116,3	23.957,800	154,78307	Válido					573976180,8	56,6932	10124250,89
25	-60	128,7	26.512,200	162,82567	Válido					702896748,8	56,6932	12398254,97
25	-60	129	26.574,000	163,01534	Válido					706177476	56,6932	12456123,06
25	-60	131,7	27.130,200	164,71248	Válido					736047752	56,6932	12982998,88
25	-60	133,7	27.542,200	165,95843	Válido					758572780,8	56,6932	13380313,35
25	-60	133,7	27.542,200	165,95843	Válido					758572780,8	56,6932	13380313,35
25	-60	140,7	28.984,200	170,24747	Válido					840083849,6	56,6932	14818070,77
25	-60	150,4	30.982,400	176,01818	Válido					959909109,8	56,6932	16931644,53
25	-60	164,6	33.907,600	184,14016	Válido					1149725338	56,6932	20279774,96
25	-60	166,1	34.216,600	184,9773	Válido					1170775716	56,6932	20651078,36
25	-60	176	36.256,000	190,41008	Válido					1314497536	56,6932	23186158,76
25	-60	197,6	40.705,600	201,75629	Válido					1656945871	56,6932	29226536,36
25	-60	200,2	41.241,200	203,07929	Válido					1700836577	56,6932	30000715,74
25	-60	217,1	44.722,600	211,47719	Válido					2000110951	56,6932	35279556,47
25	-60	219,5	45.217,000	212,64289	Válido					2044577089	56,6932	36063885,77
25	-60	234,5	48.307,000	219,78853	Válido					2333566249	56,6932	41161307,69
25	-60	275,9	56.835,400	238,40176	Válido					3230262693	56,6932	56977956,67
25	-60	369,1	76.034,600	275,74372	Censurado					0	56,6932	2,184139821
25	-60	373,6	76.961,600	277,41954	Censurado					0	56,6932	2,184139821

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068	
25	-60	427,1	87.982,600	296,61861	Censurado					0	56,6932	2,184139821	
25	-60	678,2	139.709,200	373,77694	Censurado					0	56,6932	2,184139821	
25	-60	687,7	141.666,200	376,38571	Censurado					0	56,6932	2,184139821	
Total de Válidos					26						<i>Soma dos K0</i>		
Total de Censurados					5						Somatoria ^1/4		
										anterior + 0		167,2374466	
										Kjc Médio		152,5874463	
										Kjc Médio-30		122,5874463	
										-70		1,751249232	
										LN		0,56032938	
										T - T0		29,49013529	
										T0		-89,49013529	
25	-40	61,6	12.689,600	112,64812	Válido					161025948,2	14,6932	10959215,7	
25	-40	113,2	23.319,200	152,70625	Válido					543785088,6	14,6932	37009302,85	
25	-40	136,6	28.139,600	167,74862	Válido					791837088,2	14,6932	53891397,94	
25	-40	139,3	28.695,800	169,39835	Válido					823448937,6	14,6932	56042859,12	
25	-40	155,4	32.012,400	178,92009	Válido					1024793754	14,6932	69746124,31	
25	-40	165,5	34.093,000	184,6429	Válido					1162332649	14,6932	79106841,87	
25	-40	195,2	40.211,200	200,5273	Válido					1616940605	14,6932	110046865,6	
25	-40	203,4	41.900,400	204,69587	Válido					1755643520	14,6932	119486804,8	
25	-40	233,2	48.039,200	219,17847	Válido					2307764737	14,6932	157063453,6	
25	-40	251	51.706,000	227,38953	Válido					2673510436	14,6932	181955628,2	
25	-40	254,5	52.427,000	228,96943	Válido					2748590329	14,6932	187065467,6	
25	-40	264,8	54.548,800	233,55685	Válido					2975571581	14,6932	202513515,2	
25	-40	275,9	56.835,400	238,40176	Válido					3230262693	14,6932	219847459,6	
25	-40	283	58.298,000	241,44979	Válido					3398656804	14,6932	231308142,8	
25	-40	311,7	64.210,200	253,39732	Válido					4122949784	14,6932	280602577	
25	-40	349,2	71.935,200	268,20738	Censurado					0	14,6932	17,90551673	
25	-40	483,2	99.539,200	315,49834	Censurado					0	14,6932	17,90551673	
25	-40	548,6	113.011,600	336,17198	Censurado					0	14,6932	17,90551673	
25	-40	562,8	115.936,800	340,49493	Censurado					0	14,6932	17,90551673	
25	-40	619,9	127.699,400	357,35053	Censurado					0	14,6932	17,90551673	
25	-40	758,7	156.292,200	395,33808	Censurado					0	14,6932	17,90551673	
25	-40	773,9	159.423,400	399,2786	Censurado					0	14,6932	17,90551673	
25	-40	1127,9	232.347,400	482,02427	Censurado					0	14,6932	17,90551673	
25	-40	1174	241.844,000	491,77637	Censurado					0	14,6932	17,90551673	
25	-40	1337,1	275.442,600	524,82626	Censurado					0	14,6932	17,90551673	
25	-40	1337,2	275.463,200	524,84588	Censurado					0	14,6932	17,90551673	
25	-40	1433,6	295.321,600	543,435	Censurado					0	14,6932	17,90551673	
25	-40	1544,1	318.084,600	563,98989	Censurado					0	14,6932	17,90551673	
25	-40	1573,3	324.099,800	569,29764	Censurado					0	14,6932	17,90551673	
25	-40	1714,3	353.145,800	594,26072	Censurado					0	14,6932	17,90551673	
											Somatoria		1996645925

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
Total de Válidos					15						Somatoria*1/4	211,3855343
Total de Censurados					15						K0	211,3855343
Total de Registros					30						Kjc Médio	192,8681615
											-30	162,8681615
											/ 70	2,326688021
											Ln	0,844445806
											T-T0	44,44318279
											T0	-84,44318279
50	-40	49,1	10.114,600	100,57137	Válido	100,571	1,189207	119,600186	119,600186	204610266,3	31,6932	6455967,41
50	-40	50,6	10.423,600	102,09603	Válido	102,096	1,189207	121,413329	121,4133291	217302873,9	31,6932	6856451,034
50	-40	60,6	12.483,600	111,73003	Válido	111,73	1,189207	132,870149	132,8701487	311680537,9	31,6932	9834303,192
50	-40	93,8	19.322,800	139,00647	Válido	139,006	1,189207	165,307489	165,3074887	746741199,7	31,6932	23561558,94
50	-40	107,4	22.124,400	148,74273	Válido	148,743	1,189207	176,885914	176,8859139	978978150,7	31,6932	30889217,58
50	-40	107,5	22.145,000	148,81196	Válido	148,812	1,189207	176,968244	176,9682439	980802050	31,6932	30946766,18
50	-40	119	24.514,000	156,56947	Válido	156,569	1,189207	186,193532	186,1935318	1201872392	31,6932	37922090,29
50	-40	122,7	25.276,200	158,9849	Válido	158,985	1,189207	189,06598	189,0659801	1277772573	31,6932	40316931,48
50	-40	137,8	28.386,800	168,48383	Válido	168,484	1,189207	200,362166	200,362166	1611620828	31,6932	50850681,8
50	-40	139,9	28.819,400	169,76278	Válido	169,763	1,189207	201,883101	201,8831007	1661115633	31,6932	52412367,09
50	-40	166,5	34.299,000	185,19989	Válido	185,2	1,189207	220,241029	220,2410293	2352842802	31,6932	74238095,3
50	-40	167	34.402,000	185,47776	Válido	185,478	1,189207	220,571474	220,5714736	2366995208	31,6932	74684639,23
50	-40	167	34.402,000	185,47776	Válido	185,478	1,189207	220,571474	220,5714736	2366995208	31,6932	74684639,23
50	-40	168,9	34.793,400	186,52989	Válido	186,53	1,189207	221,822673	221,8226728	2421161367	31,6932	76393717,49
50	-40	187	38.522,000	196,27022	Válido	196,27	1,189207	233,405944	233,4059443	2967888968	31,6932	93644345,41
50	-40	205,3	42.291,800	205,6497	Válido	205,65	1,189207	244,560089	244,560089	3577192694	31,6932	112869407,1
50	-40	210	43.260,000	207,99038	Válido	207,99	1,189207	247,343645	247,343645	3742855200	31,6932	118096475
50	-40	212,8	43.836,800	209,3724	Válido	209,372	1,189207	248,987142	248,9871424	3843330068	31,6932	121266709,2
50	-40	217,1	44.722,600	211,47719	Válido	211,477	1,189207	251,490174	251,4901737	4000221902	31,6932	126217040,3
50	-40	219,3	45.175,800	212,546	Válido	212,546	1,189207	252,76121	252,7612095	4081705811	31,6932	128788062,1
50	-40	245	50.470,000	224,65529	Válido	224,655	1,189207	267,161671	267,1616711	5094441800	31,6932	160742424,2
50	-40	251,8	51.870,800	227,75162	Válido	227,752	1,189207	270,843846	270,8438459	5381159785	31,6932	169789096,3
50	-40	271,9	56.011,400	236,66728	Válido	236,667	1,189207	281,44641	281,4464097	6274553860	31,6932	197977921,4
50	-40	272,7	56.176,200	237,01519	Válido	237,015	1,189207	281,86015	281,8601496	6311530893	31,6932	199144639,6
50	-40	274,2	56.485,200	237,66615	Válido	237,666	1,189207	282,634279	282,6342794	6381155638	31,6932	201341475,1
50	-40	308,7	63.592,200	252,17494	Válido	252,175	1,189207	299,888232	299,888232	8087935802	31,6932	255194672,7
50	-40	308,8	63.612,800	252,21578	Válido	252,216	1,189207	299,936801	299,9368008	8093176648	31,6932	255360034,6
50	-40	313,1	64.498,600	253,96575	Válido	253,966	1,189207	302,017872	302,0178718	8320138804	31,6932	262521260,2
50	-40	313,1	64.498,600	253,96575	Válido	253,966	1,189207	302,017872	302,0178718	8320138804	31,6932	262521260,2
50	-40	349,4	71.976,400	268,28418	Válido	268,284	1,189207	319,045453	319,045453	10361204314	31,6932	326921999,5
50	-40	386,6	79.639,600	282,20489	Válido	282,205	1,189207	335,600063	335,6000632	12684931776	31,6932	400241432,7
50	-40	455,2	93.771,200	306,22084	Válido	306,221	1,189207	364,159996	364,1599962	17586075899	31,6932	554884830,1
Total de Válidos					32						Somatoria	4537570512
Total de Censurados					0						Somatoria*1/4	259,5409242
											K0	259,5409242

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
											Kjc Médio	236,8051392
											-30	206,8051392
											/ 70	2,954359132
											Ln	1,083281751
											T-T0	57,01311857
											T0	-97,01311857
100	-40	40	8.240,000	90,774446	Válido	70,7744	1,414214	100,090181	100,090181	100361212,4	29,6932	3379939,259
100	-40	63,5	13.081,000	114,3722	Válido	94,3722	1,414214	133,462444	133,4624443	317275325,5	29,6932	10685117,32
100	-40	75,5	15.553,000	124,71167	Válido	104,712	1,414214	148,08466	148,0846603	480883962,1	29,6932	16195087,16
100	-40	79,1	16.294,600	127,6503	Válido	107,65	1,414214	152,240519	152,2405193	537181474,1	29,6932	18091060,38
100	-40	81	16.686,000	129,1743	Válido	109,174	1,414214	154,395777	154,3957769	568252910,6	29,6932	19137476,28
100	-40	86,1	17.736,600	133,17883	Válido	113,179	1,414214	160,059032	160,0590323	656327721	29,6932	22103637,23
100	-40	91,5	18.849,000	137,29166	Válido	117,292	1,414214	165,875457	165,8754568	757056909,6	29,6932	25495969,1
100	-40	92,1	18.972,600	137,74106	Válido	117,741	1,414214	166,511006	166,5110059	768726367,4	29,6932	25888970,11
100	-40	94,8	19.528,800	139,74548	Válido	119,745	1,414214	169,345686	169,345686	822425468,1	29,6932	27697434,7
100	-40	95,6	19.693,600	140,33389	Válido	120,334	1,414214	170,177816	170,1778158	838709922,8	29,6932	28245858,41
100	-40	96	19.776,000	140,62717	Válido	120,627	1,414214	170,592575	170,5925751	846916315,4	29,6932	28522321,2
100	-40	96,4	19.858,400	140,91984	Válido	120,92	1,414214	171,006471	171,0064711	855165516,5	29,6932	28800045,69
100	-40	99,6	20.517,600	143,23966	Válido	123,24	1,414214	174,287198	174,2871976	922703031,8	29,6932	31074556,86
100	-40	102,6	21.135,600	145,38088	Válido	125,381	1,414214	177,31534	177,3153396	988519482,4	29,6932	33291106,46
100	-40	108,2	22.289,200	149,29568	Válido	129,296	1,414214	182,851704	182,8517039	1117882215	29,6932	37647751,49
100	-40	110,9	22.845,400	151,14695	Válido	131,147	1,414214	185,469793	185,469793	1183294237	29,6932	39850680,87
100	-40	112,4	23.154,400	152,1657	Válido	132,166	1,414214	186,910524	186,9105242	1220492239	29,6932	41103425,68
100	-40	124	25.544,000	159,8249	Válido	139,825	1,414214	197,742276	197,7422759	1528967003	29,6932	51492159,94
100	-40	141,2	29.087,200	170,5497	Válido	150,55	1,414214	212,909427	212,9094268	2054847344	29,6932	69202623,62
100	-40	142,5	29.355,000	171,33301	Válido	151,333	1,414214	214,017194	214,0171939	2097947721	29,6932	70654147,1
100	-40	153,4	31.600,400	177,76501	Válido	157,765	1,414214	223,113422	223,1134217	2478008469	29,6932	83453735,84
100	-40	160,5	33.063,000	181,83234	Válido	161,832	1,414214	228,865491	228,8654906	2743602882	29,6932	92398356,6
100	-40	166,8	34.360,800	185,36666	Válido	165,367	1,414214	233,863779	233,8637785	2991244059	29,6932	100738352,9
100	-40	167,8	34.566,800	185,92149	Válido	165,921	1,414214	234,64842	234,6484198	3031590484	29,6932	102097129,5
100	-40	175,4	36.132,400	190,08524	Válido	170,085	1,414214	240,536859	240,5368589	3347545905	29,6932	112737795,4
100	-40	186,7	38.460,200	196,11272	Válido	176,113	1,414214	249,061001	249,0610009	3847892376	29,6932	129588335,9
100	-40	187,7	38.666,200	196,63723	Válido	176,637	1,414214	249,802765	249,8027655	3893937423	29,6932	131139029,3
100	-40	214,1	44.104,600	210,01095	Válido	190,011	1,414214	268,716065	268,7160655	5214042031	29,6932	175597174,8
100	-40	272,3	56.093,800	236,8413	Válido	216,841	1,414214	306,659903	306,6599032	8843577316	29,6932	297831736,4
100	-40	282,2	58.133,200	241,10827	Válido	221,108	1,414214	312,69432	312,6943205	9560486057	29,6932	321975605,8
											Somatoria	2176116531
											Somatoria ⁿ /4	215,9834813
											K0	215,9834813
											Kjc Médio	197,0633283
											-30	167,0633283
											/ 70	2,386618976
											Ln	0,86987771

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
											T-T0	45,78166389
											T0	-85,78166389
25	-20	78,9	16.253,400	127,48882	Válido					264173011,6	2,6932	98088894,83
25	-20	102,7	21.156,200	145,45171	Válido					447584798,4	2,6932	166190701,9
25	-20	258,8	53.312,800	230,89565	Válido					2842254644	2,6932	1055344811
25	-20	723,7	149.082,200	386,11164	Censurado					0	2,6932	94,8344609
25	-20	772,5	159.135,000	398,91728	Censurado					0	2,6932	94,8344609
25	-20	798,3	164.449,800	405,52411	Censurado					0	2,6932	94,8344609
25	-20	914,9	188.469,400	434,13063	Censurado					0	2,6932	94,8344609
25	-20	1133,7	233.542,200	483,26204	Censurado					0	2,6932	94,8344609
25	-20	1340	276.040,000	525,39509	Censurado					0	2,6932	94,8344609
25	-20	1348,6	277.811,600	527,07836	Censurado					0	2,6932	94,8344609
25	-20	1361,1	280.386,600	529,51544	Censurado					0	2,6932	94,8344609
25	-20	1368,5	281.911,000	530,95292	Censurado					0	2,6932	94,8344609
25	-20	1368,6	281.931,600	530,97232	Censurado					0	2,6932	94,8344609
25	-20	1371,1	282.446,600	531,45705	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,43022	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,29992	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,59929	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,35955	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,75857	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,98294	Censurado					0	2,6932	94,8344609
25	-20	1480,1	304.900,600	552,17805	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,24733	Censurado					0	2,6932	94,8344609
25	-20	1497,2	308.423,200	555,35862	Censurado					0	2,6932	94,8344609
25	-20	1499	308.794,000	555,69236	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,39897	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,66521	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,66757	Censurado					0	2,6932	94,8344609
25	-20	1554,5	320.227,000	565,88603	Censurado					0	2,6932	94,8344609
25	-20	1560,5	321.463,000	566,97707	Censurado					0	2,6932	94,8344609
25	-20	1575	324.450,000	569,60513	Censurado					0	2,6932	94,8344609
											Somatoria	1319627063
											Somatoria ^{1/4}	190,5955705
											K0	190,5955705
											Kjc Médio	173,8993986
											-30	143,8993986
											/70	2,055705694
											Ln	0,720619192
											T-T0	37,92618809
											T0	-57,92618809

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068
50	-20	139	28.634,000	169,21584	Válido	169,216	1,189207	201,232679	201,2326791	1639811912	15,6932	104491876,2
50	-20	162	33.372,000	182,68005	Válido	182,68	1,189207	217,244413	217,2444131	2227380768	15,6932	141932860,6
50	-20	168,1	34.628,600	186,08761	Válido	186,088	1,189207	221,296714	221,2967143	2398279876	15,6932	152822870,8
50	-20	180,6	37.203,600	192,88235	Válido	192,882	1,189207	229,37706	229,3770601	2768215706	15,6932	176395872,5
50	-20	195,2	40.211,200	200,5273	Válido	200,527	1,189207	238,468498	238,4684977	3233881211	15,6932	206068947,8
50	-20	256	52.736,000	229,6432	Válido	229,643	1,189207	273,093329	273,0933291	5562171392	15,6932	354431944,5
50	-20	259	53.354,000	230,98485	Válido	230,985	1,189207	274,688825	274,6888247	5693298632	15,6932	362787617,1
50	-20	291	59.946,000	244,83872	Válido	244,839	1,189207	291,163951	291,1639507	7187045832	15,6932	457971977,2
50	-20	326,5	67.259,000	259,3434	Válido	259,343	1,189207	308,413019	308,4130185	9047546162	15,6932	576526531,4
50	-20	328,8	67.732,800	260,25526	Válido	260,255	1,189207	309,497406	309,4974061	9175464392	15,6932	584677719,8
50	-20	330	67.980,000	260,72975	Válido	260,73	1,189207	310,061668	310,061668	9242560800	15,6932	588953228,1
50	-20	362,3	74.633,800	273,19187	Válido	273,192	1,189207	324,88172	324,8817203	11140408205	15,6932	709887607,7
50	-20	380	78.280,000	279,78563	Válido	279,786	1,189207	332,723065	332,7230645	12255516800	15,6932	780944409
50	-20	392	80.752,000	284,16896	Válido	284,169	1,189207	337,935754	337,9357536	13041771008	15,6932	831045995
50	-20	417	85.902,000	293,09043	Válido	293,09	1,189207	348,545224	348,5452244	14758307208	15,6932	940426886
50	-20	447	92.082,000	303,45016	Válido	303,45	1,189207	360,86509	360,8650901	16958189448	15,6932	1080607489
50	-20	480	98.880,000	314,4519	Censurado	314,452	1,189207	373,948442	373,9484417	0	15,6932	23,01644661
50	-20	486,8	100.280,800	316,67144	Censurado	316,671	1,189207	376,587928	376,5879279	0	15,6932	23,01644661
50	-20	502	103.412,000	321,57736	Censurado	321,577	1,189207	382,422087	382,4220874	0	15,6932	23,01644661
50	-20	512	105.472,000	324,76453	Censurado	324,765	1,189207	386,21229	386,2122899	0	15,6932	23,01644661
50	-20	555	114.330,000	338,1272	Censurado	338,127	1,189207	402,103266	402,1032661	0	15,6932	23,01644661
50	-20	648,8	133.652,800	365,58556	Censurado	365,586	1,189207	434,756946	434,7569464	0	15,6932	23,01644661
50	-20	655,6	135.053,600	367,49639	Censurado	367,496	1,189207	437,029327	437,0293271	0	15,6932	23,01644661
50	-20	695	143.170,000	378,37812	Censurado	378,378	1,189207	449,96995	449,9699498	0	15,6932	23,01644661
50	-20	807	166.242,000	407,72785	Censurado	407,728	1,189207	484,872861	484,8728607	0	15,6932	23,01644661
50	-20	820	168.920,000	410,99878	Censurado	410,999	1,189207	488,762678	488,7626775	0	15,6932	23,01644661
50	-20	1017	209.502,000	457,71388	Censurado	457,714	1,189207	544,316608	544,316608	0	15,6932	23,01644661
50	-20	1266	260.796,000	510,6819	Censurado	510,682	1,189207	607,306546	607,3065455	0	15,6932	23,01644661
50	-20	1582	325.892,000	570,86951	Censurado	570,87	1,189207	678,882086	678,8820857	0	15,6932	23,01644661
50	-20	1619	333.514,000	577,50671	Censurado	577,507	1,189207	686,775088	686,7750884	0	15,6932	23,01644661
											Somatoria	8049974155
											Somatoria ^{1/4}	299,5357211
											K0	299,5357211
											Kjc Médio	273,2963919
											-30	243,2963919
											/70	3,475662741
											Ln	1,245785178
											T-T0	65,56567391
											T0	-85,56567391
100	-20	58,6	12.071,600	109,87083	Válido	109,871	1,414214	155,380822	155,3808225	582894106,2	28,6932	20314712,41
100	-20	74,4	15.326,400	123,79984	Válido	123,8	1,414214	175,079411	175,0794106	939594147,8	28,6932	32746230,74
100	-20	82,8	17.056,800	130,60168	Válido	130,602	1,414214	184,698674	184,6986735	1163737705	28,6932	40557961,64
100	-20	100,6	20.723,600	143,95694	Válido	143,957	1,414214	203,585854	203,5858541	1717870388	28,6932	59870296,37

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068	
100	-20	112,2	23.113,200	152,03026	Válido	152,03	1,414214	215,003256	215,0032558	2136880057	28,6932	74473396,38	
100	-20	123,7	25.482,200	159,63145	Válido	159,631	1,414214	225,752962	225,7529623	2597370067	28,6932	90522146,97	
100	-20	130,8	26.944,800	164,14871	Válido	164,149	1,414214	232,141336	232,1413363	2904088988	28,6932	101211750,1	
100	-20	133,4	27.480,400	165,77213	Válido	165,772	1,414214	234,437198	234,4371984	3020689537	28,6932	105275449,8	
100	-20	186,1	38.336,600	195,79734	Válido	195,797	1,414214	276,89926	276,8992597	5878779598	28,6932	204884070	
100	-20	188,4	38.810,400	197,00355	Válido	197,004	1,414214	278,605097	278,6050969	6024988593	28,6932	209979667,4	
100	-20	191,7	39.490,200	198,72141	Válido	198,721	1,414214	281,034517	281,0345175	6237903584	28,6932	217400066,4	
100	-20	193	39.758,000	199,39408	Válido	199,394	1,414214	281,985815	281,9858152	6322794256	28,6932	220358630,5	
100	-20	212,3	43.733,800	209,12628	Válido	209,126	1,414214	295,749218	295,7492181	7650581050	28,6932	266633942,9	
100	-20	212,5	43.775,000	209,22476	Válido	209,225	1,414214	295,888493	295,8884925	7665002500	28,6932	267136551,5	
100	-20	223	45.938,000	214,33152	Válido	214,332	1,414214	303,110541	303,1105409	8441199376	28,6932	294188148,3	
100	-20	224,4	46.226,400	215,00326	Válido	215,003	1,414214	304,06052	304,0605203	8547520228	28,6932	297893585,5	
100	-20	231,2	47.627,200	218,23657	Válido	218,237	1,414214	308,633116	308,6331155	9073400719	28,6932	316221290	
100	-20	247,3	50.943,800	225,70733	Válido	225,707	1,414214	319,198371	319,1983709	10381083034	28,6932	361795931,9	
100	-20	288,5	59.431,000	243,78474	Válido	243,785	1,414214	344,763687	344,7636872	14128175044	28,6932	492387570,7	
100	-20	299,8	61.758,800	248,51318	Válido	248,513	1,414214	351,450708	351,4507078	15256597510	28,6932	531714744,6	
100	-20	301,3	62.067,800	249,1341	Válido	249,134	1,414214	352,328824	352,3288237	15409647187	28,6932	537048749,8	
100	-20	315,9	65.075,400	255,0988	Válido	255,099	1,414214	360,764189	360,7641889	16939230741	28,6932	590356974,5	
100	-20	318,2	65.549,200	256,02578	Válido	256,026	1,414214	362,07513	362,0751303	17186790483	28,6932	598984793,7	
100	-20	324,6	66.867,600	258,5877	Válido	258,588	1,414214	365,698236	365,6982363	17885103719	28,6932	623322031,7	
100	-20	334,9	68.989,400	262,65833	Válido	262,658	1,414214	371,454977	371,4549771	19038149249	28,6932	663507355,4	
100	-20	371,9	76.611,400	276,78764	Válido	276,788	1,414214	391,436884	391,4368804	23477226440	28,6932	818215690,1	
100	-20	373,5	76.941,000	277,38241	Válido	277,382	1,414214	392,277963	392,2779627	23679669924	28,6932	825271141,7	
100	-20	384,1	79.124,600	281,29095	Válido	281,291	1,414214	397,80548	397,8054801	25042809301	28,6932	872778543,4	
100	-20	588,7	121.272,200	348,24158	Válido	348,242	1,414214	492,487969	492,4879694	58827785971	28,6932	2050234410	
100	-20	683,1	140.718,600	375,12478	Censurado	375,125	1,414214	530,50655	530,5065504	0	28,6932	17,80269681	
Total de Válidos											29	Somatoria	11785285852
Total de Censurados											1	Somatoria ^{1/4}	329,4845314
												K0	329,4845314
												Kjc Médio	300,6216864
												-30	270,6216864
												/70	3,866024092
												Ln	1,352226613
												T-T0	71,16768662
												T0	-91,16768662
200	-20	112	23.072,000	151,8947	Válido	151,895	1,681793	255,455418	255,4554181	4258537472	14,6932	289830497,9	
200	-20	117	24.102,000	155,24819	Válido	155,248	1,681793	261,09529	261,0952902	4647251232	14,6932	316285848,7	
200	-20	125	25.750,000	160,46807	Válido	160,468	1,681793	269,874042	269,8740418	5304500000	14,6932	361017341,4	
200	-20	162	33.372,000	182,68005	Válido	182,68	1,681793	307,229995	307,2299953	8909523072	14,6932	606370502,8	
200	-20	162	33.372,000	182,68005	Válido	182,68	1,681793	307,229995	307,2299953	8909523072	14,6932	606370502,8	
200	-20	166	34.196,000	184,92161	Válido	184,922	1,681793	310,99983	310,9998295	9354931328	14,6932	636684406,9	
200	-20	168	34.608,000	186,03226	Válido	186,032	1,681793	312,867713	312,8677132	9581709312	14,6932	652118620,3	
200	-20	175	36.050,000	189,86838	Válido	189,868	1,681793	319,319273	319,3192726	10396820000	14,6932	707593989,1	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 0	Conv Pol	Mult	Mult + 0	Kjc-0 ⁴	r-0,3068	kjc-20 ⁴ / r-0,3068				
200	-20	179	36.874,000	192,02604	Válido	192,026	1,681793	322,948017	322,9480172	10877535008	14,6932	740310824,6				
200	-20	179	36.874,000	192,02604	Válido	192,026	1,681793	322,948017	322,9480172	10877535008	14,6932	740310824,6				
200	-20	187	38.522,000	196,27022	Válido	196,27	1,681793	330,085852	330,085852	11871555872	14,6932	807962586,2				
200	-20	199	40.994,000	202,46975	Válido	202,47	1,681793	340,512175	340,5121753	13444064288	14,6932	914985455				
200	-20	234	48.204,000	219,55409	Válido	219,554	1,681793	369,2445	369,2445005	18589004928	14,6932	1265143395				
200	-20	236	48.616,000	220,49036	Válido	220,49	1,681793	370,819111	370,819111	18908123648	14,6932	1286862198				
200	-20	239	49.234,000	221,88736	Válido	221,887	1,681793	373,168569	373,1685692	19391894048	14,6932	1319786980				
											Válidos	15	Somatoria	11251633973		
											Censurados	0	Somatoria ^{1/4}	325,6896061		
													K0	325,6896061		
													Kjc Médio	297,1591966		
													-30	267,1591966		
													/70	3,816559951		
													Ln	1,339349481		
													T-T0	70,48996317		
													T0	-90,48996317		
											Resumo do Kmin 0					
											-91°C	Esp	T-T0	T0	Válidos	Censurados
												25	3,574453875	-94,57445388	31	0
												50	11,75372403	-102,753724	34	0
												100	14,21950183	-105,2195018	30	0
												200	17,75285397	-108,752854	15	0
											-60°C	Esp	T-T0	T0	Válidos	Censurados
												25	29,49013529	-89,49013529	57	5
												50	33,30503989	-93,30503989	34	0
												100	57,16403509	-117,1640351	30	0
											-40°C	Esp	T-T0	T0	Válidos	Censurados
												25	44,44318279	-84,44318279	15	15
												50	57,01311857	-97,01311857	32	0
												100	45,78166389	-85,78166389	30	0
											-20°C	Esp	T-T0	T0	Válidos	Censurados
												25	37,92618809	-57,92618809	3	28
												50	65,56567391	-85,56567391	16	14
												100	71,16768662	-91,16768662	29	1
												200	70,48996317	-90,48996317	0	0

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068	
25	-91	19,9	4.099,400	64,03	Válido					8519795,423	30,6932	277579,2496	
25	-91	21,3	4.387,800	66,24	Válido					10004509,41	30,6932	325951,9831	
25	-91	23,1	4.758,600	68,98	Válido					12103078,28	30,6932	394324,4198	
25	-91	23,7	4.882,200	69,87	Válido					12850397,94	30,6932	418672,4727	
25	-91	29,1	5.994,600	77,42	Válido					20667061,17	30,6932	673343,3195	
25	-91	29,4	6.056,400	77,82	Válido					21159470,85	30,6932	689386,2762	
25	-91	38,6	7.951,600	89,17	Válido					39289893,87	30,6932	1280084,64	
25	-91	39,7	8.178,200	90,43	Válido					41854844,06	30,6932	1363652,016	
25	-91	42,3	8.713,800	93,35	Válido					48258659,07	30,6932	1572291,552	
25	-91	46,3	9.537,800	97,66	Válido					59052566,64	30,6932	1923962,527	
25	-91	47,3	9.743,800	98,71	Válido					61930387,47	30,6932	2017723,387	
25	-91	48,9	10.073,400	100,37	Válido					66684755,1	30,6932	2172623,092	
25	-91	51,4	10.588,400	102,90	Válido					74483820,93	30,6932	2426720,607	
25	-91	52	10.712,000	103,50	Válido					76422986,32	30,6932	2489899,597	
25	-91	55,9	11.515,400	107,31	Válido					89665812,35	30,6932	2921357,576	
25	-91	56,6	11.659,600	107,98	Válido					92160142,96	30,6932	3002624,13	
25	-91	59,4	12.236,400	110,62	Válido					102496079,6	30,6932	3339374,181	
25	-91	63,3	13.039,800	114,19	Válido					117851892	30,6932	3839674,325	
25	-91	68,5	14.111,000	118,79	Válido					140072086,8	30,6932	4563619,524	
25	-91	70,2	14.461,200	120,25	Válido					147770898,7	30,6932	4814450,715	
25	-91	70,6	14.543,600	120,60	Válido					149613580,2	30,6932	4874486,212	
25	-91	71,4	14.708,400	121,28	Válido					153334631,1	30,6932	4995719,934	
25	-91	76	15.656,000	125,12	Válido					175655825	30,6932	5722955,735	
25	-91	76,5	15.759,000	125,53	Válido					178177189,9	30,6932	5805103,082	
25	-91	76,6	15.779,600	125,62	Válido					178683705,2	30,6932	5821605,607	
25	-91	76,8	15.820,800	125,78	Válido					179698978,6	30,6932	5854683,729	
25	-91	77	15.862,000	125,94	Válido					180717242,9	30,6932	5887859,296	
25	-91	77,2	15.903,200	126,11	Válido					181738498,6	30,6932	5921132,323	
25	-91	93,9	19.343,400	139,08	Válido					277615211,2	30,6932	9044844,174	
25	-91	112,8	23.236,800	152,44	Válido					411606014,7	30,6932	13410332,41	
25	-91	124,3	25.605,800	160,02	Válido					506494718	30,6932	16501854,42	
Total de Válidos											31		
Total de Censurados											0		
											<i>Soma dos K0</i>		124347892,5
											<i>Somatoria^{1/4}</i>		105,5989518
											anterior +10		115,5989518
											Kjc Médio		106,3484836
											-30		76,34848361
											/70		1,090692623
											Ln		0,086812928
											T-T0		4,568964424
											T0		-95,56896442
50	-91	14,9	3.069,400	55,40	Válido	45,40	1,189207	53,99	63,99	8498382,721	33,6932	252228,4236	
50	-91	18,3	3.769,800	61,40	Válido	51,40	1,189207	61,12	71,12	13958489,85	33,6932	414282,1059	
50	-91	18,8	3.872,800	62,23	Válido	52,23	1,189207	62,11	72,11	14885752,24	33,6932	441802,8635	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
50	-91	20,2	4.161,200	64,51	Válido	54,51	1,189207	64,82	74,82	17654308,55	33,6932	523972,4499
50	-91	22,4	4.614,400	67,93	Válido	57,93	1,189207	68,89	78,89	22522955,05	33,6932	668471,8295
50	-91	24,6	5.067,600	71,19	Válido	61,19	1,189207	72,76	82,76	28032952,19	33,6932	832006,2266
50	-91	27,7	5.706,200	75,54	Válido	65,54	1,189207	77,94	87,94	36901130,67	33,6932	1095210,032
50	-91	30,2	6.221,200	78,87	Válido	68,87	1,189207	81,91	91,91	45005537,25	33,6932	1335745,41
50	-91	30,4	6.262,400	79,14	Válido	69,14	1,189207	82,22	92,22	45690939,09	33,6932	1356087,848
50	-91	30,6	6.303,600	79,40	Válido	69,40	1,189207	82,53	92,53	46381850,55	33,6932	1376593,81
50	-91	31,7	6.530,200	80,81	Válido	70,81	1,189207	84,21	94,21	50280531,23	33,6932	1492305,012
50	-91	34,3	7.065,800	84,06	Válido	74,06	1,189207	88,07	98,07	60162414,48	33,6932	1785595,149
50	-91	41,5	8.549,000	92,46	Válido	82,46	1,189207	98,06	108,06	92474123,53	33,6932	2744593,079
50	-91	41,6	8.569,600	92,57	Válido	82,57	1,189207	98,20	108,20	92974538,46	33,6932	2759445,184
50	-91	45,3	9.331,800	96,60	Válido	86,60	1,189207	102,99	112,99	112493254,8	33,6932	3338752,471
50	-91	46,1	9.496,600	97,45	Válido	87,45	1,189207	104,00	114,00	116971265,5	33,6932	3471657,945
50	-91	46,5	9.579,000	97,87	Válido	87,87	1,189207	104,50	114,50	119244751,7	33,6932	3539134,059
50	-91	47,3	9.743,800	98,71	Válido	88,71	1,189207	105,50	115,50	123860774,9	33,6932	3676135,687
50	-91	48,7	10.032,200	100,16	Válido	90,16	1,189207	107,22	117,22	132160715,8	33,6932	3922474,441
50	-91	52,7	10.856,200	104,19	Válido	94,19	1,189207	112,02	122,02	157436770,3	33,6932	4672657,102
50	-91	54,6	11.247,600	106,05	Válido	96,05	1,189207	114,23	124,23	170256823,8	33,6932	5053150,898
50	-91	55,6	11.453,600	107,02	Válido	97,02	1,189207	115,38	125,38	177215544	33,6932	5259682,786
50	-91	57,4	11.824,400	108,74	Válido	98,74	1,189207	117,42	127,42	190109355,8	33,6932	5642365,695
50	-91	58,7	12.092,200	109,96	Válido	99,96	1,189207	118,88	128,88	199716468,8	33,6932	5927500,765
50	-91	59,1	12.174,600	110,34	Válido	100,34	1,189207	119,32	129,32	202722345,5	33,6932	6016713,923
50	-91	67	13.802,000	117,48	Válido	107,48	1,189207	127,82	137,82	266914123,1	33,6932	7921898,872
50	-91	75,7	15.594,200	124,88	Válido	114,88	1,189207	136,61	146,61	348303945,6	33,6932	10337514,56
50	-91	76,2	15.697,200	125,29	Válido	115,29	1,189207	137,10	147,10	353324257,8	33,6932	10486515,32
50	-91	78,6	16.191,600	127,25	Válido	117,25	1,189207	139,43	149,43	377942182,3	33,6932	11217164,96
50	-91	81	16.686,000	129,17	Válido	119,17	1,189207	141,72	151,72	403422806,9	33,6932	11973419,17
50	-91	86	17.716,000	133,10	Válido	123,10	1,189207	146,39	156,39	459285655,9	33,6932	13631405,03
50	-91	86,5	17.819,000	133,49	Válido	123,49	1,189207	146,85	156,85	465078852	33,6932	13803344,65
50	-91	100,5	20.703,000	143,89	Válido	133,89	1,189207	159,22	169,22	642632228,1	33,6932	19073054,15
50	-91	117,8	24.266,800	155,78	Válido	145,78	1,189207	173,36	183,36	903230322,8	33,6932	26807495,96
											<i>Soma dos K0</i>	192850377,9
											<i>Somatoria^{1/4}</i>	117,8433618
											anterior +10	127,8433618
											Kjc Médio	117,5202833
											-30	87,52028333
											/70	1,250289762
											Ln	0,223375334
											T-T0	11,75624383
											T0	-102,7562438
100	-91	19,6	4.037,600	63,54	Válido	53,54	1,414214	75,72	85,72	32873200,21	29,6932	1107095,234
100	-91	19,7	4.058,200	63,70	Válido	53,70	1,414214	75,95	85,95	33272591,31	29,6932	1120545,826
100	-91	21,6	4.449,600	66,71	Válido	56,71	1,414214	80,19	90,19	41357595,27	29,6932	1392830,523

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
100	-91	23,3	4.799,800	69,28	Válido	59,28	1,414214	83,84	93,84	49398075,43	29,6932	1663615,758
100	-91	25,4	5.232,400	72,34	Válido	62,34	1,414214	88,16	98,16	60394452,65	29,6932	2033948,939
100	-91	25,9	5.335,400	73,04	Válido	63,04	1,414214	89,16	99,16	63187349,82	29,6932	2128007,417
100	-91	27,7	5.706,200	75,54	Válido	65,54	1,414214	92,69	102,69	73802261,33	29,6932	2485493,693
100	-91	29,5	6.077,000	77,96	Válido	67,96	1,414214	96,10	106,10	85299916,46	29,6932	2872708,784
100	-91	32	6.592,000	81,19	Válido	71,19	1,414214	100,68	110,68	102745686,6	29,6932	3460242,971
100	-91	32,1	6.612,600	81,32	Válido	71,32	1,414214	100,86	110,86	103479435	29,6932	3484953,964
100	-91	32,9	6.777,400	82,32	Válido	72,32	1,414214	102,28	112,28	109449287,8	29,6932	3686005,14
100	-91	33	6.798,000	82,45	Válido	72,45	1,414214	102,46	112,46	110208016,7	29,6932	3711557,418
100	-91	33,4	6.880,400	82,95	Válido	72,95	1,414214	103,16	113,16	113270744,3	29,6932	3814703,176
100	-91	35,8	7.374,800	85,88	Válido	75,88	1,414214	107,31	117,31	132584488	29,6932	4465146,497
100	-91	35,9	7.395,400	86,00	Válido	76,00	1,414214	107,48	117,48	133424204,2	29,6932	4493426,246
100	-91	37,6	7.745,600	88,01	Válido	78,01	1,414214	110,32	120,32	148129258,2	29,6932	4988659,297
100	-91	39,6	8.157,600	90,32	Válido	80,32	1,414214	113,59	123,59	166472510,9	29,6932	5606418,671
100	-91	40,1	8.260,600	90,89	Válido	80,89	1,414214	114,39	124,39	171235185,4	29,6932	5766814,808
100	-91	40,6	8.363,600	91,45	Válido	81,45	1,414214	115,19	125,19	176068781,2	29,6932	5929599,412
100	-91	41,1	8.466,600	92,01	Válido	82,01	1,414214	115,99	125,99	180973383,8	29,6932	6094775,361
100	-91	41,3	8.507,800	92,24	Válido	82,24	1,414214	116,30	126,30	182955125,5	29,6932	6161515,953
100	-91	41,3	8.507,800	92,24	Válido	82,24	1,414214	116,30	126,30	182955125,5	29,6932	6161515,953
100	-91	42,3	8.713,800	93,35	Válido	83,35	1,414214	117,87	127,87	193034636,3	29,6932	6500971,141
100	-91	42,7	8.796,200	93,79	Válido	83,79	1,414214	118,49	128,49	197146245	29,6932	6639440,847
100	-91	45,6	9.393,600	96,92	Válido	86,92	1,414214	122,92	132,92	228323479,7	29,6932	7689419,791
100	-91	46,6	9.599,600	97,98	Válido	87,98	1,414214	124,42	134,42	239633436	29,6932	8070313,608
100	-91	47,6	9.805,600	99,02	Válido	89,02	1,414214	125,90	135,90	251231084,9	29,6932	8460896,264
100	-91	49,2	10.135,200	100,67	Válido	90,67	1,414214	128,23	138,23	270387073,6	29,6932	9106026,755
100	-91	53,7	11.062,200	105,18	Válido	95,18	1,414214	134,60	144,60	328237293,1	29,6932	11054291,66
100	-91	126,4	26.038,400	161,36	Válido	151,36	1,414214	214,06	224,06	2099677003	29,6932	70712385,42
<i>Soma dos K0</i>											210863326,5	
Total de Válidos											30	
Total de Censurados											0	
<i>Somatoria</i> ^{1/4}											120,5036671	
anterior +10											130,5036671	
Kjc Médio											119,9475459	
-30											89,94754588	
/70											1,284964941	
Ln											0,250731435	
T-T0											13,19599541	
T0											-104,1959954	
200	-91	13,8	2.842,800	53,32	Válido	43,32	1,681793	72,85	82,85	28168267,97	14,6932	1917095,525
200	-91	20,4	4.202,400	64,83	Válido	54,83	1,681793	92,21	102,21	72282592,83	14,6932	4919458,854
200	-91	23	4.738,000	68,83	Válido	58,83	1,681793	98,95	108,95	95846851,05	14,6932	6523211,489
200	-91	23,2	4.779,200	69,13	Válido	59,13	1,681793	99,45	109,45	97807725,15	14,6932	6656666,019
200	-91	25,4	5.232,400	72,34	Válido	62,34	1,681793	104,84	114,84	120788905,3	14,6932	8220735,122
200	-91	25,6	5.273,600	72,62	Válido	62,62	1,681793	105,31	115,31	123007031,9	14,6932	8371697,921
200	-91	25,8	5.314,800	72,90	Válido	62,90	1,681793	105,79	115,79	125246743,1	14,6932	8524129,741

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068	
200	-91	30,2	6.221,200	78,87	Válido	68,87	1,681793	115,83	125,83	180022149	14,6932	12252072,32	
200	-91	33,9	6.983,400	83,57	Válido	73,57	1,681793	123,72	133,72	234323598,2	14,6932	15947758,02	
200	-91	36,9	7.601,400	87,19	Válido	77,19	1,681793	129,81	139,81	283951592,5	14,6932	19325374,49	
200	-91	38,8	7.992,800	89,40	Válido	79,40	1,681793	133,54	143,54	317999059,6	14,6932	21642600,63	
200	-91	40,9	8.425,400	91,79	Válido	81,79	1,681793	137,55	147,55	358006033,1	14,6932	24365422,99	
200	-91	44,6	9.187,600	95,85	Válido	85,85	1,681793	144,39	154,39	434601310,3	14,6932	29578397,51	
200	-91	44,8	9.228,800	96,07	Válido	86,07	1,681793	144,75	154,75	438964554,2	14,6932	29875354,19	
200	-91	50,7	10.444,200	102,20	Válido	92,20	1,681793	155,06	165,06	578035717,3	14,6932	39340355,9	
Total de Válidos					15						Soma dos K0		237460330,7
Total de Censurados					0						Somatoria^{1/4}		124,1360057
											anterior +10		134,1360057
											Kjc Médio		123,2616916
											-30		93,26169161
											/70		1,33230988
											Ln		0,286914188
											T-T0		15,1002937
											T0		-106,1002937
25	-60	34	7.004,000	83,68990381	Válido					29487092,93	56,6932	520116,9264	
25	-60	40,2	8.281,200	91,00109889	Válido					43049057,04	56,6932	759333,695	
25	-60	46,9	9.661,400	98,29242087	Válido					60770624,48	56,6932	1071920,874	
25	-60	52	10.712,000	103,4987923	Válido					76422986,32	56,6932	1348009,749	
25	-60	54,2	11.165,200	105,66551	Válido					83757086,92	56,6932	1477374,481	
25	-60	56,1	11.556,600	107,5016279	Válido					90374824,53	56,6932	1594103,429	
25	-60	62,3	12.833,800	113,2863628	Válido					113807776,1	56,6932	2007432,568	
25	-60	67,4	13.884,400	117,8320839	Válido					135204763,6	56,6932	2384849,745	
25	-60	68	14.008,000	118,355397	Válido					137848546,4	56,6932	2431482,9	
25	-60	69	14.214,000	119,2224811	Válido					142314172,2	56,6932	2510251,18	
25	-60	74,6	15.367,600	123,9661244	Válido					168695352,7	56,6932	2975583,54	
25	-60	78,2	16.109,200	126,9220233	Válido					186889666,2	56,6932	3296509,391	
25	-60	81,3	16.747,800	129,4132914	Válido					203334314,8	56,6932	3586573,254	
25	-60	81,4	16.768,400	129,4928569	Válido					203876786,2	56,6932	3596141,799	
25	-60	82,3	16.953,800	130,2067587	Válido					208792813,6	56,6932	3682854,621	
25	-60	90	18.540,000	136,1616686	Válido					253343459,9	56,6932	4468674,548	
25	-60	90,4	18.622,400	136,4639146	Válido					255779941,9	56,6932	4511651,167	
25	-60	100,3	20.661,800	143,7421302	Válido					319943244,9	56,6932	5643414,816	
25	-60	112,2	23.113,200	152,0302601	Válido					406933580,8	56,6932	7177819,93	
25	-60	120,3	24.781,800	157,4223618	Válido					472338622,3	56,6932	8331486,357	
25	-60	123,4	25.420,400	159,4377622	Válido					498702357,6	56,6932	8796511,002	
25	-60	127,4	26.244,400	162,0012346	Válido					533812158,4	56,6932	9415805,748	
25	-60	129	26.574,000	163,0153367	Válido					548201032,4	56,6932	9669608,213	
25	-60	140,9	29.025,400	170,3684243	Válido					661417145	56,6932	11666604,55	
25	-60	141,9	29.231,400	170,9719275	Válido					671429746,2	56,6932	11843214,82	
25	-60	142,5	29.355,000	171,3330091	Válido					677474473,7	56,6932	11949836,55	
25	-60	143,1	29.478,600	171,6933313	Válido					683547083,2	56,6932	12056950,1	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
50	-60	163,2	33.619,200	183,3553926	Válido	173,35539	1,189207	206,1554663	216,1554663	1806256485	33,6932	53608932,51
50	-60	164,7	33.928,200	184,1960912	Válido	174,19609	1,189207	207,155231	217,155231	1841550436	33,6932	54656442,13
50	-60	176,8	36.420,800	190,8423433	Válido	180,84234	1,189207	215,0590014	225,0590014	2139097101	33,6932	63487501,96
50	-60	198	40.788,000	201,9603922	Válido	191,96039	1,189207	228,2806642	238,2806642	2715666967	33,6932	80599852,99
<i>Soma dos K0</i>											760580448,7	
<i>Somatoria^{1/4}</i>											166,0681277	
Total de Válidos											34	
Total de Censurados											0	
anterior +10											176,0681277	
Kjc Médio											161,5205597	
-30											131,5205597	
/70											1,878865139	
Ln											0,630667945	
T-To											33,19205395	
TO											-93,19205395	
100	-60	30,4	6.262,400	79,13532713	Válido	69,135327	1,414214	97,77211727	107,7721173	91381878,19	29,6932	3077535,536
100	-60	57,5	11.845,000	108,8347371	Válido	98,834737	1,414214	139,7734256	149,7734256	381679150,5	29,6932	12854092,87
100	-60	63,3	13.039,800	114,1919437	Válido	104,19194	1,414214	147,3496598	157,3496598	471407567,9	29,6932	15875943,58
100	-60	64	13.184,000	114,8216008	Válido	104,8216	1,414214	148,2401294	158,2401294	482906600,9	29,6932	16263205,07
100	-60	68,5	14.111,000	118,7897302	Válido	108,78973	1,414214	153,8519119	163,8519119	560288347,1	29,6932	18869247,74
100	-60	82,8	17.056,800	130,6016845	Válido	120,60168	1,414214	170,5565379	180,5565379	846200908	29,6932	28498137,89
100	-60	86,1	17.736,600	133,1788271	Válido	123,17883	1,414214	174,2011679	184,2011679	920882563,3	29,6932	31013247,59
100	-60	88,3	18.189,800	134,8695666	Válido	124,86957	1,414214	176,5922346	186,5922346	972492832,2	29,6932	32751365,03
100	-60	89,4	18.416,400	135,7070374	Válido	125,70704	1,414214	177,7765972	187,7765972	998845589,9	29,6932	33638866,47
100	-60	94,5	19.467,000	139,5241915	Válido	129,52419	1,414214	183,1748682	193,1748682	1125805979	29,6932	37914606,02
100	-60	102,2	21.053,200	145,0972088	Válido	135,09721	1,414214	191,0563049	201,0563049	1332433357	29,6932	44873350,01
100	-60	106,3	21.897,800	147,9790526	Válido	137,97905	1,414214	195,1318475	205,1318475	1449815123	29,6932	48826503,14
100	-60	107,7	22.186,200	148,9503273	Válido	138,95033	1,414214	196,5054374	206,5054374	1491070876	29,6932	50215903,85
100	-60	112,3	23.133,800	152,0979947	Válido	142,09799	1,414214	200,9569113	210,9569113	1630841627	29,6932	54923067,48
100	-60	113	23.278,000	152,5712948	Válido	142,57129	1,414214	201,6262587	211,6262587	1652678459	29,6932	55658482,72
100	-60	115,5	23.793,000	154,2497974	Válido	144,2498	1,414214	204,0000199	214,0000199	1731892130	29,6932	58326220,5
100	-60	128,1	26.388,600	162,4456832	Válido	152,44568	1,414214	215,5907527	225,5907527	2160332084	29,6932	72755111,74
100	-60	131,1	27.006,600	164,3368492	Válido	154,33685	1,414214	218,2652653	228,2652653	2269543496	29,6932	76433105,78
100	-60	132,7	27.336,200	165,3366263	Válido	155,33663	1,414214	219,6791637	229,6791637	2328924802	29,6932	78432934,22
100	-60	150,2	30.941,200	175,9011086	Válido	165,90111	1,414214	234,6195978	244,6195978	3030101271	29,6932	102046976,1
100	-60	153,5	31.621,000	177,8229457	Válido	167,82295	1,414214	237,3374858	247,3374858	3172965499	29,6932	106858321
100	-60	160,8	33.124,800	182,0021978	Válido	172,0022	1,414214	243,2478409	253,2478409	3501031161	29,6932	117906832,6
100	-60	168,9	34.793,400	186,5298904	Válido	176,52989	1,414214	249,6509651	259,6509651	3884480962	29,6932	130820557
100	-60	191,9	39.531,400	198,8250487	Válido	188,82505	1,414214	267,0389448	277,0389448	5085087298	29,6932	171254270,3
100	-60	225,7	46.494,200	215,6251377	Válido	205,62514	1,414214	290,7978585	300,7978585	7150967688	29,6932	240828462
100	-60	230	47.380,000	217,6694742	Válido	207,66947	1,414214	293,6889869	303,6889869	7439618138	29,6932	250549558,1
100	-60	241,9	49.831,400	223,2294783	Válido	213,22948	1,414214	301,5520202	311,5520202	8268923404	29,6932	278478688,9
100	-60	265,4	54.672,400	233,8212993	Válido	223,8213	1,414214	316,531117	326,531117	10038426450	29,6932	338071560,1
100	-60	282,6	58.215,600	241,2790915	Válido	231,27909	1,414214	327,0780279	337,0780279	11444728175	29,6932	385432630,2
100	-60	415,3	85.551,800	292,4923931	Válido	282,49239	1,414214	399,5045735	409,5045735	25473406261	29,6932	857886865

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068	
<i>Soma dos K0</i>											3751335649		
<i>Somatoria</i> ^{1/4}											247,483632		
anterior +10											257,483632		
Kjc Médio											235,8040659		
-30											205,8040659		
/70											2,940058084		
Ln											1,078429338		
T-T0											56,75773604		
T0											-116,757736		
Total de Válidos					30								
Total de Censurados					0								
25	-60	38,4	7.910,400	88,9404295	Válido					38832731,5	56,6932	684962,7733	
25	-60	46,1	9.496,600	97,45050026	Válido					58485632,73	56,6932	1031616,362	
25	-60	55	11.330,000	106,4424727	Válido					86511401,47	56,6932	1525957,284	
25	-60	63,6	13.101,600	114,4622208	Válido					119079504,4	56,6932	2100419,528	
25	-60	64,1	13.204,600	114,9112701	Válido					121140281,8	56,6932	2136769,168	
25	-60	77,7	16.006,200	126,5156117	Válido					184304728,6	56,6932	3250914,195	
25	-60	78,7	16.212,200	127,3271377	Válido					189493319,4	56,6932	3342434,708	
25	-60	87,8	18.086,800	134,4871741	Válido					240158760,7	56,6932	4236112,28	
25	-60	89,1	18.354,600	135,4791497	Válido					247905560,5	56,6932	4372756,53	
25	-60	116,3	23.957,800	154,783074	Válido					439411251,3	56,6932	7750687,055	
25	-60	128,7	26.512,200	162,8256737	Válido					545488093,1	56,6932	9621755,222	
25	-60	129	26.574,000	163,0153367	Válido					548201032,4	56,6932	9669608,213	
25	-60	131,7	27.130,200	164,7124768	Válido					572929724,7	56,6932	10105792,66	
25	-60	133,7	27.542,200	165,9584285	Válido					591609857,9	56,6932	10435287,79	
25	-60	133,7	27.542,200	165,9584285	Válido					591609857,9	56,6932	10435287,79	
25	-60	140,7	28.984,200	170,2474669	Válido					659423914,5	56,6932	11631446,36	
25	-60	150,4	30.982,400	176,0181809	Válido					759665849,5	56,6932	13399593,77	
25	-60	164,6	33.907,600	184,140164	Válido					919593296,1	56,6932	16220521,97	
25	-60	166,1	34.216,600	184,9772959	Válido					937404000,7	56,6932	16534681,42	
25	-60	176	36.256,000	190,4100838	Válido					1059359176	56,6932	18685824,33	
25	-60	197,6	40.705,600	201,7562886	Válido					1352067775	56,6932	23848852,68	
25	-60	200,2	41.241,200	203,0792949	Válido					1389769628	56,6932	24513868,11	
25	-60	217,1	44.722,600	211,4771855	Válido					1647796219	56,6932	29065147,48	
25	-60	219,5	45.217,000	212,6428931	Válido					1686263769	56,6932	29743668,9	
25	-60	234,5	48.307,000	219,7885347	Válido					1936988305	56,6932	34166148,76	
25	-60	275,9	56.835,400	238,4017617	Válido					2721433947	56,6932	48002828,32	
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821	
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821	
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821	
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821	
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821	
Total de Válidos					26							<i>Soma dos K0</i>	624506162
Total de Censurados					5							<i>Somatoria</i> ^{1/4}	158,0826407
anterior +10											168,0826407		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
											T0	-84,82754264
50	-40	49,1	10.114,600	100,5713677	Válido	90,571368	1,189207	107,7081149	117,7081149	134584082,9	31,6932	4246465,58
50	-40	50,6	10.423,600	102,0960332	Válido	92,096033	1,189207	109,521258	119,521258	143877768,7	31,6932	4539704,691
50	-40	60,6	12.483,600	111,7300318	Válido	101,73003	1,189207	120,9780776	130,9780776	214203575,7	31,6932	6758660,397
50	-40	93,8	19.322,800	139,0064747	Válido	129,00647	1,189207	153,4154176	163,4154176	553956963,2	31,6932	17478732,45
50	-40	107,4	22.124,400	148,7427309	Válido	138,74273	1,189207	164,9938428	174,9938428	741089994,8	31,6932	23383249,24
50	-40	107,5	22.145,000	148,8119619	Válido	138,81196	1,189207	165,0761727	175,0761727	742570282,6	31,6932	23429956,04
50	-40	119	24.514,000	156,5694734	Válido	146,56947	1,189207	174,3014606	184,3014606	923005110,5	31,6932	29123127,69
50	-40	122,7	25.276,200	158,9849049	Válido	148,9849	1,189207	177,173909	187,173909	985369393,3	31,6932	31090877,33
50	-40	137,8	28.386,800	168,4838271	Válido	158,48383	1,189207	188,4700948	198,4700948	1261739782	31,6932	39811056,68
50	-40	139,9	28.819,400	169,7627757	Válido	159,76278	1,189207	189,9910295	199,9910295	1302963904	31,6932	41111781,19
50	-40	166,5	34.299,000	185,199892	Válido	175,19989	1,189207	208,3489581	218,3489581	1884366315	31,6932	59456486,41
50	-40	167	34.402,000	185,4777615	Válido	175,47776	1,189207	208,6794025	218,6794025	1896349310	31,6932	59834579,97
50	-40	167	34.402,000	185,4777615	Válido	175,47776	1,189207	208,6794025	218,6794025	1896349310	31,6932	59834579,97
50	-40	168,9	34.793,400	186,5298904	Válido	176,52989	1,189207	209,9306016	219,9306016	1942240481	31,6932	61282561,59
50	-40	187	38.522,000	196,2702219	Válido	186,27022	1,189207	221,5138732	231,5138732	2407707487	31,6932	75969213,81
50	-40	205,3	42.291,800	205,6497022	Válido	195,6497	1,189207	232,6680179	242,6680179	2930533971	31,6932	92465701,51
50	-40	210	43.260,000	207,9903844	Válido	197,99038	1,189207	235,4515738	245,4515738	3073310155	31,6932	96970648,42
50	-40	212,8	43.836,800	209,3723955	Válido	199,3724	1,189207	237,0950713	247,0950713	3160021983	31,6932	99706624,23
50	-40	217,1	44.722,600	211,4771855	Válido	201,47719	1,189207	239,5981025	249,5981025	3295592438	31,6932	103984212,3
50	-40	219,3	45.175,800	212,545995	Válido	202,546	1,189207	240,8691384	250,8691384	3366081574	31,6932	106208321,5
50	-40	245	50.470,000	224,6552915	Válido	214,65529	1,189207	255,2695999	265,2695999	4246160353	31,6932	133977015,7
50	-40	251,8	51.870,800	227,7516191	Válido	217,75162	1,189207	258,9517747	268,9517747	4496510038	31,6932	141876176,5
50	-40	271,9	56.011,400	236,667277	Válido	226,66728	1,189207	269,5543385	279,5543385	5279408960	31,6932	166578602,4
50	-40	272,7	56.176,200	237,0151894	Válido	227,01519	1,189207	269,9680784	279,9680784	5311897197	31,6932	167603687,8
50	-40	274,2	56.485,200	237,6661524	Válido	227,66615	1,189207	270,7422083	280,7422083	5373086937	31,6932	169534377,6
50	-40	308,7	63.592,200	252,1749393	Válido	242,17494	1,189207	287,9961609	297,9961609	6879340308	31,6932	217060451,7
50	-40	308,8	63.612,800	252,2157806	Válido	242,21578	1,189207	288,0447297	298,0447297	6883982121	31,6932	217206912,5
50	-40	313,1	64.498,600	253,9657457	Válido	243,96575	1,189207	290,1258006	300,1258006	7085090594	31,6932	223552389,6
50	-40	313,1	64.498,600	253,9657457	Válido	243,96575	1,189207	290,1258006	300,1258006	7085090594	31,6932	223552389,6
50	-40	349,4	71.976,400	268,2841777	Válido	258,28418	1,189207	307,1533818	317,1533818	8900639378	31,6932	280837510,2
50	-40	386,6	79.639,600	282,2048901	Válido	272,20489	1,189207	323,7079921	333,7079921	10980286892	31,6932	346455608,5
50	-40	455,2	93.771,200	306,2208353	Válido	296,22084	1,189207	352,267925	362,267925	15398995957	31,6932	485876969,1
											<i>Soma dos K0</i>	3810798632
											<i>Somatoria</i> ^{1/4}	248,4585808
											anterior +10	258,4585808
											Kjc Médio	236,6936091
											-30	206,6936091
											/70	2,952765844
											Ln	1,082742305
											T-T0	56,98472754
											T0	-96,98472754
					Total de Válidos	32						
					Total de Censurados	0						

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068	
100	-40	40	8.240,000	90,77444574	Válido	80,774446	1,414214	114,2323167	124,2323167	170276979,6	29,6932	5734544,596	
100	-40	63,5	13.081,000	114,3721994	Válido	104,3722	1,414214	147,60458	157,60458	474678250,3	29,6932	15986092,79	
100	-40	75,5	15.553,000	124,7116675	Válido	114,71167	1,414214	162,2267959	172,2267959	692612559,1	29,6932	23325628,73	
100	-40	79,1	16.294,600	127,6503036	Válido	117,6503	1,414214	166,3826549	176,3826549	766358890	29,6932	25809238,81	
100	-40	81	16.686,000	129,1743008	Válido	119,1743	1,414214	168,5379125	178,5379125	806845613,8	29,6932	27172740,35	
100	-40	86,1	17.736,600	133,1788271	Válido	123,17883	1,414214	174,2011679	184,2011679	920882563,3	29,6932	31013247,59	
100	-40	91,5	18.849,000	137,2916603	Válido	127,29166	1,414214	180,0175924	190,0175924	1050170457	29,6932	35367372,21	
100	-40	92,1	18.972,600	137,7410614	Válido	127,74106	1,414214	180,6531415	190,6531415	1065079616	29,6932	35869479,08	
100	-40	94,8	19.528,800	139,7454829	Válido	129,74548	1,414214	183,4878216	193,4878216	1133519456	29,6932	38174378,51	
100	-40	95,6	19.693,600	140,3338876	Válido	130,33389	1,414214	184,3199514	194,3199514	1154222110	29,6932	38871597,2	
100	-40	96	19.776,000	140,6271666	Válido	130,62717	1,414214	184,7347107	194,7347107	1164646214	29,6932	39222657,5	
100	-40	96,4	19.858,400	140,9198354	Válido	130,91984	1,414214	185,1486068	195,1486068	1175118851	29,6932	39575352,32	
100	-40	99,6	20.517,600	143,2396593	Válido	133,23966	1,414214	188,4293332	198,4293332	1260648599	29,6932	42455801,3	
100	-40	102,6	21.135,600	145,3808791	Válido	135,38088	1,414214	191,4574753	201,4574753	1343659758	29,6932	45251429,89	
100	-40	108,2	22.289,200	149,2956798	Válido	139,29568	1,414214	196,9938395	206,9938395	1505950093	29,6932	50717002,32	
100	-40	110,9	22.845,400	151,1469484	Válido	141,14695	1,414214	199,6119287	209,6119287	1587617814	29,6932	53467386,96	
100	-40	112,4	23.154,400	152,1656992	Válido	142,1657	1,414214	201,0526599	211,0526599	1633951992	29,6932	55027817,54	
100	-40	124	25.544,000	159,8249042	Válido	149,8249	1,414214	211,8844115	221,8844115	2015561369	29,6932	67879560,61	
100	-40	141,2	29.087,200	170,5496995	Válido	160,5497	1,414214	227,0515625	237,0515625	2657651185	29,6932	89503697,31	
100	-40	142,5	29.355,000	171,3330091	Válido	161,33301	1,414214	228,1593295	238,1593295	2709897895	29,6932	91263248,65	
100	-40	153,4	31.600,400	177,7650134	Válido	167,76501	1,414214	237,2555573	247,2555573	3168586556	29,6932	106710848,1	
100	-40	160,5	33.063,000	181,8323404	Válido	171,83234	1,414214	243,0076262	253,0076262	3487222131	29,6932	117441775,6	
100	-40	166,8	34.360,800	185,3666637	Válido	175,36666	1,414214	248,0059141	258,0059141	3783102863	29,6932	127406371,3	
100	-40	167,8	34.566,800	185,9214888	Válido	175,92149	1,414214	248,7905554	258,7905554	3831206478	29,6932	129026392,5	
100	-40	175,4	36.132,400	190,085244	Válido	180,08524	1,414214	254,6789945	264,6789945	4206999944	29,6932	141682268,8	
100	-40	186,7	38.460,200	196,1127227	Válido	186,11272	1,414214	263,2031366	273,2031366	4799149087	29,6932	161624516,3	
100	-40	187,7	38.666,200	196,6372294	Válido	186,63723	1,414214	263,9449011	273,9449011	4853478464	29,6932	163454207,1	
100	-40	214,1	44.104,600	210,0109521	Válido	200,01095	1,414214	282,8582011	292,8582011	6401401983	29,6932	215584779,8	
100	-40	272,3	56.093,800	236,8412971	Válido	226,8413	1,414214	320,8020388	330,8020388	10591280717	29,6932	356690444,9	
100	-40	282,2	58.133,200	241,1082744	Válido	231,10827	1,414214	326,8364561	336,8364561	11410954430	29,6932	384295206,7	
					Válidos	30						Somatoria	2755605085
					Censurados	0						Somatoria ^{1/4}	229,1153805
										K0	239,1153805		
										Kjc Médio	219,0448732		
										-30	189,0448732		
										/ 70	2,700641046		
										Ln	0,993489169		
										T-T0	52,28733497		
										T0	-92,28733497		
25	-20	78,9	16.253,400	127,488823	Válido					190540022,8	2,6932	70748560,38	
25	-20	102,7	21.156,200	145,4517102	Válido					336618492,7	2,6932	124988301,2	
25	-20	258,8	53.312,800	230,8956474	Válido					2380941002	2,6932	884056513,6	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609
											Soma dos K0	1079796031
											Somatoria ^{1/4}	181,273964
											anterior +10	191,273964
											Kjc Médio	175,3943647
											-30	145,3943647
											/70	2,077062353
											Ln	0,730954565
											T-T0	38,47013876
											T0	-58,47013876
50	-20	139	28.634,000	169,2158385	Válido	159,21584	1,189207	189,340608	199,340608	1285212880	15,6932	81896163,93
50	-20	162	33.372,000	182,6800482	Válido	172,68005	1,189207	205,3523419	215,3523419	1778273842	15,6932	113314928,9
50	-20	168,1	34.628,600	186,0876138	Válido	176,08761	1,189207	209,4046432	219,4046432	1922849212	15,6932	122527541,3
50	-20	180,6	37.203,600	192,8823476	Válido	182,88235	1,189207	217,4849889	227,4849889	2237263551	15,6932	142562610
50	-20	195,2	40.211,200	200,5273049	Válido	190,5273	1,189207	226,5764266	236,5764266	2635474948	15,6932	167937383,5
50	-20	256	52.736,000	229,6432015	Válido	219,6432	1,189207	261,201258	271,201258	4654800336	15,6932	296612567
50	-20	259	53.354,000	230,984848	Válido	220,98485	1,189207	262,7967535	272,7967535	4769578307	15,6932	303926433,5
50	-20	291	59.946,000	244,8387224	Válido	234,83872	1,189207	279,2718796	289,2718796	6082874158	15,6932	387612096,8

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
50	-20	326,5	67.259,000	259,3434017	Válido	249,3434	1,189207	296,5209474	306,5209474	7730747986	15,6932	492617693,4
50	-20	328,8	67.732,800	260,2552593	Válido	250,25526	1,189207	297,6053349	307,6053349	7844456315	15,6932	499863400,4
50	-20	330	67.980,000	260,7297451	Válido	250,72975	1,189207	298,1695969	308,1695969	7904118316	15,6932	503665174,5
50	-20	362,3	74.633,800	273,191874	Válido	263,19187	1,189207	312,9896491	322,9896491	9596655415	15,6932	611516798,1
50	-20	380	78.280,000	279,7856322	Válido	269,78563	1,189207	320,8309934	330,8309934	10595104972	15,6932	675139867,7
50	-20	392	80.752,000	284,1689638	Válido	274,16896	1,189207	326,0436825	336,0436825	11300643083	15,6932	720098073,2
50	-20	417	85.902,000	293,0904297	Válido	283,09043	1,189207	336,6531532	346,6531532	12844900557	15,6932	818501042,3
50	-20	447	92.082,000	303,4501607	Válido	293,45016	1,189207	348,9730189	358,9730189	14830896431	15,6932	945052406,9
50	-20	480	98.880,000	314,4519041	Censurado	304,4519	1,189207	362,0563705	372,0563705	0	15,6932	23,01644661
50	-20	486,8	100.280,800	316,6714386	Censurado	306,67144	1,189207	364,6958567	374,6958567	0	15,6932	23,01644661
50	-20	502	103.412,000	321,5773624	Censurado	311,57736	1,189207	370,5300162	380,5300162	0	15,6932	23,01644661
50	-20	512	105.472,000	324,7645301	Censurado	314,76453	1,189207	374,3202187	384,3202187	0	15,6932	23,01644661
50	-20	555	114.330,000	338,127195	Censurado	328,1272	1,189207	390,2111949	400,2111949	0	15,6932	23,01644661
50	-20	648,8	133.652,800	365,5855577	Censurado	355,58556	1,189207	422,8648752	432,8648752	0	15,6932	23,01644661
50	-20	655,6	135.053,600	367,4963945	Censurado	357,49639	1,189207	425,137256	435,137256	0	15,6932	23,01644661
50	-20	695	143.170,000	378,3781178	Censurado	368,37812	1,189207	438,0778787	448,0778787	0	15,6932	23,01644661
50	-20	807	166.242,000	407,7278504	Censurado	397,72785	1,189207	472,9807895	482,9807895	0	15,6932	23,01644661
50	-20	820	168.920,000	410,9987835	Censurado	400,99878	1,189207	476,8706064	486,8706064	0	15,6932	23,01644661
50	-20	1017	209.502,000	457,7138844	Censurado	447,71388	1,189207	532,4245368	542,4245368	0	15,6932	23,01644661
50	-20	1266	260.796,000	510,6818971	Censurado	500,6819	1,189207	595,4144744	605,4144744	0	15,6932	23,01644661
50	-20	1582	325.892,000	570,8695122	Censurado	560,86951	1,189207	666,9900145	676,9900145	0	15,6932	23,01644661
50	-20	1619	333.514,000	577,5067099	Censurado	567,50671	1,189207	674,8830172	684,8830172	0	15,6932	23,01644661
											Soma dos K0	6882844504
											Somatoria ^{1/4}	288,0328287
											anterior +10	298,0328287
											Kjc Médio	272,8011529
											-30	242,8011529
											/70	3,468587899
											Ln	1,243747566
											T-T0	65,45843437
											T0	-85,45843437
100	-20	58,6	12.071,600	109,8708333	Válido	99,870833	1,414214	141,2386869	151,2386869	397937332,8	28,6932	13868698,26
100	-20	74,4	15.326,400	123,7998384	Válido	113,79984	1,414214	160,9372749	170,9372749	670851775,4	28,6932	23380165,87
100	-20	82,8	17.056,800	130,6016845	Válido	120,60168	1,414214	170,5565379	180,5565379	846200908	28,6932	29491339,69
100	-20	100,6	20.723,600	143,956938	Válido	133,95694	1,414214	189,4437185	199,4437185	1288014757	28,6932	44889198,72
100	-20	112,2	23.113,200	152,0302601	Válido	142,03026	1,414214	200,8611202	210,8611202	1627734323	28,6932	56728922,65
100	-20	123,7	25.482,200	159,6314505	Válido	149,63145	1,414214	211,6108267	221,6108267	2005171556	28,6932	69883162,43
100	-20	130,8	26.944,800	164,1487131	Válido	154,14871	1,414214	217,9992006	227,9992006	2258497450	28,6932	78711940,45
100	-20	133,4	27.480,400	165,7721328	Válido	155,77213	1,414214	220,2950628	230,2950628	2355152620	28,6932	82080514,54
100	-20	186,1	38.336,600	195,7973442	Válido	185,79734	1,414214	262,757124	272,757124	4766701966	28,6932	166126537,5
100	-20	188,4	38.810,400	197,0035533	Válido	187,00355	1,414214	264,4629612	274,4629612	4891695623	28,6932	170482749,3
100	-20	191,7	39.490,200	198,721413	Válido	188,72141	1,414214	266,8923818	276,8923818	5073932786	28,6932	176833981,1
100	-20	193	39.758,000	199,3940822	Válido	189,39408	1,414214	267,8436796	277,8436796	5146661564	28,6932	179368685,4

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc -10	Conv Pol	Mult	Mult + 10	Kjc-10 ⁴	r-0,3068	kjc-10 ⁴ / r-0,3068
100	-20	212,3	43.733,800	209,1262776	Válido	199,12628	1,414214	281,6070825	291,6070825	6288894261	28,6932	219177166,1
100	-20	212,5	43.775,000	209,2247595	Válido	199,22476	1,414214	281,7463569	291,7463569	6301344688	28,6932	219611081,7
100	-20	223	45.938,000	214,3315189	Válido	204,33152	1,414214	288,9684053	298,9684053	6972707461	28,6932	243009056,5
100	-20	224,4	46.226,400	215,0032558	Válido	205,00326	1,414214	289,9183847	299,9183847	7064851295	28,6932	246220404
100	-20	231,2	47.627,200	218,2365689	Válido	208,23657	1,414214	294,4909799	304,4909799	7521214740	28,6932	262125337,7
100	-20	247,3	50.943,800	225,7073326	Válido	215,70733	1,414214	305,0562353	315,0562353	8660034563	28,6932	301814874,7
100	-20	288,5	59.431,000	243,7847411	Válido	233,78474	1,414214	330,6215516	340,6215516	11948809536	28,6932	416433494,2
100	-20	299,8	61.758,800	248,5131787	Válido	238,51318	1,414214	337,3085722	347,3085722	12945222307	28,6932	451159937,1
100	-20	301,3	62.067,800	249,1341004	Válido	239,1341	1,414214	338,1866881	348,1866881	13080550879	28,6932	455876335,8
100	-20	315,9	65.075,400	255,0988044	Válido	245,0988	1,414214	346,6220533	356,6220533	14435265042	28,6932	503090106,4
100	-20	318,2	65.549,200	256,02578	Válido	246,02578	1,414214	347,9329947	357,9329947	14654886541	28,6932	510744237
100	-20	324,6	66.867,600	258,5877027	Válido	248,5877	1,414214	351,5561006	361,5561006	15274906304	28,6932	532352832,9
100	-20	334,9	68.989,400	262,6583332	Válido	252,65833	1,414214	357,3128415	367,3128415	16300258746	28,6932	568087865,6
100	-20	371,9	76.611,400	276,7876442	Válido	266,78764	1,414214	377,2947047	387,2947047	20263890969	28,6932	706226247,7
100	-20	373,5	76.941,000	277,3824075	Válido	267,38241	1,414214	378,1358271	388,1358271	20445197435	28,6932	712545043,2
100	-20	384,1	79.124,600	281,2909526	Válido	271,29095	1,414214	383,6633445	393,6633445	21667122228	28,6932	755130910,1
100	-20	588,7	121.272,200	348,2415828	Válido	338,24158	1,414214	478,3458338	488,3458338	52356183725	28,6932	1824689603
100	-20	683,1	140.718,600	375,1247792	Censurado	365,12478	1,414214	516,3644148	526,3644148	0	28,6932	17,80269681
Soma dos K0											10020140448	
Somatoria^{1/4}											316,3868701	
anterior +10											326,3868701	
Kjc Médio											298,6713803	
-30											268,6713803	
/70											3,838162576	
Ln											1,344993756	
T-T0											70,78702139	
T0											-90,78702139	
200	-20	112	23.072,000	151,8947004	Válido	141,8947	1,681793	238,6374898	248,6374898	3243057793	14,6932	220718277,4
200	-20	117	24.102,000	155,2481884	Válido	145,24819	1,681793	244,2773619	254,2773619	3560679502	14,6932	242335196
200	-20	125	25.750,000	160,4680654	Válido	150,46807	1,681793	253,0561135	263,0561135	4100788163	14,6932	279094286
200	-20	162	33.372,000	182,6800482	Válido	172,68005	1,681793	290,412067	300,412067	7113095369	14,6932	484107979,8
200	-20	162	33.372,000	182,6800482	Válido	172,68005	1,681793	290,412067	300,412067	7113095369	14,6932	484107979,8
200	-20	166	34.196,000	184,921605	Válido	174,92161	1,681793	294,1819012	304,1819012	7489689291	14,6932	509738470,2
200	-20	168	34.608,000	186,0322553	Válido	176,03226	1,681793	296,0497848	306,0497848	7681729307	14,6932	522808462,9
200	-20	175	36.050,000	189,8683755	Válido	179,86838	1,681793	302,5013443	312,5013443	8373542633	14,6932	569892374,2
200	-20	179	36.874,000	192,0260399	Válido	182,02604	1,681793	306,1300889	316,1300889	8782619552	14,6932	597733615
200	-20	179	36.874,000	192,0260399	Válido	182,02604	1,681793	306,1300889	316,1300889	8782619552	14,6932	597733615
200	-20	187	38.522,000	196,2702219	Válido	186,27022	1,681793	313,2679237	323,2679237	9630829949	14,6932	655461706,7
200	-20	199	40.994,000	202,4697508	Válido	192,46975	1,681793	323,694247	333,694247	10978422067	14,6932	747177066,1
200	-20	234	48.204,000	219,5540936	Válido	209,55409	1,681793	352,4265722	362,4265722	15426755029	14,6932	1049924797
200	-20	236	48.616,000	220,4903626	Válido	210,49036	1,681793	354,0011827	364,0011827	15704309727	14,6932	1068814807
200	-20	239	49.234,000	221,8873588	Válido	211,88736	1,681793	356,3506409	366,3506409	16125388141	14,6932	1097472854
Válidos											15	
Somatoria											9127121488	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
25	-91	76,8	0,077	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083
25	-91	70,6	0,071	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362
25	-91	23,7	0,024	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925
25	-91	42,3	0,042	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831
25	-91	77,2	0,077	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718
25	-91	68,5	0,069	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141
25	-91	52	0,052	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747
25	-91	29,4	0,029	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538
25	-91	46,3	0,046	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58
25	-91	124,3	0,124	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81
25	-91	39,7	0,040	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432
25	-91	63,3	0,063	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009
25	-91	71,4	0,071	14.708,400	121,28	Válido					105211635	30,6932	3427848,349
25	-91	76	0,076	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922
25	-91	55,9	0,056	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774
25	-91	21,3	0,021	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676
25	-91	76,5	0,077	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047
25	-91	23,1	0,023	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965
25	-91	70,2	0,070	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584
25	-91	38,6	0,039	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933
25	-91	112,8	0,113	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59
25	-91	19,9	0,020	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513
25	-91	77	0,077	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66
25	-91	47,3	0,473	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849
25	-91	48,9	0,489	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208
25	-91	93,9	0,939	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01
25	-91	29,1	0,291	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273
25	-91	56,6	0,566	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202
25	-91	51,4	0,514	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337
25	-91	76,6	0,766	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954
25	-91	59,4	0,594	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94
											<i>Soma dos K0</i>		86037559,23
											<i>Somatoria ^1/4</i>		96,31014138
											<i>anterior +20</i>		116,3101414
											<i>Kjc Médio</i>		107,873373
													77,87337299
													1,112476757
											<i>Ln</i>		0,106588842
											<i>T - T0</i>		5,609770771
											<i>T0</i>		-96,60977077
50	-91	22,4	0,224	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851
50	-91	31,7	0,317	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956
50	-91	14,9	0,149	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238
50	-91	46,5	0,465	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
50	-91	24,6	0,246	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697
50	-91	58,7	0,587	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154
50	-91	41,6	0,416	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143
50	-91	30,4	0,304	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514
50	-91	46,1	0,461	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339
50	-91	48,7	0,487	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848
50	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768
50	-91	47,3	0,473	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211
50	-91	55,6	0,556	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766
50	-91	41,5	0,415	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782
50	-91	18,3	0,183	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082
50	-91	54,6	0,546	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685
50	-91	100,5	1,005	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05
50	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597
50	-91	76,2	0,762	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988
50	-91	75,7	0,757	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655
50	-91	78,6	0,786	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85
50	-91	59,1	0,591	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411
50	-91	81	0,810	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651
50	-91	86,5	0,865	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447
50	-91	117,8	1,178	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14
50	-91	52,7	0,527	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821
50	-91	57,4	0,574	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204
50	-91	34,3	0,343	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456
50	-91	18,8	0,188	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199
50	-91	45,3	0,453	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134
50	-91	30,6	0,306	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749
50	-91	86	0,860	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58
50	-91	20,2	0,202	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293
50	-91	67	0,670	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081
												Soma dos K0	131341550,9
												Somatoria ^1/4	107,0534173
												anterior +20	127,0534173
												Kjc Médio	117,6755379
													87,67553792
													1,252507685
												Ln	0,225147689
												T - T0	11,84952289
												T0	-102,8495229
100	-91	19,6	0,196	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238
100	-91	19,7	0,197	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394
100	-91	21,6	0,216	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417
100	-91	23,3	0,233	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288
100	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
100	-91	25,9	0,259	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274
100	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394
100	-91	29,5	0,295	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764
100	-91	32	0,320	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786
100	-91	32,1	0,321	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622
100	-91	32,9	0,329	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551
100	-91	33	0,330	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606
100	-91	33,4	0,334	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893
100	-91	35,8	0,358	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8
100	-91	35,9	0,359	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865
100	-91	37,6	0,376	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563
100	-91	39,6	0,396	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659
100	-91	40,1	0,401	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191
100	-91	40,6	0,406	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782
100	-91	41,1	0,411	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	42,3	0,423	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732
100	-91	42,7	0,427	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546
100	-91	45,6	0,456	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886
100	-91	46,6	0,466	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784
100	-91	47,6	0,476	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644
100	-91	49,2	0,492	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097
100	-91	53,7	0,537	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728
100	-91	126,4	1,264	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33
												Soma dos K0	135856648,7
												Somatoria ^1/4	107,9618267
												anterior +20	127,9618267
												Kjc Médio	118,5043707
													88,50437072
													1,264348153
												Ln	0,234556695
												T - T0	12,34471888
												T0	-103,3447189
200	-91	13,8	0,138	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716
200	-91	20,4	0,204	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78
200	-91	23	0,230	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622
200	-91	23,2	0,232	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806
200	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051
200	-91	25,6	0,256	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041
200	-91	25,8	0,258	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143
200	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331
200	-91	33,9	0,339	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802
200	-91	36,9	0,369	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068		
200	-91	38,8	0,388	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87		
200	-91	40,9	0,409	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07		
200	-91	44,6	0,446	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11		
200	-91	44,8	0,448	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46		
200	-91	50,7	0,507	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39		
Total de Válidos						15							Soma dos K0		136387006,3
Total de Censurados						0							Somatoria ^1/4		108,0670383
													anterior +20		128,0670383
													Kjc Médio		118,6003657
															88,60036572
															1,26571951
													Ln		0,235640743
													T - T0		12,40177232
													T0		-103,4017723
25	-60	34	34.000,000	7.004,000	83,68990381	Válido					16454412,17	56,6932	290236,0808		
25	-60	40,2	40.200,000	8.281,200	91,00109889	Válido					25413254,26	56,6932	448259,302		
25	-60	46,9	46.900,000	9.661,400	98,29242087	Válido					37573260,89	56,6932	662747,2236		
25	-60	52	52.000,000	10.712,000	103,4987923	Válido					48609457,63	56,6932	857412,4874		
25	-60	54,2	54.200,000	11.165,200	105,66551	Válido					53854750,56	56,6932	949933,1587		
25	-60	56,1	56.100,000	11.556,600	107,5016279	Válido					58622526,43	56,6932	1034031,003		
25	-60	62,3	62.300,000	12.833,800	113,2863628	Válido					75730816,98	56,6932	1335800,713		
25	-60	67,4	67.400,000	13.884,400	117,8320839	Válido					91606273,8	56,6932	1615824,716		
25	-60	68	68.000,000	14.008,000	118,355397	Válido					93582099,2	56,6932	1650675,905		
25	-60	69	69.000,000	14.214,000	119,2224811	Válido					96926008,89	56,6932	1709658,458		
25	-60	74,6	74.600,000	15.367,600	123,9661244	Válido					116833508,7	56,6932	2060802,86		
25	-60	78,2	78.200,000	16.109,200	126,9220233	Válido					130697919,3	56,6932	2305354,421		
25	-60	81,3	81.300,000	16.747,800	129,4132914	Válido					143311265,7	56,6932	2527838,713		
25	-60	81,4	81.400,000	16.768,400	129,4928569	Válido					143728585,3	56,6932	2535199,73		
25	-60	82,3	82.300,000	16.953,800	130,2067587	Válido					147513890,6	56,6932	2601967,971		
25	-60	90	90.000,000	18.540,000	136,1616686	Válido					182075439,7	56,6932	3211592,214		
25	-60	90,4	90.400,000	18.622,400	136,4639146	Válido					183977848,2	56,6932	3245148,416		
25	-60	100,3	100.300,000	20.661,800	143,7421302	Válido					234460859,4	56,6932	4135608,14		
25	-60	112,2	112.200,000	23.113,200	152,0302601	Válido					303874261,2	56,6932	5359977,232		
25	-60	120,3	120.300,000	24.781,800	157,4223618	Válido					356639656,8	56,6932	6290695,476		
25	-60	123,4	123.400,000	25.420,400	159,4377622	Válido					378025952,7	56,6932	6667924,066		
25	-60	127,4	127.400,000	26.244,400	162,0012346	Válido					406601035,8	56,6932	7171954,235		
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475		
25	-60	140,9	140.900,000	29.025,400	170,3684243	Válido					511242082,6	56,6932	9017696,7		
25	-60	141,9	141.900,000	29.231,400	170,9719275	Válido					519499100,1	56,6932	9163340,579		
25	-60	142,5	142.500,000	29.355,000	171,3330091	Válido					524486930,2	56,6932	9251319,915		
25	-60	143,1	143.100,000	29.478,600	171,6933313	Válido					529499988,6	56,6932	9339744,247		
25	-60	191,8	191.800,000	39.510,800	198,7732376	Válido					1021433322	56,6932	18016857,79		
25	-60	193,2	193.200,000	39.799,200	199,4973684	Válido					1038083632	56,6932	18310549,27		
25	-60	261	261.000,000	53.766,000	231,8749663	Válido					2015202002	56,6932	35545744,5		
25	-60	284,9	284.900,000	58.689,400	242,2589524	Válido					2440265341	56,6932	43043351,6		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
					Total de Válidos	31							
					Total de Censurados	0							
50	-60	46,7	46.700,000	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473
50	-60	48	48.000,000	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099
50	-60	49,9	49.900,000	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382
50	-60	52,9	52.900,000	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894
50	-60	59,4	59.400,000	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046
50	-60	63,1	63.100,000	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323
50	-60	68,1	68.100,000	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889
50	-60	68,2	68.200,000	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856
50	-60	69,2	69.200,000	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228
50	-60	75,1	75.100,000	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502
50	-60	76,2	76.200,000	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988
50	-60	76,5	76.500,000	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749
50	-60	80,6	80.600,000	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779
50	-60	81,9	81.900,000	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736
50	-60	82,9	82.900,000	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962
50	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309
50	-60	86,2	86.200,000	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153
50	-60	94,4	94.400,000	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48
50	-60	95,1	95.100,000	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2
50	-60	96,8	96.800,000	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39
50	-60	97	97.000,000	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87
50	-60	98,6	98.600,000	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59
50	-60	109,7	109.700,000	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83
50	-60	112,9	112.900,000	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06
50	-60	127,4	127.400,000	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34
50	-60	129,1	129.100,000	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35
50	-60	129,9	129.900,000	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43
50	-60	142,3	142.300,000	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34
50	-60	147,4	147.400,000	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19
50	-60	147,8	147.800,000	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18
50	-60	163,2	163.200,000	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44
50	-60	164,7	164.700,000	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33
50	-60	176,8	176.800,000	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7
50	-60	198	198.000,000	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42
											Soma dos K0		575512757,5

specimen width W, mm	test W, mm	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068	
Total de Válidos						34							Somatoria ^1/4	154,8865616
Total de Censurados						0							anterior +20	174,8865616
													Kjc Médio	161,3184988
														131,3184988
														1,875978554
													Ln	0,629130419
													T - T0	33,11113395
													T0	-93,11113395
100	-60	30,4	30.400,000	6.262,400	79,13532713	Válido	59,135327	1,414214	83,62998164	103,6299816	48915669,93	29,6932	1647369,429	
100	-60	57,5	57.500,000	11.845,000	108,8347371	Válido	88,834737	1,414214	125,63129	145,63129	249110066,1	29,6932	8389465,135	
100	-60	63,3	63.300,000	13.039,800	114,1919437	Válido	94,191944	1,414214	133,2075242	153,2075242	314858213,1	29,6932	10603714,42	
100	-60	64	64.000,000	13.184,000	114,8216008	Válido	94,821601	1,414214	134,0979938	154,0979938	323362104,1	29,6932	10890106,29	
100	-60	68,5	68.500,000	14.111,000	118,7897302	Válido	98,78973	1,414214	139,7097763	159,7097763	380984396	29,6932	12830695,11	
100	-60	82,8	82.800,000	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	29,6932	20158116,65	
100	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-60	88,3	88.300,000	18.189,800	134,8695666	Válido	114,86957	1,414214	162,450099	182,450099	696433929,9	29,6932	23454323,88	
100	-60	89,4	89.400,000	18.416,400	135,7070374	Válido	115,70704	1,414214	163,6344616	183,6344616	716966868,3	29,6932	24145826,93	
100	-60	94,5	94.500,000	19.467,000	139,5241915	Válido	119,52419	1,414214	169,0327326	189,0327326	816362880,3	29,6932	27493260,42	
100	-60	102,2	102.200,000	21.053,200	145,0972088	Válido	125,09721	1,414214	176,9141693	196,9141693	979603820,3	29,6932	32990847,07	
100	-60	106,3	106.300,000	21.897,800	147,9790526	Válido	127,97905	1,414214	180,9897118	200,9897118	1073039117	29,6932	36137537,13	
100	-60	107,7	107.700,000	22.186,200	148,9503273	Válido	128,95033	1,414214	182,3633017	202,3633017	1105986399	29,6932	37247127,27	
100	-60	112,3	112.300,000	23.133,800	152,0979947	Válido	132,09799	1,414214	186,8147757	206,8147757	1217993278	29,6932	41019266,28	
100	-60	113	113.000,000	23.278,000	152,5712948	Válido	132,57129	1,414214	187,4841231	207,4841231	1235543338	29,6932	41610312,73	
100	-60	115,5	115.500,000	23.793,000	154,2497974	Válido	134,2498	1,414214	189,8578842	209,8578842	1299315284	29,6932	43758008,04	
100	-60	128,1	128.100,000	26.388,600	162,4456832	Válido	142,44568	1,414214	201,4486171	221,4486171	1646861822	29,6932	55462591,51	
100	-60	131,1	131.100,000	27.006,600	164,3368492	Válido	144,33685	1,414214	204,1231297	224,1231297	1736076561	29,6932	58467142,68	
100	-60	132,7	132.700,000	27.336,200	165,3366263	Válido	145,33663	1,414214	205,537028	225,537028	1784679727	29,6932	60103987,67	
100	-60	150,2	150.200,000	30.941,200	175,9011086	Válido	155,90111	1,414214	220,4774621	240,4774621	2362962366	29,6932	79579242,59	
100	-60	153,5	153.500,000	31.621,000	177,8229457	Válido	157,82295	1,414214	223,1953502	243,1953502	2481650230	29,6932	83576382,15	
100	-60	160,8	160.800,000	33.124,800	182,0021978	Válido	162,0022	1,414214	229,1057052	249,1057052	2755139650	29,6932	92786888,93	
100	-60	168,9	168.900,000	34.793,400	186,5298904	Válido	166,52989	1,414214	235,5088295	255,5088295	3076300640	29,6932	103602866,7	
100	-60	191,9	191.900,000	39.531,400	198,8250487	Válido	178,82505	1,414214	252,8968092	272,8968092	4090471768	29,6932	137757862,9	
100	-60	225,7	225.700,000	46.494,200	215,6251377	Válido	195,62514	1,414214	276,6557228	296,6557228	5858124988	29,6932	197288436	
100	-60	230	230.000,000	47.380,000	217,6694742	Válido	197,66947	1,414214	279,5468513	299,5468513	6106866407	29,6932	205665485,9	
100	-60	241,9	241.900,000	49.831,400	223,2294783	Válido	203,22948	1,414214	287,4098845	307,4098845	6823493794	29,6932	229799879,9	
100	-60	265,4	265.400,000	54.672,400	233,8212993	Válido	213,8213	1,414214	302,3889814	322,3889814	8361108288	29,6932	281583267,8	
100	-60	282,6	282.600,000	58.215,600	241,2790915	Válido	221,27909	1,414214	312,9358923	332,9358923	9590064104	29,6932	322971727,7	
100	-60	415,3	415.300,000	85.551,800	292,4923931	Válido	272,49239	1,414214	385,3624379	405,3624379	22053499959	29,6932	742712134,7	
Total de Válidos						30							Soma dos K0	3045837511
Total de Censurados						0							Somatoria ^1/4	234,9236191
													anterior +20	254,9236191
													Kjc Médio	234,3443101
														204,3443101
														2,91920443

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
												Ln	1,071311124
												T - T0	56,38310443
												T0	-116,3831044
25	-60	38,4	38.400,000	7.910,400	88,9404295	Válido					22588944,53	56,6932	398441,8684
25	-60	46,1	46.100,000	9.496,600	97,45050026	Válido					35982961,89	56,6932	634696,258
25	-60	55	55.000,000	11.330,000	106,4424727	Válido					55835283,59	56,6932	984867,3843
25	-60	63,6	63.600,000	13.101,600	114,4622208	Válido					79621912,89	56,6932	1404434,974
25	-60	64,1	64.100,000	13.204,600	114,9112701	Válido					81146751,92	56,6932	1431331,305
25	-60	77,7	77.700,000	16.006,200	126,5156117	Válido					128722084,2	56,6932	2270503,061
25	-60	78,7	78.700,000	16.212,200	127,3271377	Válido					132689998,7	56,6932	2340492,311
25	-60	87,8	87.800,000	18.086,800	134,4871741	Válido					171801655	56,6932	3030374,983
25	-60	89,1	89.100,000	18.354,600	135,4791497	Válido					177833800,3	56,6932	3136774,786
25	-60	116,3	116.300,000	23.957,800	154,783074	Válido					330020888	56,6932	5821172,346
25	-60	128,7	128.700,000	26.512,200	162,8256737	Válido					416126261,3	56,6932	7339967,779
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475
25	-60	131,7	131.700,000	27.130,200	164,7124768	Válido					438554837,8	56,6932	7735580,948
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	140,7	140.700,000	28.984,200	170,2474669	Válido					509599080,2	56,6932	8988716,11
25	-60	150,4	150.400,000	30.982,400	176,0181809	Válido					592517033	56,6932	10451289,27
25	-60	164,6	164.600,000	33.907,600	184,140164	Válido					725871010,5	56,6932	12803493,37
25	-60	166,1	166.100,000	34.216,600	184,9772959	Válido					740792750,6	56,6932	13066694,96
25	-60	176	176.000,000	36.256,000	190,4100838	Válido					843298173,6	56,6932	14874767,58
25	-60	197,6	197.600,000	40.705,600	201,7562886	Válido					1091334248	56,6932	19249826,21
25	-60	200,2	200.200,000	41.241,200	203,0792949	Válido					1123458215	56,6932	19816454,44
25	-60	217,1	217.100,000	44.722,600	211,4771855	Válido					1344213155	56,6932	23710306,61
25	-60	219,5	219.500,000	45.217,000	212,6428931	Válido					1377247421	56,6932	24292991,41
25	-60	234,5	234.500,000	48.307,000	219,7885347	Válido					1593243836	56,6932	28102908,92
25	-60	275,9	275.900,000	56.835,400	238,4017617	Válido					2275226038	56,6932	40132256,38
25	-60	369,1	369.100,000	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	373,6	373.600,000	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	427,1	427.100,000	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	678,2	678.200,000	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	687,7	687.700,000	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
					T. Válidos	26						Soma dos K0	493144568,1
					T. Censurados	5						Somatoria ^1/4	149,0196584
												anterior + 20	169,0196584
												Kjc Médio	155,9655363
													125,9655363
													1,799507661
												LN	0,587513106
												T - T0	30,92081477
												T0	-90,92081477
25	-40	61,6		12.689,600	112,6481247	Válido					73679476,71	14,6932	5014528,946

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
25	-40	113,2		23.319,200	152,706254	Válido					310145554,3	14,6932	21108101,32
25	-40	136,6		28.139,600	167,7486215	Válido					476533843,6	14,6932	32432270,96
25	-40	139,3		28.695,800	169,3983471	Válido					498176423,4	14,6932	33905236,67
25	-40	155,4		32.012,400	178,9200939	Válido					637845141,6	14,6932	43410907,2
25	-40	165,5		34.093,000	184,6428986	Válido					734804848,9	14,6932	50009858,23
25	-40	195,2		40.211,200	200,5273049	Válido					1062115127	14,6932	72286168,21
25	-40	203,4		41.900,400	204,695872	Válido					1163667099	14,6932	79197662,81
25	-40	233,2		48.039,200	219,1784661	Válido					1573872452	14,6932	107115703,3
25	-40	251		51.706,000	227,3895336	Válido					1849896113	14,6932	125901513,1
25	-40	254,5		52.427,000	228,9694303	Válido					1906913682	14,6932	129782054,4
25	-40	264,8		54.548,800	233,5568453	Válido					2079955231	14,6932	141559036,2
25	-40	275,9		56.835,400	238,4017617	Válido					2275226038	14,6932	154848912,3
25	-40	283		58.298,000	241,4497877	Válido					2404922433	14,6932	163675879,5
25	-40	311,7		64.210,200	253,3973165	Válido					2967450160	14,6932	201960781,9
25	-40	349,2		71.935,200	268,2073824	Censurado					0	14,6932	17,90551673
25	-40	483,2		99.539,200	315,498336	Censurado					0	14,6932	17,90551673
25	-40	548,6		113.011,600	336,1719798	Censurado					0	14,6932	17,90551673
25	-40	562,8		115.936,800	340,4949339	Censurado					0	14,6932	17,90551673
25	-40	619,9		127.699,400	357,3505282	Censurado					0	14,6932	17,90551673
25	-40	758,7		156.292,200	395,3380832	Censurado					0	14,6932	17,90551673
25	-40	773,9		159.423,400	399,2785995	Censurado					0	14,6932	17,90551673
25	-40	1127,9		232.347,400	482,0242732	Censurado					0	14,6932	17,90551673
25	-40	1174		241.844,000	491,7763719	Censurado					0	14,6932	17,90551673
25	-40	1337,1		275.442,600	524,826257	Censurado					0	14,6932	17,90551673
25	-40	1337,2		275.463,200	524,8458821	Censurado					0	14,6932	17,90551673
25	-40	1433,6		295.321,600	543,4350007	Censurado					0	14,6932	17,90551673
25	-40	1544,1		318.084,600	563,9898935	Censurado					0	14,6932	17,90551673
25	-40	1573,3		324.099,800	569,2976374	Censurado					0	14,6932	17,90551673
25	-40	1714,3		353.145,800	594,2607172	Censurado					0	14,6932	17,90551673
											Soma dos K0		136220884
											Somatoria ^1/4		192,114846
											anterior +20		212,114846
											Kjc Médio		195,2855855
													165,2855855
													2,36122265
											Ln		0,859179557
											T - T0		45,21862008
											T0		-85,21862008
50	-40	49,1		10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	31,6932	2659419,493
50	-40	50,6		10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	31,6932	2866504,294
50	-40	60,6		12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	31,6932	4467968,269
50	-40	93,8		19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	31,6932	12657451,31
50	-40	107,4		22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	31,6932	17336234,52
50	-40	107,5		22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	31,6932	17373554,61

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
50	-40	119		24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	31,6932	21952219,86
50	-40	122,7		25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	31,6932	23546938,09
50	-40	137,8		28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	31,6932	30674713,53
50	-40	139,9		28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	31,6932	31745299,34
50	-40	166,5		34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	31,6932	47000550,07
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	168,9		34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	31,6932	48532502,88
50	-40	187		38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	31,6932	60922779,52
50	-40	205,3		42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	31,6932	74961959,72
50	-40	210		43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	31,6932	78814558,67
50	-40	212,8		43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	31,6932	81157861,71
50	-40	217,1		44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	31,6932	84826597,16
50	-40	219,3		45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	31,6932	86736493,94
50	-40	245		50.470,000	224,6552915	Válido	204,65529	1,189207	243,3775288	263,3775288	3508503451	31,6932	110702089,1
50	-40	251,8		51.870,800	227,7516191	Válido	207,75162	1,189207	247,0597036	267,0597036	3725698132	31,6932	117555126,4
50	-40	271,9		56.011,400	236,667277	Válido	216,66728	1,189207	257,6622674	277,6622674	4407611391	31,6932	139071201,1
50	-40	272,7		56.176,200	237,0151894	Válido	217,01519	1,189207	258,0760073	278,0760073	4435989652	31,6932	139966606,5
50	-40	274,2		56.485,200	237,6661524	Válido	217,66615	1,189207	258,8501371	278,8501371	4489454740	31,6932	141653564,2
50	-40	308,7		63.592,200	252,1749393	Válido	232,17494	1,189207	276,1040897	296,1040897	5811541698	31,6932	183368725,7
50	-40	308,8		63.612,800	252,2157806	Válido	232,21578	1,189207	276,1526585	296,1526585	5815631956	31,6932	183497783,6
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	349,4		71.976,400	268,2841777	Válido	248,28418	1,189207	295,2613107	315,2613107	7600220161	31,6932	239806020,2
50	-40	386,6		79.639,600	282,2048901	Válido	262,20489	1,189207	311,8159209	331,8159209	9453511213	31,6932	298282004,1
50	-40	455,2		93.771,200	306,2208353	Válido	286,22084	1,189207	340,3758539	360,3758539	13422548294	31,6932	423515085,1
												<i>Soma dos K0</i>	3178470837
												<i>Somatoria ^1/4</i>	237,4403686
												anterior +20	257,4403686
												Kjc Médio	236,6405923
													206,6405923
													2,952008461
												Ln	1,082485773
												T - T0	56,97122624
												T0	-96,97122624
100	-40	75,5		15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16
100	-40	79,1		16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38
100	-40	187,7		38.666,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3
100	-40	214,1		44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8
100	-40	91,5		18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1
100	-40	167,8		34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5
100	-40	142,5		29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1
100	-40	153,4		31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84
100	-40	110,9		22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068	
100	-40	112,4		23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68	
100	-40	99,6		20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86	
100	-40	108,2		22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49	
100	-40	92,1		18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11	
100	-40	160,5		33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6	
100	-40	96		19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2	
100	-40	166,8		34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9	
100	-40	141,2		29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62	
100	-40	186,7		38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9	
100	-40	81		16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28	
100	-40	95,6		19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41	
100	-40	86,1		17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-40	63,5		13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32	
100	-40	40		8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259	
100	-40	94,8		19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7	
100	-40	272,3		56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4	
100	-40	282,2		58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8	
100	-40	175,4		36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4	
100	-40	102,6		21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46	
100	-40	124		25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94	
100	-40	96,4		19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69	
						Válidos	30					Somatoria	2176116531	
						Censurados	0					Somatoria*1/4	215,9834813	
										K0	235,9834813			
										Kjc Médio	217,0633283			
											187,0633283			
											2,672333262			
										Ln	0,982951972			
										T-T0	51,73276227			
										T0	-91,73276227			
25	-20	78,9		16.253,400	127,488823	Válido					133491382,3	2,6932	49566085,81	
25	-20	102,7		21.156,200	145,4517102	Válido					247688786	2,6932	91968211,05	
25	-20	258,8		53.312,800	230,8956474	Válido					1978201225	2,6932	734517015,2	
25	-20	723,7		149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	772,5		159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3		164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	914,9		188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1133,7		233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	1340		276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	
25	-20	1348,6		277.811,600	527,0783623	Censurado					0	2,6932	94,8344609	
25	-20	1361,1		280.386,600	529,5154389	Censurado					0	2,6932	94,8344609	
25	-20	1368,5		281.911,000	530,9529169	Censurado					0	2,6932	94,8344609	
25	-20	1368,6		281.931,600	530,9723157	Censurado					0	2,6932	94,8344609	
25	-20	1371,1		282.446,600	531,4570538	Censurado					0	2,6932	94,8344609	
25	-20	1381,3		284.547,800	533,4302204	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
25	-20	1391		286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2		290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3		295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7		300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5		303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7		303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1480,1		304.900,600	552,178051	Censurado					0	2,6932	94,8344609
25	-20	1496,6		308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1497,2		308.423,200	555,3586229	Censurado					0	2,6932	94,8344609
25	-20	1499		308.794,000	555,6923609	Censurado					0	2,6932	94,8344609
25	-20	1524,5		314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8		318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3		319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
25	-20	1554,5		320.227,000	565,8860309	Censurado					0	2,6932	94,8344609
25	-20	1560,5		321.463,000	566,9770718	Censurado					0	2,6932	94,8344609
25	-20	1575		324.450,000	569,6051264	Censurado					0	2,6932	94,8344609
											Soma dos K0		876053967,4
											Somatoria ^1/4		172,0412999
											anterior +20		192,0412999
											Kjc Médio		176,970482
													146,970482
													2,099578314
											Ln		0,741736522
											T - T0		39,03759314
											T0		-59,03759314
50	-20	139		28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	15,6932	63179790,43
50	-20	162		33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	15,6932	89259747,8
50	-20	168,1		34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	15,6932	96976714,87
50	-20	180,6		37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	15,6932	113846868,9
50	-20	195,2		40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	15,6932	135359917,3
50	-20	256		52.736,000	229,6432015	Válido	209,6432	1,189207	249,3091868	269,3091868	3863252807	15,6932	246173680,8
50	-20	259		53.354,000	230,984848	Válido	210,98485	1,189207	250,9046824	270,9046824	3963100309	15,6932	252536150
50	-20	291		59.946,000	244,8387224	Válido	224,83872	1,189207	267,3798084	287,3798084	5111100625	15,6932	325688873,2
50	-20	326,5		67.259,000	259,3434017	Válido	239,3434	1,189207	284,6288762	304,6288762	6563202928	15,6932	418219542,7
50	-20	328,8		67.732,800	260,2552593	Válido	240,25526	1,189207	285,7132638	305,7132638	6663794707	15,6932	424629438,6
50	-20	330		67.980,000	260,7297451	Válido	240,72975	1,189207	286,2775257	306,2775257	6716592804	15,6932	427993832
50	-20	362,3		74.633,800	273,191874	Válido	253,19187	1,189207	301,097578	321,097578	8219190536	15,6932	523742164,5
50	-20	380		78.280,000	279,7856322	Válido	259,78563	1,189207	308,9389222	328,9389222	9109415433	15,6932	580468956,8
50	-20	392		80.752,000	284,1689638	Válido	264,16896	1,189207	314,1516113	334,1516113	9739959848	15,6932	620648424
50	-20	417		85.902,000	293,0904297	Válido	273,09043	1,189207	324,7610821	344,7610821	11123870365	15,6932	708833785,7
50	-20	447		92.082,000	303,4501607	Válido	283,45016	1,189207	337,0809478	357,0809478	12910314607	15,6932	822669347,7
50	-20	480		98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	15,6932	23,01644661
50	-20	486,8		100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	15,6932	23,01644661
50	-20	502		103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	15,6932	23,01644661

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
50	-20	512		105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	15,6932	23,01644661
50	-20	555		114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	15,6932	23,01644661
50	-20	648,8		133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	15,6932	23,01644661
50	-20	655,6		135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	15,6932	23,01644661
50	-20	695		143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	15,6932	23,01644661
50	-20	807		166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	15,6932	23,01644661
50	-20	820		168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	15,6932	23,01644661
50	-20	1017		209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	15,6932	23,01644661
50	-20	1266		260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	15,6932	23,01644661
50	-20	1582		325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	15,6932	23,01644661
50	-20	1619		333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	15,6932	23,01644661
												Soma dos K0	5850227557
												Somatoria ^1/4	276,5624347
												anterior +20	296,5624347
												Kjc Médio	272,3355654
													242,3355654
													3,461936649
												Ln	1,241828158
												T - T0	65,35741593
												T0	-85,35741593
100	-20	58,6		12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	28,6932	9094023,649
100	-20	74,4		15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	28,6932	16183323,52
100	-20	82,8		17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	28,6932	20860656,51
100	-20	100,6		20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	28,6932	32912764,68
100	-20	112,2		23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	28,6932	42361850,36
100	-20	123,7		25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	28,6932	52992450,69
100	-20	130,8		26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	28,6932	60189963,99
100	-20	133,4		27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	28,6932	62947579,85
100	-20	186,1		38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	28,6932	133146650,4
100	-20	188,4		38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	28,6932	136838701,6
100	-20	191,7		39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	28,6932	142228740,4
100	-20	193		39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	28,6932	144382133,7
100	-20	212,3		43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	28,6932	178356321
100	-20	212,5		43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	28,6932	178728106,3
100	-20	223		45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	28,6932	198817215,2
100	-20	224,4		46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	28,6932	201580471
100	-20	231,2		47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	28,6932	215286151,8
100	-20	247,3		50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	28,6932	249620412,8
100	-20	288,5		59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	28,6932	349625329,1
100	-20	299,8		61.758,800	248,5131787	Válido	228,51318	1,414214	323,1664365	343,1664365	10906992078	28,6932	380124631,6
100	-20	301,3		62.067,800	249,1341004	Válido	229,1341	1,414214	324,0445524	344,0445524	11026023136	28,6932	384273038,1
100	-20	315,9		65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	28,6932	425875530,7
100	-20	318,2		65.549,200	256,02578	Válido	236,02578	1,414214	333,7908591	353,7908591	12413600285	28,6932	432632131,8
100	-20	324,6		66.867,600	258,5877027	Válido	238,5877	1,414214	337,413965	357,413965	12961408950	28,6932	451724065,3

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20^4	r-0,3068	Kjc-20^4 / r - 0,3068
100	-20	334,9		68.989,400	262,6583332	Válido	242,65833	1,414214	343,1707058	363,1707058	13868862163	28,6932	483350137,4
100	-20	371,9		76.611,400	276,7876442	Válido	256,78764	1,414214	363,1525691	383,1525691	17392278605	28,6932	606146355,4
100	-20	373,5		76.941,000	277,3824075	Válido	257,38241	1,414214	363,9936914	383,9936914	17553973034	28,6932	611781642,8
100	-20	384,1		79.124,600	281,2909526	Válido	261,29095	1,414214	369,5212089	389,5212089	18644789305	28,6932	649798185,8
100	-20	588,7		121.272,200	348,2415828	Válido	328,24158	1,414214	464,2036981	484,2036981	46433816847	28,6932	1618286453
100	-20	683,1		140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	28,6932	17,80269681
											Soma dos K0	8470145036	
											Somatoria ^1/4 anterior +20	303,370056	
											Kjc Médio	296,7948391	
												266,7948391	
												3,811354844	
											Ln	1,337984728	
											T - T0	70,41813624	
											T0	-90,41813624	
200	-20	117		24.102,000	155,2481884	Válido	135,24819	1,681793	227,4594336	247,4594336	2676799320	14,6932	182179465,4
200	-20	234		48.204,000	219,5540936	Válido	199,55409	1,681793	335,6086439	355,6086439	12686229143	14,6932	863408185
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5
200	-20	175		36.050,000	189,8683755	Válido	169,86838	1,681793	285,683416	305,683416	6661010537	14,6932	453339676,7
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6
200	-20	166		34.196,000	184,921605	Válido	164,92161	1,681793	277,3639729	297,3639729	5918343906	14,6932	402794755,8
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5
200	-20	199		40.994,000	202,4697508	Válido	182,46975	1,681793	306,8763187	326,8763187	8868568054	14,6932	603583157,8
200	-20	239		49.234,000	221,8873588	Válido	201,88736	1,681793	339,5327126	359,5327126	13290046261	14,6932	904503189,3
200	-20	112		23.072,000	151,8947004	Válido	131,8947	1,681793	221,8195615	241,8195615	2421025531	14,6932	164771835,4
200	-20	236		48.616,000	220,4903626	Válido	200,49036	1,681793	337,1832544	357,1832544	12925995256	14,6932	879726353,4
200	-20	125		25.750,000	160,4680654	Válido	140,46807	1,681793	236,2381852	256,2381852	3114586458	14,6932	211974686,1
200	-20	168		34.608,000	186,0322553	Válido	166,03226	1,681793	279,2318565	299,2318565	6079387909	14,6932	413755200,3
200	-20	187		38.522,000	196,2702219	Válido	176,27022	1,681793	296,4499954	316,4499954	7723351343	14,6932	525641204,3
											Somatoria	7321985905	
											Somatoria^1/4	292,5211163	
											K0	312,5211163	
											Kjc Médio	286,8962665	
												256,8962665	
												3,669946665	
											Ln	1,300177129	
											T-T0	68,42832231	
											T0	-88,42832231	
Resumo do Kmin = 20													

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-91	19,9	4.099,400	64,03	Válido					1340516,078	30,6932	43674,6927
25	-91	21,3	4.387,800	66,24	Válido					1724945,325	30,6932	56199,59227
25	-91	23,1	4.758,600	68,98	Válido					2309316,701	30,6932	75238,70762
25	-91	23,7	4.882,200	69,87	Válido					2527576,955	30,6932	82349,73725
25	-91	29,1	5.994,600	77,42	Válido					5058504,187	30,6932	164808,6282
25	-91	29,4	6.056,400	77,82	Válido					5230494,562	30,6932	170412,1617
25	-91	38,6	7.951,600	89,17	Válido					12259069,03	30,6932	399406,6773
25	-91	39,7	8.178,200	90,43	Válido					13338535,22	30,6932	434576,2326
25	-91	42,3	8.713,800	93,35	Válido					16103653,58	30,6932	524665,1891
25	-91	46,3	9.537,800	97,66	Válido					20959002,81	30,6932	682854,9257
25	-91	47,3	9.743,800	98,71	Válido					22289339,45	30,6932	726197,9672
25	-91	48,9	10.073,400	100,37	Válido					24516562,58	30,6932	798762,0249
25	-91	51,4	10.588,400	102,90	Válido					28242878,35	30,6932	920167,2797
25	-91	52	10.712,000	103,50	Válido					29182386,91	30,6932	950776,9444
25	-91	55,9	11.515,400	107,31	Válido					35722258,88	30,6932	1163849,285
25	-91	56,6	11.659,600	107,98	Válido					36976400,3	30,6932	1204709,848
25	-91	59,4	12.236,400	110,62	Válido					42240955,73	30,6932	1376231,73
25	-91	63,3	13.039,800	114,19	Válido					50243761,27	30,6932	1636967,187
25	-91	68,5	14.111,000	118,79	Válido					62151404,2	30,6932	2024924,224
25	-91	70,2	14.461,200	120,25	Válido					66355951,09	30,6932	2161910,491
25	-91	70,6	14.543,600	120,60	Válido					67367801,21	30,6932	2194877,081
25	-91	71,4	14.708,400	121,28	Válido					69417365,6	30,6932	2261652,926
25	-91	76	15.656,000	125,12	Válido					81876504,79	30,6932	2667577,991
25	-91	76,5	15.759,000	125,53	Válido					83300461,63	30,6932	2713971,226
25	-91	76,6	15.779,600	125,62	Válido					83586903,07	30,6932	2723303,633
25	-91	76,8	15.820,800	125,78	Válido					84161437,52	30,6932	2742022,256
25	-91	77	15.862,000	125,94	Válido					84738175,31	30,6932	2760812,666
25	-91	77,2	15.903,200	126,11	Válido					85317117,93	30,6932	2779674,91
25	-91	93,9	19.343,400	139,08	Válido					141575893,5	30,6932	4612614,309
25	-91	112,8	23.236,800	152,44	Válido					224718898,7	30,6932	7321455,526
25	-91	124,3	25.605,800	160,02	Válido					285769306,8	30,6932	9310508,738
											<i>Soma dos K0</i>	57687154,79
											<i>Somatoria^{1/4}</i>	87,15047929
											anterior +30	117,1504793
											Kjc Médio	109,5160973
												79,5160973
												1,135944247
											Ln	0,127464241
											T - T0	6,708442998
											T0	-97,708443
50	-91	14,9	3.069,400	55,40	Válido	25,40	1,189207	30,21	60,21	832746,8455	33,6932	24715,57601
50	-91	18,3	3.769,800	61,40	Válido	31,40	1,189207	37,34	67,34	1943911,559	33,6932	57694,47718
50	-91	18,8	3.872,800	62,23	Válido	32,23	1,189207	38,33	68,33	2158587,028	33,6932	64065,95479
50	-91	20,2	4.161,200	64,51	Válido	34,51	1,189207	41,04	71,04	2835810,014	33,6932	84165,64808

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-91	22,4	4.614,400	67,93	Válido	37,93	1,189207	45,11	75,11	4139355,682	33,6932	122854,3351
50	-91	24,6	5.067,600	71,19	Válido	41,19	1,189207	48,98	78,98	5755378,665	33,6932	170817,2173
50	-91	27,7	5.706,200	75,54	Válido	45,54	1,189207	54,16	84,16	8601594,647	33,6932	255291,7101
50	-91	30,2	6.221,200	78,87	Válido	48,87	1,189207	58,12	88,12	11412013,87	33,6932	338703,7703
50	-91	30,4	6.262,400	79,14	Válido	49,14	1,189207	58,43	88,43	11657499,43	33,6932	345989,6784
50	-91	30,6	6.303,600	79,40	Válido	49,40	1,189207	58,74	88,74	11906098,73	33,6932	353368,0009
50	-91	31,7	6.530,200	80,81	Válido	50,81	1,189207	60,42	90,42	13329532,19	33,6932	395614,907
50	-91	34,3	7.065,800	84,06	Válido	54,06	1,189207	64,29	94,29	17079688,78	33,6932	506917,9768
50	-91	41,5	8.549,000	92,46	Válido	62,46	1,189207	74,28	104,28	30441092,51	33,6932	903478,818
50	-91	41,6	8.569,600	92,57	Válido	62,57	1,189207	74,41	104,41	30658709,01	33,6932	909937,5841
50	-91	45,3	9.331,800	96,60	Válido	66,60	1,189207	79,20	109,20	39351320,83	33,6932	1167930,646
50	-91	46,1	9.496,600	97,45	Válido	67,45	1,189207	80,21	110,21	41397174,09	33,6932	1228650,71
50	-91	46,5	9.579,000	97,87	Válido	67,87	1,189207	80,71	110,71	42442596,74	33,6932	1259678,414
50	-91	47,3	9.743,800	98,71	Válido	68,71	1,189207	81,71	111,71	44578678,89	33,6932	1323076,434
50	-91	48,7	10.032,200	100,16	Válido	70,16	1,189207	83,44	113,44	48462952,97	33,6932	1438360,054
50	-91	52,7	10.856,200	104,19	Válido	74,19	1,189207	88,23	118,23	60601563,81	33,6932	1798628,917
50	-91	54,6	11.247,600	106,05	Válido	76,05	1,189207	90,44	120,44	66916665,47	33,6932	1986058,477
50	-91	55,6	11.453,600	107,02	Válido	77,02	1,189207	91,59	121,59	70384613,6	33,6932	2088985,718
50	-91	57,4	11.824,400	108,74	Válido	78,74	1,189207	93,64	123,64	76879915,16	33,6932	2281763,536
50	-91	58,7	12.092,200	109,96	Válido	79,96	1,189207	95,09	125,09	81774851,31	33,6932	2427043,181
50	-91	59,1	12.174,600	110,34	Válido	80,34	1,189207	95,54	125,54	83315610,58	33,6932	2472772,268
50	-91	67	13.802,000	117,48	Válido	87,48	1,189207	104,03	134,03	117139425,8	33,6932	3476648,874
50	-91	75,7	15.594,200	124,88	Válido	94,88	1,189207	112,83	142,83	162057448,4	33,6932	4809796,884
50	-91	76,2	15.697,200	125,29	Válido	95,29	1,189207	113,32	143,32	164888876,4	33,6932	4893832,477
50	-91	78,6	16.191,600	127,25	Válido	97,25	1,189207	115,65	145,65	178863150,7	33,6932	5308583,06
50	-91	81	16.686,000	129,17	Válido	99,17	1,189207	117,94	147,94	193475770,9	33,6932	5742279,477
50	-91	86	17.716,000	133,10	Válido	103,10	1,189207	122,61	152,61	225990062,4	33,6932	6707289,968
50	-91	86,5	17.819,000	133,49	Válido	103,49	1,189207	123,07	153,07	229396649,2	33,6932	6808396,033
50	-91	100,5	20.703,000	143,89	Válido	113,89	1,189207	135,43	165,43	336435457	33,6932	9985262,814
50	-91	117,8	24.266,800	155,78	Válido	125,78	1,189207	149,58	179,58	500552214,3	33,6932	14856179,12
											Soma dos K0	86594832,71
											Somatoria ^{1/4}	96,4657165
											anterior +30	126,4657165
											Kjc Médio	118,0153197
												88,01531974
												1,257361711
											Ln	0,229015645
											T - T0	12,05309341
											T0	-103,0530934
100	-91	19,6	4.037,600	63,54	Válido	33,54	1,414214	47,44	77,44	5063159,531	29,6932	170515,7925
100	-91	19,7	4.058,200	63,70	Válido	33,70	1,414214	47,66	77,66	5161618,843	29,6932	173831,6801
100	-91	21,6	4.449,600	66,71	Válido	36,71	1,414214	51,91	81,91	7260660,841	29,6932	244522,68
100	-91	23,3	4.799,800	69,28	Válido	39,28	1,414214	55,55	85,55	9522959,833	29,6932	320711,8072
100	-91	25,4	5.232,400	72,34	Válido	42,34	1,414214	59,87	89,87	12849073,06	29,6932	432727,7983

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-91	25,9	5.335,400	73,04	Válido	43,04	1,414214	60,87	90,87	13731036,36	29,6932	462430,3328
100	-91	27,7	5.706,200	75,54	Válido	45,54	1,414214	64,40	94,40	17203189,29	29,6932	579364,6119
100	-91	29,5	6.077,000	77,96	Válido	47,96	1,414214	67,82	97,82	21154353,1	29,6932	712430,8965
100	-91	32	6.592,000	81,19	Válido	51,19	1,414214	72,40	102,40	27468752,87	29,6932	925085,6383
100	-91	32,1	6.612,600	81,32	Válido	51,32	1,414214	72,57	102,57	27741843,46	29,6932	934282,7132
100	-91	32,9	6.777,400	82,32	Válido	52,32	1,414214	74,00	104,00	29984430,54	29,6932	1009807,988
100	-91	33	6.798,000	82,45	Válido	52,45	1,414214	74,18	104,18	30272024,02	29,6932	1019493,487
100	-91	33,4	6.880,400	82,95	Válido	52,95	1,414214	74,88	104,88	31438659,92	29,6932	1058783,153
100	-91	35,8	7.374,800	85,88	Válido	55,88	1,414214	79,02	109,02	38992547,74	29,6932	1313181,056
100	-91	35,9	7.395,400	86,00	Válido	56,00	1,414214	79,19	109,19	39328182,89	29,6932	1324484,491
100	-91	37,6	7.745,600	88,01	Válido	58,01	1,414214	82,04	112,04	45294369,13	29,6932	1525412,186
100	-91	39,6	8.157,600	90,32	Válido	60,32	1,414214	85,30	115,30	52952808,25	29,6932	1783331,142
100	-91	40,1	8.260,600	90,89	Válido	60,89	1,414214	86,11	116,11	54977165,76	29,6932	1851506,936
100	-91	40,6	8.363,600	91,45	Válido	61,45	1,414214	86,91	116,91	57045899,57	29,6932	1921177,225
100	-91	41,1	8.466,600	92,01	Válido	62,01	1,414214	87,70	117,70	59159241,14	29,6932	1992349,802
100	-91	41,3	8.507,800	92,24	Válido	62,24	1,414214	88,02	118,02	60017119,03	29,6932	2021241,194
100	-91	41,3	8.507,800	92,24	Válido	62,24	1,414214	88,02	118,02	60017119,03	29,6932	2021241,194
100	-91	42,3	8.713,800	93,35	Válido	63,35	1,414214	89,59	119,59	64414614,33	29,6932	2169338,917
100	-91	42,7	8.796,200	93,79	Válido	63,79	1,414214	90,21	120,21	66224324,75	29,6932	2230285,882
100	-91	45,6	9.393,600	96,92	Válido	66,92	1,414214	94,64	124,64	80223006,46	29,6932	2701729,906
100	-91	46,6	9.599,600	97,98	Válido	67,98	1,414214	96,13	126,13	85412608,15	29,6932	2876503,986
100	-91	47,6	9.805,600	99,02	Válido	69,02	1,414214	97,61	127,61	90790643,78	29,6932	3057624,095
100	-91	49,2	10.135,200	100,67	Válido	70,67	1,414214	99,95	129,95	99791156,11	29,6932	3360741,049
100	-91	53,7	11.062,200	105,18	Válido	75,18	1,414214	106,32	136,32	127761443,1	29,6932	4302717,226
100	-91	126,4	26.038,400	161,36	Válido	131,36	1,414214	185,78	215,78	1191153925	29,6932	40115377,42
<i>Soma dos K0</i>											84612232,29	
<i>Somatoria^{1/4}</i>											95,90876269	
<i>anterior +30</i>											125,9087627	
<i>Kjc Médio</i>											117,5071551	
<i>Ln</i>											87,50715508	
<i>T - T0</i>											1,250102215	
<i>T0</i>											0,22322532	
<i>T - T0</i>											11,74834861	
<i>T0</i>											-102,7483486	
200	-91	13,8	2.842,800	53,32	Válido	23,32	1,681793	39,22	69,22	2365096,168	14,6932	160965,356
200	-91	20,4	4.202,400	64,83	Válido	34,83	1,681793	58,57	88,57	11767939,21	14,6932	800910,5714
200	-91	23	4.738,000	68,83	Válido	38,83	1,681793	65,31	95,31	18192804,11	14,6932	1238178,484
200	-91	23,2	4.779,200	69,13	Válido	39,13	1,681793	65,81	95,81	18758902,87	14,6932	1276706,427
200	-91	25,4	5.232,400	72,34	Válido	42,34	1,681793	71,20	101,20	25698146,12	14,6932	1748982,259
200	-91	25,6	5.273,600	72,62	Válido	42,62	1,681793	71,68	101,68	26395244,87	14,6932	1796425,889
200	-91	25,8	5.314,800	72,90	Válido	42,90	1,681793	72,15	102,15	27103630,42	14,6932	1844637,684
200	-91	30,2	6.221,200	78,87	Válido	48,87	1,681793	82,20	112,20	45648055,49	14,6932	3106747,032
200	-91	33,9	6.983,400	83,57	Válido	53,57	1,681793	90,09	120,09	65867449,44	14,6932	4482852,574
200	-91	36,9	7.601,400	87,19	Válido	57,19	1,681793	96,18	126,18	85555731,98	14,6932	5822811,367

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
200	-91	38,8	7.992,800	89,40	Válido	59,40	1,681793	99,90	129,90	99611099,32	14,6932	6779401,309	
200	-91	40,9	8.425,400	91,79	Válido	61,79	1,681793	103,92	133,92	116617073,9	14,6932	7936805,724	
200	-91	44,6	9.187,600	95,85	Válido	65,85	1,681793	110,75	140,75	150440598,5	14,6932	10238790,63	
200	-91	44,8	9.228,800	96,07	Válido	66,07	1,681793	111,11	141,11	152411929,2	14,6932	10372956,83	
200	-91	50,7	10.444,200	102,20	Válido	72,20	1,681793	121,42	151,42	217351898,4	14,6932	14792686,31	
Total de Válidos					15							Soma dos K0	72399858,44
Censurados					0							Somatoria^{1/4}	92,24321458
											anterior +30	122,2432146	
											Kjc Médio	114,162709	
											Ln	84,16270898	
											T - T0	1,202324414	
											T0	0,184256695	
												9,697429854	
												-100,6974299	
25	-60	34	7.004,000	83,68990381	Válido					8309416,033	56,6932	146568,1251	
25	-60	40,2	8.281,200	91,00109889	Válido					13846838,74	56,6932	244241,6152	
25	-60	46,9	9.661,400	98,29242087	Válido					21751541,11	56,6932	383671,0771	
25	-60	52	10.712,000	103,4987923	Válido					29182386,91	56,6932	514742,2779	
25	-60	54,2	11.165,200	105,66551	Válido					32778709,71	56,6932	578177,0956	
25	-60	56,1	11.556,600	107,5016279	Válido					36078070,2	56,6932	636373,8543	
25	-60	62,3	12.833,800	113,2863628	Válido					48116672,48	56,6932	848720,3489	
25	-60	67,4	13.884,400	117,8320839	Válido					59513123,99	56,6932	1049740,074	
25	-60	68	14.008,000	118,355397	Válido					60944192,98	56,6932	1074982,414	
25	-60	69	14.214,000	119,2224811	Válido					63371966,48	56,6932	1117805,424	
25	-60	74,6	15.367,600	123,9661244	Válido					77962410,72	56,6932	1375163,348	
25	-60	78,2	16.109,200	126,9220233	Válido					88244955,18	56,6932	1556535,09	
25	-60	81,3	16.747,800	129,4132914	Válido					97673738,69	56,6932	1722847,514	
25	-60	81,4	16.768,400	129,4928569	Válido					97986807,32	56,6932	1728369,669	
25	-60	82,3	16.953,800	130,2067587	Válido					100829603,1	56,6932	1778513,175	
25	-60	90	18.540,000	136,1616686	Válido					127019659,5	56,6932	2240474,333	
25	-60	90,4	18.622,400	136,4639146	Válido					128472366,5	56,6932	2266098,341	
25	-60	100,3	20.661,800	143,7421302	Válido					167373011,6	56,6932	2952259,03	
25	-60	112,2	23.113,200	152,0302601	Válido					221753329,1	56,6932	3911462,558	
25	-60	120,3	24.781,800	157,4223618	Válido					263622577,8	56,6932	4649985,851	
25	-60	123,4	25.420,400	159,4377622	Válido					280701015,2	56,6932	4951228,986	
25	-60	127,4	26.244,400	162,0012346	Válido					303607134	56,6932	5355265,428	
25	-60	129	26.574,000	163,0153367	Válido					313045072,7	56,6932	5521739,34	
25	-60	140,9	29.025,400	170,3684243	Válido					388219815,8	56,6932	6847731,576	
25	-60	141,9	29.231,400	170,9719275	Válido					394939481,5	56,6932	6966258,414	
25	-60	142,5	29.355,000	171,3330091	Válido					399001402,2	56,6932	7037905,82	
25	-60	143,1	29.478,600	171,6933313	Válido					403085934	56,6932	7109952,058	
25	-60	191,8	39.510,800	198,7732376	Válido					811361370,5	56,6932	14311440,71	
25	-60	193,2	39.799,200	199,4973684	Válido					825376005,1	56,6932	14558642,04	
25	-60	261	53.766,000	231,8749663	Válido					1660847927	56,6932	29295363,94	
25	-60	284,9	58.689,400	242,2589524	Válido					2029850558	56,6932	35804127,45	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
Total de Válidos					34							Somatoria^{1/4}	143,8104809
Total de Censurados					0							anterior +30	173,8104809
											Kjc Médio	161,2126828	
												131,2126828	
												1,874466897	
											Ln	0,628324297	
											T - T0	33,06870777	
											T0	-93,06870777	
100	-60	30,4	6.262,400	79,13532713	Válido	49,135327	1,414214	69,48784602	99,48784602	23314998,86	29,6932	785196,5724	
100	-60	57,5	11.845,000	108,8347371	Válido	78,834737	1,414214	111,4891544	141,4891544	154500712,3	29,6932	5203235,499	
100	-60	63,3	13.039,800	114,1919437	Válido	84,191944	1,414214	119,0653886	149,0653886	200975045,1	29,6932	6768386,199	
100	-60	64	13.184,000	114,8216008	Válido	84,821601	1,414214	119,9558582	149,9558582	207055060	29,6932	6973147,387	
100	-60	68,5	14.111,000	118,7897302	Válido	88,78973	1,414214	125,5676406	155,5676406	248605616,8	29,6932	8372476,419	
100	-60	82,8	17.056,800	130,6016845	Válido	100,60168	1,414214	142,2722666	172,2722666	409714187,2	29,6932	13798249,67	
100	-60	86,1	17.736,600	133,1788271	Válido	103,17883	1,414214	145,9168967	175,9168967	453338223,8	29,6932	15267408,83	
100	-60	88,3	18.189,800	134,8695666	Válido	104,86957	1,414214	148,3079634	178,3079634	483791110,8	29,6932	16292993,37	
100	-60	89,4	18.416,400	135,7070374	Válido	105,70704	1,414214	149,4923259	179,4923259	499431115,6	29,6932	16819713,46	
100	-60	94,5	19.467,000	139,5241915	Válido	109,52419	1,414214	154,890597	184,890597	575572736,5	29,6932	19383991,5	
100	-60	102,2	21.053,200	145,0972088	Válido	115,09721	1,414214	162,7720337	192,7720337	701970979,8	29,6932	23640799,23	
100	-60	106,3	21.897,800	147,9790526	Válido	117,97905	1,414214	166,8475762	196,8475762	774960573,9	29,6932	26098924,13	
100	-60	107,7	22.186,200	148,9503273	Válido	118,95033	1,414214	168,2211661	198,2211661	800797219,7	29,6932	26969044,08	
100	-60	112,3	23.133,800	152,0979947	Válido	122,09799	1,414214	172,6726401	202,6726401	888984352,6	29,6932	29938987,8	
100	-60	113	23.278,000	152,5712948	Válido	122,57129	1,414214	173,3419875	203,3419875	902848928,4	29,6932	30405915,44	
100	-60	115,5	23.793,000	154,2497974	Válido	124,2498	1,414214	175,7157486	205,7157486	953328877,3	29,6932	32105966,26	
100	-60	128,1	26.388,600	162,4456832	Válido	132,44568	1,414214	187,3064815	217,3064815	1230867270	29,6932	41452833,29	
100	-60	131,1	27.006,600	164,3368492	Válido	134,33685	1,414214	189,980994	219,980994	1302688631	29,6932	43871614,74	
100	-60	132,7	27.336,200	165,3366263	Válido	135,33663	1,414214	191,3948924	221,3948924	1341903779	29,6932	45192292,47	
100	-60	150,2	30.941,200	175,9011086	Válido	145,90111	1,414214	206,3353265	236,3353265	1812568208	29,6932	61043208,82	
100	-60	153,5	31.621,000	177,8229457	Válido	147,82295	1,414214	209,0532146	239,0532146	1909973757	29,6932	64323607,98	
100	-60	160,8	33.124,800	182,0021978	Válido	152,0022	1,414214	214,9635696	244,9635696	2135302758	29,6932	71912180,5	
100	-60	168,9	34.793,400	186,5298904	Válido	156,52989	1,414214	221,3666939	251,3666939	2401314900	29,6932	80870869,41	
100	-60	191,9	39.531,400	198,8250487	Válido	168,82505	1,414214	238,7546736	268,7546736	3249432548	29,6932	109433558,8	
100	-60	225,7	46.494,200	215,6251377	Válido	185,62514	1,414214	262,5135872	292,5135872	4749054422	29,6932	159937441	
100	-60	230	47.380,000	217,6694742	Válido	187,66947	1,414214	265,4047157	295,4047157	4961746137	29,6932	167100418,2	
100	-60	241,9	49.831,400	223,2294783	Válido	193,22948	1,414214	273,2677489	303,2677489	5576394844	29,6932	187800400,2	
100	-60	265,4	54.672,400	233,8212993	Válido	203,8213	1,414214	288,2468458	318,2468458	6903323956	29,6932	232488379,7	
100	-60	282,6	58.215,600	241,2790915	Válido	211,27909	1,414214	298,7937567	328,7937567	7970509328	29,6932	268428775,9	
100	-60	415,3	85.551,800	292,4923931	Válido	262,49239	1,414214	371,2203023	401,2203023	18990083757	29,6932	639543186,9	
Soma dos K0											2452223204		
Total de Válidos					30							Somatoria^{1/4}	222,5307335
Total de Censurados					0							anterior +30	252,5307335
											Kjc Médio	233,0370412	
												203,0370412	
												2,90052916	

specimen width W, mm	test W, mm	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
											Ln	1,064893189
											T - T0	56,04532856
											T0	-116,0453286
25	-60	38,4	7.910,400	88,9404295	Válido					12068496,95	56,6932	212873,8006
25	-60	46,1	9.496,600	97,45050026	Válido					20698587,05	56,6932	365098,2313
25	-60	55	11.330,000	106,4424727	Válido					34145927,03	56,6932	602293,1679
25	-60	63,6	13.101,600	114,4622208	Válido					50892054,8	56,6932	897674,7617
25	-60	64,1	13.204,600	114,9112701	Válido					51983001,1	56,6932	916917,745
25	-60	77,7	16.006,200	126,5156117	Válido					86774130,33	56,6932	1530591,505
25	-60	78,7	16.212,200	127,3271377	Válido					89729615,31	56,6932	1582722,713
25	-60	87,8	18.086,800	134,4871741	Válido					119193325	56,6932	2102427,186
25	-60	89,1	18.354,600	135,4791497	Válido					123784560,9	56,6932	2183411,077
25	-60	116,3	23.957,800	154,783074	Válido					242450297,2	56,6932	4276532,233
25	-60	128,7	26.512,200	162,8256737	Válido					311263437,1	56,6932	5490313,425
25	-60	129	26.574,000	163,0153367	Válido					313045072,7	56,6932	5521739,34
25	-60	131,7	27.130,200	164,7124768	Válido					329329992,1	56,6932	5808985,771
25	-60	133,7	27.542,200	165,9584285	Válido					341683922,9	56,6932	6026894,282
25	-60	133,7	27.542,200	165,9584285	Válido					341683922,9	56,6932	6026894,282
25	-60	140,7	28.984,200	170,2474669	Válido					386883407,5	56,6932	6824158,937
25	-60	150,4	30.982,400	176,0181809	Válido					454598223,8	56,6932	8018567,02
25	-60	164,6	33.907,600	184,140164	Válido					564499117	56,6932	9957086,865
25	-60	166,1	34.216,600	184,9772959	Válido					576862510,4	56,6932	10175162,28
25	-60	176	36.256,000	190,4100838	Válido					662104687,3	56,6932	11678731,97
25	-60	197,6	40.705,600	201,7562886	Válido					870263138,3	56,6932	15350397,2
25	-60	200,2	41.241,200	203,0792949	Válido					897388435,8	56,6932	15828854,89
25	-60	217,1	44.722,600	211,4771855	Válido					1084646305	56,6932	19131858,94
25	-60	219,5	45.217,000	212,6428931	Válido					1112784613	56,6932	19628184,91
25	-60	234,5	48.307,000	219,7885347	Válido					1297417918	56,6932	22884894,79
25	-60	275,9	56.835,400	238,4017617	Válido					1886277324	56,6932	33271667,93
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
				T. Válidos	26						Soma dos K0	384831333,2
				T. Censurados	5						Somatoria ^{1/4}	140,0611237
											anterior +20	170,0611237
											Kjc Médio	157,7917693
												127,7917693
												1,825596704
											LN	0,601906895
											T - T0	31,67835986
											T0	-91,67835986
25	-40	61,6	12.689,600	112,6481247	Válido					46658633,5	14,6932	3175525,651

specimen width W, mm	test W, mm	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-40	113,2	23.319,200	152,706254	Válido					226707971,9	14,6932	15429448,45
25	-40	136,6	28.139,600	167,7486215	Válido					360038584	14,6932	24503755,75
25	-40	139,3	28.695,800	169,3983471	Válido					377598705,5	14,6932	25698874,68
25	-40	155,4	32.012,400	178,9200939	Válido					491827950	14,6932	33473167,86
25	-40	165,5	34.093,000	184,6428986	Válido					571899775	14,6932	38922751,68
25	-40	195,2	40.211,200	200,5273049	Válido					845620909,1	14,6932	57551854,54
25	-40	203,4	41.900,400	204,695872	Válido					931387856,3	14,6932	63389040,94
25	-40	233,2	48.039,200	219,1784661	Válido					1280816162	14,6932	87170675,01
25	-40	251	51.706,000	227,3895336	Válido					1518086379	14,6932	103318976,1
25	-40	254,5	52.427,000	228,9694303	Válido					1567275792	14,6932	106666743,3
25	-40	264,8	54.548,800	233,5568453	Válido					1716891485	14,6932	116849391,9
25	-40	275,9	56.835,400	238,4017617	Válido					1886277324	14,6932	128377570,9
25	-40	283	58.298,000	241,4497877	Válido					1999074660	14,6932	136054410,2
25	-40	311,7	64.210,200	253,3973165	Válido					2490644869	14,6932	169510036,6
25	-40	349,2	71.935,200	268,2073824	Censurado					0	14,6932	17,90551673
25	-40	483,2	99.539,200	315,498336	Censurado					0	14,6932	17,90551673
25	-40	548,6	113.011,600	336,1719798	Censurado					0	14,6932	17,90551673
25	-40	562,8	115.936,800	340,4949339	Censurado					0	14,6932	17,90551673
25	-40	619,9	127.699,400	357,3505282	Censurado					0	14,6932	17,90551673
25	-40	758,7	156.292,200	395,3380832	Censurado					0	14,6932	17,90551673
25	-40	773,9	159.423,400	399,2785995	Censurado					0	14,6932	17,90551673
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	14,6932	17,90551673
25	-40	1174	241.844,000	491,7763719	Censurado					0	14,6932	17,90551673
25	-40	1337,1	275.442,600	524,826257	Censurado					0	14,6932	17,90551673
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	14,6932	17,90551673
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	14,6932	17,90551673
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	14,6932	17,90551673
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	14,6932	17,90551673
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	14,6932	17,90551673
											<i>Soma dos K0</i>	1110092492
											<i>Somatoria</i> ^{1/4}	182,5323274
											anterior +30	212,5323274
											Kjc Médio	196,5424955
												166,5424955
												2,379178507
											Ln	0,866755263
											T - T0	45,6173295
											T0	-85,6173295
50	-40	49,1	10.114,600	100,5713677	Válido	70,571368	1,189207	83,92397258	113,9239726	49607133,53	31,6932	1565229,561
50	-40	50,6	10.423,600	102,0960332	Válido	72,096033	1,189207	85,73711567	115,7371157	54035039,89	31,6932	1704941,119
50	-40	60,6	12.483,600	111,7300318	Válido	81,730032	1,189207	97,19393529	127,1939353	89239405,14	31,6932	2815727,195
50	-40	93,8	19.322,800	139,0064747	Válido	109,00647	1,189207	129,6312753	159,6312753	282383407,1	31,6932	8909905,186
50	-40	107,4	22.124,400	148,7427309	Válido	118,74273	1,189207	141,2097005	171,2097005	397610758,6	31,6932	12545617,31
50	-40	107,5	22.145,000	148,8119619	Válido	118,81196	1,189207	141,2920304	171,2920304	398538851,2	31,6932	12574900,96

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-40	119	24.514,000	156,5694734	Válido	126,56947	1,189207	150,5173183	180,5173183	513270008,7	31,6932	16194956,92
50	-40	122,7	25.276,200	158,9849049	Válido	128,9849	1,189207	153,3897667	183,3897667	553586572,4	31,6932	17467045,69
50	-40	137,8	28.386,800	168,4838271	Válido	138,48383	1,189207	164,6859525	194,6859525	735573753	31,6932	23209197,97
50	-40	139,9	28.819,400	169,7627757	Válido	139,76278	1,189207	166,2068872	196,2068872	763125672,3	31,6932	24078530,17
50	-40	166,5	34.299,000	185,199892	Válido	155,19989	1,189207	184,5648158	214,5648158	1160367762	31,6932	36612515,06
50	-40	167	34.402,000	185,4777615	Válido	155,47776	1,189207	184,8952602	214,8952602	1168700183	31,6932	36875423,86
50	-40	167	34.402,000	185,4777615	Válido	155,47776	1,189207	184,8952602	214,8952602	1168700183	31,6932	36875423,86
50	-40	168,9	34.793,400	186,5298904	Válido	156,52989	1,189207	186,1464593	216,1464593	1200657450	31,6932	37883755,82
50	-40	187	38.522,000	196,2702219	Válido	166,27022	1,189207	197,7297309	227,7297309	1528579043	31,6932	48230505,06
50	-40	205,3	42.291,800	205,6497022	Válido	175,6497	1,189207	208,8838756	238,8838756	1903792741	31,6932	60069438,9
50	-40	210	43.260,000	207,9903844	Válido	177,99038	1,189207	211,6674315	241,6674315	2007317910	31,6932	63335917,8
50	-40	212,8	43.836,800	209,3723955	Válido	179,3724	1,189207	213,310929	243,310929	2070391272	31,6932	65326040,68
50	-40	217,1	44.722,600	211,4771855	Válido	181,47719	1,189207	215,8139602	245,8139602	2169292611	31,6932	68446626,12
50	-40	219,3	45.175,800	212,545995	Válido	182,546	1,189207	217,0849961	247,0849961	2220850029	31,6932	70073392,07
50	-40	245	50.470,000	224,6552915	Válido	194,65529	1,189207	231,4854576	261,4854576	2871407642	31,6932	90600117,44
50	-40	251,8	51.870,800	227,7516191	Válido	197,75162	1,189207	235,1676324	265,1676324	3058511991	31,6932	96503729,24
50	-40	271,9	56.011,400	236,667277	Válido	206,66728	1,189207	245,7701962	275,7701962	3648521124	31,6932	115119998,1
50	-40	272,7	56.176,200	237,0151894	Válido	207,01519	1,189207	246,1839361	276,1839361	3673151528	31,6932	115897149,2
50	-40	274,2	56.485,200	237,6661524	Válido	207,66615	1,189207	246,958066	276,958066	3719571073	31,6932	117361802,3
50	-40	308,7	63.592,200	252,1749393	Válido	222,17494	1,189207	264,2120186	294,2120186	4873155573	31,6932	153760288,4
50	-40	308,8	63.612,800	252,2157806	Válido	222,21578	1,189207	264,2605874	294,2605874	4876739797	31,6932	153873379,7
50	-40	313,1	64.498,600	253,9657457	Válido	223,96575	1,189207	266,3416583	296,3416583	5032182672	31,6932	158777992,5
50	-40	313,1	64.498,600	253,9657457	Válido	223,96575	1,189207	266,3416583	296,3416583	5032182672	31,6932	158777992,5
50	-40	349,4	71.976,400	268,2841777	Válido	238,28418	1,189207	283,3692395	313,3692395	6447789023	31,6932	203443925,6
50	-40	386,6	79.639,600	282,2048901	Válido	252,20489	1,189207	299,9238498	329,9238498	8091778904	31,6932	255315932,3
50	-40	455,2	93.771,200	306,2208353	Válido	276,22084	1,189207	328,4837827	358,4837827	11642754312	31,6932	367358118,2
											Soma dos K0	2631585517
											Somatoria ^{1/4}	226,4927849
											anterior +30	256,4927849
											Kjc Médio	236,652017
												206,652017
												2,952171671
											Ln	1,082541059
											T - T0	56,97413595
											T0	-96,97413595
100	-40	40	8.240,000	90,77444574	Válido	60,774446	1,414214	85,94804542	115,9480454	54568751,64	29,6932	1837752,47
100	-40	63,5	13.081,000	114,3721994	Válido	84,372199	1,414214	119,3203087	149,3203087	202701738,4	29,6932	6826537,334
100	-40	75,5	15.553,000	124,7116675	Válido	94,711667	1,414214	133,9425246	163,9425246	321865125	29,6932	10839691,41
100	-40	79,1	16.294,600	127,6503036	Válido	97,650304	1,414214	138,0983837	168,0983837	363709280	29,6932	12248908,17
100	-40	81	16.686,000	129,1743008	Válido	99,174301	1,414214	140,2536413	170,2536413	386951541,7	29,6932	13031655,12
100	-40	86,1	17.736,600	133,1788271	Válido	103,17883	1,414214	145,9168967	175,9168967	453338223,8	29,6932	15267408,83
100	-40	91,5	18.849,000	137,2916603	Válido	107,29166	1,414214	151,7333212	181,7333212	530058563,9	29,6932	17851176,83
100	-40	92,1	18.972,600	137,7410614	Válido	107,74106	1,414214	152,3688703	182,3688703	538995314,8	29,6932	18152146,45
100	-40	94,8	19.528,800	139,7454829	Válido	109,74548	1,414214	155,2035504	185,2035504	580238587,3	29,6932	19541126,83

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-40	95,6	19.693,600	140,3338876	Válido	110,33389	1,414214	156,0356802	186,0356802	592782909,3	29,6932	19963591,3	
100	-40	96	19.776,000	140,6271666	Válido	110,62717	1,414214	156,4504394	186,4504394	599110801,1	29,6932	20176700,43	
100	-40	96,4	19.858,400	140,9198354	Válido	110,91984	1,414214	156,8643355	186,8643355	605475893,2	29,6932	20391062,37	
100	-40	99,6	20.517,600	143,2396593	Válido	113,23966	1,414214	160,145062	190,145062	657739929,9	29,6932	22151197,24	
100	-40	102,6	21.135,600	145,3808791	Válido	115,38088	1,414214	163,173204	193,173204	708916958	29,6932	23874724,11	
100	-40	108,2	22.289,200	149,2956798	Válido	119,29568	1,414214	168,7095683	198,7095683	810137725,4	29,6932	27283611,24	
100	-40	110,9	22.845,400	151,1469484	Válido	121,14695	1,414214	171,3276574	201,3276574	861608365,7	29,6932	29017026,31	
100	-40	112,4	23.154,400	152,1656992	Válido	122,1657	1,414214	172,7683886	202,7683886	890957792,4	29,6932	30005448,8	
100	-40	124	25.544,000	159,8249042	Válido	129,8249	1,414214	183,6001402	213,6001402	1136297456	29,6932	38267935,29	
100	-40	141,2	29.087,200	170,5496995	Válido	140,5497	1,414214	198,7672912	228,7672912	1560916520	29,6932	52568147,59	
100	-40	142,5	29.355,000	171,3330091	Válido	141,33301	1,414214	199,8750583	229,8750583	1596005609	29,6932	53749868,96	
100	-40	153,4	31.600,400	177,7650134	Válido	147,76501	1,414214	208,971286	238,971286	1906981420	29,6932	64222832,85	
100	-40	160,5	33.063,000	181,8323404	Válido	151,83234	1,414214	214,7233549	244,7233549	2125774224	29,6932	71591280,96	
100	-40	166,8	34.360,800	185,3666637	Válido	155,36666	1,414214	219,7216429	249,7216429	2330726696	29,6932	78493617,95	
100	-40	167,8	34.566,800	185,9214888	Válido	155,92149	1,414214	220,5062841	250,5062841	2364198205	29,6932	79620862,84	
100	-40	175,4	36.132,400	190,085244	Válido	160,08524	1,414214	226,3947233	256,3947233	2627031019	29,6932	88472479,2	
100	-40	186,7	38.460,200	196,1127227	Válido	166,11272	1,414214	234,9188653	264,9188653	3045590982	29,6932	102568634,6	
100	-40	187,7	38.666,200	196,6372294	Válido	166,63723	1,414214	235,6606299	265,6606299	3084239795	29,6932	103870239,5	
100	-40	214,1	44.104,600	210,0109521	Válido	180,01095	1,414214	254,5739298	284,5739298	4200062055	29,6932	141448616,4	
100	-40	272,3	56.093,800	236,8412971	Válido	206,8413	1,414214	292,5177676	322,5177676	7321650625	29,6932	246576678,3	
100	-40	282,2	58.133,200	241,1082744	Válido	211,10827	1,414214	298,5521848	328,5521848	7944764256	29,6932	267561739,9	
					Válidos	30						Somatoria	1697472700
					Censurados	0						Somatoria ^{1/4}	202,9788088
											K0	232,9788088	
											Kjc Médio	215,1978652	
												185,1978652	
												2,645683788	
											Ln	0,972929553	
											T-T0	51,20528238	
											T0	-91,20528238	
25	-20	78,9	16.253,400	127,488823	Válido					90327358,3	2,6932	33539045,86	
25	-20	102,7	21.156,200	145,4517102	Válido					177664837,2	2,6932	65967933,01	
25	-20	258,8	53.312,800	230,8956474	Válido					1628853817	2,6932	604802397,6	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609	
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609	
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609	
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609	
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609	
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609	
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609	
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609	
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609	
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609	
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609	
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609	
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609	
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609	
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609	
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
Total de Válidos					3							Soma dos K0	704312031,9
Total de Censurados					28							Somatoria ^{1/4}	162,9075742
											anterior +30	192,9075742	
											Kjc Médio	178,6368707	
												148,6368707	
												2,123383868	
											Ln	0,75301098	
											T - T0	39,63096788	
											T0	-59,63096788	
50	-20	139	28.634,000	169,2158385	Válido	139,21584	1,189207	165,5564657	195,5564657	751250174,2	15,6932	47871063,53	
50	-20	162	33.372,000	182,6800482	Válido	152,68005	1,189207	181,5681996	211,5681996	1086823821	15,6932	69254442,78	
50	-20	168,1	34.628,600	186,0876138	Válido	156,08761	1,189207	185,6205009	215,6205009	1187144981	15,6932	75647094,36	
50	-20	180,6	37.203,600	192,8823476	Válido	162,88235	1,189207	193,7008466	223,7008466	1407751749	15,6932	89704569,46	
50	-20	195,2	40.211,200	200,5273049	Válido	170,5273	1,189207	202,7922843	232,7922843	1691241818	15,6932	107769085,9	
50	-20	256	52.736,000	229,6432015	Válido	199,6432	1,189207	237,4171157	267,4171157	3177225931	15,6932	202458767,5	
50	-20	259	53.354,000	230,984848	Válido	200,98485	1,189207	239,0126112	269,0126112	3263497366	15,6932	207956144,4	
50	-20	291	59.946,000	244,8387224	Válido	214,83872	1,189207	255,4877373	285,4877373	4260692975	15,6932	271499310,2	
50	-20	326,5	67.259,000	259,3434017	Válido	229,3434	1,189207	272,7368051	302,7368051	5533182502	15,6932	352584718,4	
50	-20	328,8	67.732,800	260,2552593	Válido	230,25526	1,189207	273,8211926	303,8211926	5621707313	15,6932	358225684,6	
50	-20	330	67.980,000	260,7297451	Válido	230,72975	1,189207	274,3854546	304,3854546	5668189237	15,6932	361187599,5	
50	-20	362,3	74.633,800	273,191874	Válido	243,19187	1,189207	289,2055068	319,2055068	6995620356	15,6932	445773988,5	
50	-20	380	78.280,000	279,7856322	Válido	249,78563	1,189207	297,0468511	327,0468511	7785738474	15,6932	496121789,9	
50	-20	392	80.752,000	284,1689638	Válido	254,16896	1,189207	302,2595402	332,2595402	8346801192	15,6932	531873753,7	
50	-20	417	85.902,000	293,0904297	Válido	263,09043	1,189207	312,8690109	342,8690109	9581868292	15,6932	610574535	
50	-20	447	92.082,000	303,4501607	Válido	273,45016	1,189207	325,1888766	355,1888766	11182598367	15,6932	712576043,6	
50	-20	480	98.880,000	314,4519041	Censurado	284,4519	1,189207	338,2722282	368,2722282	0	15,6932	23,01644661	
50	-20	486,8	100.280,800	316,6714386	Censurado	286,67144	1,189207	340,9117144	370,9117144	0	15,6932	23,01644661	
50	-20	502	103.412,000	321,5773624	Censurado	291,57736	1,189207	346,7458739	376,7458739	0	15,6932	23,01644661	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-20	512	105.472,000	324,7645301	Censurado	294,76453	1,189207	350,5360764	380,5360764	0	15,6932	23,01644661	
50	-20	555	114.330,000	338,127195	Censurado	308,1272	1,189207	366,4270526	396,4270526	0	15,6932	23,01644661	
50	-20	648,8	133.652,800	365,5855577	Censurado	335,58556	1,189207	399,0807329	429,0807329	0	15,6932	23,01644661	
50	-20	655,6	135.053,600	367,4963945	Censurado	337,49639	1,189207	401,3531137	431,3531137	0	15,6932	23,01644661	
50	-20	695	143.170,000	378,3781178	Censurado	348,37812	1,189207	414,2937364	444,2937364	0	15,6932	23,01644661	
50	-20	807	166.242,000	407,7278504	Censurado	377,72785	1,189207	449,1966472	479,1966472	0	15,6932	23,01644661	
50	-20	820	168.920,000	410,9987835	Censurado	380,99878	1,189207	453,0864641	483,0864641	0	15,6932	23,01644661	
50	-20	1017	209.502,000	457,7138844	Censurado	427,71388	1,189207	508,6403945	538,6403945	0	15,6932	23,01644661	
50	-20	1266	260.796,000	510,6818971	Censurado	480,6819	1,189207	571,6303321	601,6303321	0	15,6932	23,01644661	
50	-20	1582	325.892,000	570,8695122	Censurado	540,86951	1,189207	643,2058722	673,2058722	0	15,6932	23,01644661	
50	-20	1619	333.514,000	577,5067099	Censurado	547,50671	1,189207	651,0988749	681,0988749	0	15,6932	23,01644661	
Total de Válidos					16							Soma dos K0	4941078914
Total de Censurados					14							Somatoria ^{1/4}	265,1279095
											anterior +30	295,1279095	
											Kjc Médio	271,9027046	
												241,9027046	
												3,455752923	
											Ln	1,240040356	
											T - T0	65,26332395	
											T0	-85,26332395	
100	-20	58,6	12.071,600	109,8708333	Válido	79,870833	1,414214	112,9544156	142,9544156	162784425,9	28,6932	5673275,408	
100	-20	74,4	15.326,400	123,7998384	Válido	93,799838	1,414214	132,6530037	162,6530037	309648052,5	28,6932	10791687,66	
100	-20	82,8	17.056,800	130,6016845	Válido	100,60168	1,414214	142,2722666	172,2722666	409714187,2	28,6932	14279138,86	
100	-20	100,6	20.723,600	143,956938	Válido	113,95694	1,414214	161,1594473	191,1594473	674563870,4	28,6932	23509537,81	
100	-20	112,2	23.113,200	152,0302601	Válido	122,03026	1,414214	172,5768489	202,5768489	887013316,4	28,6932	30913711,83	
100	-20	123,7	25.482,200	159,6314505	Válido	129,63145	1,414214	183,3265555	213,3265555	1129539737	28,6932	39366112,43	
100	-20	130,8	26.944,800	164,1487131	Válido	134,14871	1,414214	189,7149294	219,7149294	1295406387	28,6932	45146807,85	
100	-20	133,4	27.480,400	165,7721328	Válido	135,77213	1,414214	192,0107915	222,0107915	1359260047	28,6932	47372201,33	
100	-20	186,1	38.336,600	195,7973442	Válido	165,79734	1,414214	234,4728528	264,4728528	3022527562	28,6932	105339507,7	
100	-20	188,4	38.810,400	197,0035533	Válido	167,00355	1,414214	236,17869	266,17869	3111450080	28,6932	108438587,5	
100	-20	191,7	39.490,200	198,721413	Válido	168,72141	1,414214	238,6081106	268,6081106	3241461048	28,6932	112969660	
100	-20	193	39.758,000	199,3940822	Válido	169,39408	1,414214	239,5594084	269,5594084	3293464052	28,6932	114782040,7	
100	-20	212,3	43.733,800	209,1262776	Válido	179,12628	1,414214	253,3228112	283,3228112	4118102913	28,6932	143521911,6	
100	-20	212,5	43.775,000	209,2247595	Válido	179,22476	1,414214	253,4620856	283,4620856	4127166757	28,6932	143837799,8	
100	-20	223	45.938,000	214,3315189	Válido	184,33152	1,414214	260,684134	290,684134	4618047528	28,6932	160945712,9	
100	-20	224,4	46.226,400	215,0032558	Válido	185,00326	1,414214	261,6341134	291,6341134	4685732340	28,6932	163304627,6	
100	-20	231,2	47.627,200	218,2365689	Válido	188,23657	1,414214	266,2067087	296,2067087	5021991619	28,6932	175023755,4	
100	-20	247,3	50.943,800	225,7073326	Válido	195,70733	1,414214	276,7719641	306,7719641	5867976724	28,6932	204507574,1	
100	-20	288,5	59.431,000	243,7847411	Válido	213,78474	1,414214	302,3372803	332,3372803	8355391580	28,6932	291197621	
100	-20	299,8	61.758,800	248,5131787	Válido	218,51318	1,414214	309,0243009	339,0243009	9119489559	28,6932	317827553,5	
100	-20	301,3	62.067,800	249,1341004	Válido	219,1341	1,414214	309,9024168	339,9024168	9223587087	28,6932	321455504,7	
100	-20	315,9	65.075,400	255,0988044	Válido	225,0988	1,414214	318,337782	348,337782	10269581464	28,6932	357909939,1	
100	-20	318,2	65.549,200	256,02578	Válido	226,02578	1,414214	319,6487235	349,6487235	10439793239	28,6932	363842068,5	
100	-20	324,6	66.867,600	258,5877027	Válido	228,5877	1,414214	323,2718294	353,2718294	10921227238	28,6932	380620747,7	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-20	334,9	68.989,400	262,6583332	Válido	232,65833	1,414214	329,0285702	359,0285702	11720184299	28,6932	408465570,2
100	-20	371,9	76.611,400	276,7876442	Válido	246,78764	1,414214	349,0104335	379,0104335	14837257732	28,6932	517100139,8
100	-20	373,5	76.941,000	277,3824075	Válido	247,38241	1,414214	349,8515558	379,8515558	14980808012	28,6932	522103077,1
100	-20	384,1	79.124,600	281,2909526	Válido	251,29095	1,414214	355,3790732	385,3790732	15950246598	28,6932	555889430,2
100	-20	588,7	121.272,200	348,2415828	Válido	318,24158	1,414214	450,0615625	480,0615625	41028694146	28,6932	1429910019
100	-20	683,1	140.718,600	375,1247792	Censurado	345,12478	1,414214	488,0801435	518,0801435	0	28,6932	17,80269681
Total de Válidos					29						Soma dos K0	7116045339
Total de Censurados					1						Somatoria ^{1/4}	290,4421725
											anterior +30	320,4421725
											Kjc Médio	294,9994382
												264,9994382
												3,78570626
											Ln	1,331232464
											T - T0	70,06276458
											T0	-90,06276458
200	-20	112	23.072,000	151,8947004	Válido	121,8947	1,681793	205,0016332	235,0016332	1766156905	14,6932	120202332
200	-20	117	24.102,000	155,2481884	Válido	125,24819	1,681793	210,6415053	240,6415053	1968683034	14,6932	133985995,8
200	-20	125	25.750,000	160,4680654	Válido	130,46807	1,681793	219,4202569	249,4202569	2317965016	14,6932	157757671,3
200	-20	162	33.372,000	182,6800482	Válido	152,68005	1,681793	256,7762104	286,7762104	4347295285	14,6932	295871238,8
200	-20	162	33.372,000	182,6800482	Válido	152,68005	1,681793	256,7762104	286,7762104	4347295285	14,6932	295871238,8
200	-20	166	34.196,000	184,921605	Válido	154,92161	1,681793	260,5460446	290,5460446	4608270224	14,6932	313632852,2
200	-20	168	34.608,000	186,0322553	Válido	156,03226	1,681793	262,4139282	292,4139282	4741846925	14,6932	322723908
200	-20	175	36.050,000	189,8683755	Válido	159,86838	1,681793	268,8654877	298,8654877	5225648986	14,6932	355650844,3
200	-20	179	36.874,000	192,0260399	Válido	162,02604	1,681793	272,4942323	302,4942323	5513523842	14,6932	375243231
200	-20	179	36.874,000	192,0260399	Válido	162,02604	1,681793	272,4942323	302,4942323	5513523842	14,6932	375243231
200	-20	187	38.522,000	196,2702219	Válido	166,27022	1,681793	279,6320671	309,6320671	6114316172	14,6932	416132372,3
200	-20	199	40.994,000	202,4697508	Válido	172,46975	1,681793	290,0583904	320,0583904	7078508056	14,6932	481754012,5
200	-20	234	48.204,000	219,5540936	Válido	189,55409	1,681793	318,7907155	348,7907155	10328152886	14,6932	702920595
200	-20	236	48.616,000	220,4903626	Válido	190,49036	1,681793	320,3653261	350,3653261	10533726085	14,6932	716911638,4
200	-20	239	49.234,000	221,8873588	Válido	191,88736	1,681793	322,7147843	352,7147843	10846146035	14,6932	738174532,1
Válidos					15						Somatoria	5802075694
Censurados					0						Somatoria ^{1/4}	275,9915894
											K0	305,9915894
											Kjc Médio	281,8147262
												251,8147262
												3,597353231
											Ln	1,280198362
											T-T0	67,37683977
											T0	-87,37683977

specimen width W, mm	test W, mm	fracture resistance Jo, N/mm	temperature centigrade	E*Jc	Raiz(E*Jc)	Limite	Jc - 30	Conv Pol	Mult	Mult + 30	Kjc-30 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
Resumo do Kmin 30													
-91°C													
		Esp		T-T0		T0		Válidos		Censurados			
		25		6,708442998		-97,708443		31		0			
		50		12,05309341		-103,0530934		34		0			
		100		11,74834861		-102,7483486		30		0			
		200		9,697429854		-100,6974299		15		0			
-60°C													
		Esp		T-T0		T0		Válidos		Censurados			
		25		31,67835986		-91,67835986		57		5			
		50		33,06870777		-93,06870777		34		0			
		100		56,04532856		-116,0453286		30		0			
-40°C													
		Esp		T-T0		T0		Válidos		Censurados			
		25		45,6173295		-85,6173295		15		15			
		50		56,97413595		-96,97413595		32		0			
		100		51,20528238		-91,20528238		30		0			
-20°C													
		Esp		T-T0		T0		Válidos		Censurados			
		25		39,63096788		-59,63096788		3		28			
		50		65,26332395		-85,26332395		16		14			
		100		70,06276458		-90,06276458		29		1			
		200		67,37683977		-87,37683977		15		0			

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
25	-91	19,9	0,020	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513	
25	-91	21,3	0,021	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676	
25	-91	23,1	0,023	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965	
25	-91	23,7	0,024	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925	
25	-91	29,1	0,291	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273	
25	-91	29,4	0,029	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538	
25	-91	38,6	0,039	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933	
25	-91	39,7	0,040	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432	
25	-91	42,3	0,042	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831	
25	-91	46,3	0,046	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58	
25	-91	47,3	0,473	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849	
25	-91	48,9	0,489	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208	
25	-91	51,4	0,514	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337	
25	-91	52	0,052	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747	
25	-91	55,9	0,056	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774	
25	-91	56,6	0,566	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202	
25	-91	59,4	0,594	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94	
25	-91	63,3	0,063	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009	
25	-91	68,5	0,069	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141	
25	-91	70,2	0,070	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584	
25	-91	70,6	0,071	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362	
25	-91	71,4	0,071	14.708,400	121,28	Válido					105211635	30,6932	3427848,349	
25	-91	76	0,076	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922	
25	-91	76,5	0,077	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047	
25	-91	76,6	0,766	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954	
25	-91	76,8	0,077	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083	
25	-91	77	0,077	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66	
25	-91	77,2	0,077	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718	
25	-91	93,9	0,939	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01	
25	-91	112,8	0,113	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59	
25	-91	124,3	0,124	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81	
Total de Válidos						31							<i>Soma dos K0</i>	86037559,23
Total de Censurados						0							Somatoria^{1/4}	96,31014138
												anterior +20	116,3101414	
												Kjc Médio	107,873373	
												KjcMedio - 30	77,87337299	
												-70	1,112476757	
												Ln	0,106588842	
												T - T0	5,609770771	
												T0	-96,60977077	
50	-91	14,9	0,149	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238	
50	-91	18,3	0,183	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082	
50	-91	18,8	0,188	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199	
50	-91	20,2	0,202	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293	
50	-91	22,4	0,224	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-91	24,6	0,246	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697	
50	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597	
50	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768	
50	-91	30,4	0,304	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514	
50	-91	30,6	0,306	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749	
50	-91	31,7	0,317	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956	
50	-91	34,3	0,343	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456	
50	-91	41,5	0,415	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782	
50	-91	41,6	0,416	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143	
50	-91	45,3	0,453	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134	
50	-91	46,1	0,461	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339	
50	-91	46,5	0,465	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53	
50	-91	47,3	0,473	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211	
50	-91	48,7	0,487	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848	
50	-91	52,7	0,527	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821	
50	-91	54,6	0,546	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685	
50	-91	55,6	0,556	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766	
50	-91	57,4	0,574	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204	
50	-91	58,7	0,587	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154	
50	-91	59,1	0,591	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411	
50	-91	67	0,670	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081	
50	-91	75,7	0,757	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655	
50	-91	76,2	0,762	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988	
50	-91	78,6	0,786	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85	
50	-91	81	0,810	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651	
50	-91	86	0,860	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58	
50	-91	86,5	0,865	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447	
50	-91	100,5	1,005	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05	
50	-91	117,8	1,178	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14	
Total de Válidos						34							<i>Soma dos K0</i>	131341550,9
Total de Censurados						0							<i>Somatoria^{1/4}</i>	107,0534173
													anterior +20	127,0534173
													Kjc Médio	117,6755379
													KjcMedio - 30	87,67553792
													-70	1,252507685
													Ln	0,225147689
													T - T0	11,84952289
													T0	-102,8495229
100	-91	19,6	0,196	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238	
100	-91	19,7	0,197	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394	
100	-91	21,6	0,216	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417	
100	-91	23,3	0,233	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288	
100	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306	
100	-91	25,9	0,259	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394	
100	-91	29,5	0,295	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764	
100	-91	32	0,320	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786	
100	-91	32,1	0,321	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622	
100	-91	32,9	0,329	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551	
100	-91	33	0,330	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606	
100	-91	33,4	0,334	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893	
100	-91	35,8	0,358	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8	
100	-91	35,9	0,359	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865	
100	-91	37,6	0,376	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563	
100	-91	39,6	0,396	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659	
100	-91	40,1	0,401	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191	
100	-91	40,6	0,406	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782	
100	-91	41,1	0,411	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979	
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851	
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851	
100	-91	42,3	0,423	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732	
100	-91	42,7	0,427	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546	
100	-91	45,6	0,456	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886	
100	-91	46,6	0,466	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784	
100	-91	47,6	0,476	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644	
100	-91	49,2	0,492	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097	
100	-91	53,7	0,537	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728	
100	-91	126,4	1,264	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33	
Total de Válidos						30							<i>Soma dos K0</i>	135856648,7
Total de Censurados						0							<i>Somatoria^{1/4}</i>	107,9618267
													anterior +20	127,9618267
													Kjc Médio	118,5043707
													KjcMedio - 30	88,50437072
													-70	1,264348153
													Ln	0,234556695
													T - T0	12,34471888
													T0	-103,3447189
200	-91	13,8	0,138	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716	
200	-91	20,4	0,204	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78	
200	-91	23	0,230	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622	
200	-91	23,2	0,232	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806	
200	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051	
200	-91	25,6	0,256	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041	
200	-91	25,8	0,258	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143	
200	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331	
200	-91	33,9	0,339	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802	
200	-91	36,9	0,369	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08	
200	-91	38,8	0,388	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
200	-91	40,9	0,409	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07	
200	-91	44,6	0,446	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11	
200	-91	44,8	0,448	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46	
200	-91	50,7	0,507	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39	
Total de Válidos						15							<i>Soma dos K0</i>	136387006,3
Total de Censurados						0							<i>Somatoria</i> ^{1/4}	108,0670383
													anterior +20	128,0670383
													Kjc Médio	118,6003657
													KjcMedio - 30	88,60036572
													-70	1,26571951
													Ln	0,235640743
													T - T0	12,40177232
													T0	-103,4017723
25	-60	34	34.000,000	7.004,000	83,68990381	Válido					16454412,17	56,6932	290236,0808	
25	-60	40,2	40.200,000	8.281,200	91,00109889	Válido					25413254,26	56,6932	448259,302	
25	-60	46,9	46.900,000	9.661,400	98,29242087	Válido					37573260,89	56,6932	662747,2236	
25	-60	52	52.000,000	10.712,000	103,4987923	Válido					48609457,63	56,6932	857412,4874	
25	-60	54,2	54.200,000	11.165,200	105,66551	Válido					53854750,56	56,6932	949933,1587	
25	-60	56,1	56.100,000	11.556,600	107,5016279	Válido					58622526,43	56,6932	1034031,003	
25	-60	62,3	62.300,000	12.833,800	113,2863628	Válido					75730816,98	56,6932	1335800,713	
25	-60	67,4	67.400,000	13.884,400	117,8320839	Válido					91606273,8	56,6932	1615824,716	
25	-60	68	68.000,000	14.008,000	118,355397	Válido					93582099,2	56,6932	1650675,905	
25	-60	69	69.000,000	14.214,000	119,2224811	Válido					96926008,89	56,6932	1709658,458	
25	-60	74,6	74.600,000	15.367,600	123,9661244	Válido					116833508,7	56,6932	2060802,86	
25	-60	78,2	78.200,000	16.109,200	126,9220233	Válido					130697919,3	56,6932	2305354,421	
25	-60	81,3	81.300,000	16.747,800	129,4132914	Válido					143311265,7	56,6932	2527838,713	
25	-60	81,4	81.400,000	16.768,400	129,4928569	Válido					143728585,3	56,6932	2535199,73	
25	-60	82,3	82.300,000	16.953,800	130,2067587	Válido					147513890,6	56,6932	2601967,971	
25	-60	90	90.000,000	18.540,000	136,1616686	Válido					182075439,7	56,6932	3211592,214	
25	-60	90,4	90.400,000	18.622,400	136,4639146	Válido					183977848,2	56,6932	3245148,416	
25	-60	100,3	100.300,000	20.661,800	143,7421302	Válido					234460859,4	56,6932	4135608,14	
25	-60	112,2	112.200,000	23.113,200	152,0302601	Válido					303874261,2	56,6932	5359977,232	
25	-60	120,3	120.300,000	24.781,800	157,4223618	Válido					356639656,8	56,6932	6290695,476	
25	-60	123,4	123.400,000	25.420,400	159,4377622	Válido					378025952,7	56,6932	6667924,066	
25	-60	127,4	127.400,000	26.244,400	162,0012346	Válido					406601035,8	56,6932	7171954,235	
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475	
25	-60	140,9	140.900,000	29.025,400	170,3684243	Válido					511242082,6	56,6932	9017696,7	
25	-60	141,9	141.900,000	29.231,400	170,9719275	Válido					519499100,1	56,6932	9163340,579	
25	-60	142,5	142.500,000	29.355,000	171,3330091	Válido					524486930,2	56,6932	9251319,915	
25	-60	143,1	143.100,000	29.478,600	171,6933313	Válido					529499988,6	56,6932	9339744,247	
25	-60	191,8	191.800,000	39.510,800	198,7732376	Válido					1021433322	56,6932	18016857,79	
25	-60	193,2	193.200,000	39.799,200	199,4973684	Válido					1038083632	56,6932	18310549,27	
25	-60	261	261.000,000	53.766,000	231,8749663	Válido					2015202002	56,6932	35545744,5	
25	-60	284,9	284.900,000	58.689,400	242,2589524	Válido					2440265341	56,6932	43043351,6	
Total de Válidos						31								

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
				Total de Censurados		0								
50	-60	46,7	46.700,000	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473	
50	-60	48	48.000,000	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099	
50	-60	49,9	49.900,000	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382	
50	-60	52,9	52.900,000	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894	
50	-60	59,4	59.400,000	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046	
50	-60	63,1	63.100,000	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323	
50	-60	68,1	68.100,000	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889	
50	-60	68,2	68.200,000	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856	
50	-60	69,2	69.200,000	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228	
50	-60	75,1	75.100,000	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502	
50	-60	76,2	76.200,000	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988	
50	-60	76,5	76.500,000	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749	
50	-60	80,6	80.600,000	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779	
50	-60	81,9	81.900,000	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736	
50	-60	82,9	82.900,000	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962	
50	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309	
50	-60	86,2	86.200,000	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153	
50	-60	94,4	94.400,000	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48	
50	-60	95,1	95.100,000	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2	
50	-60	96,8	96.800,000	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39	
50	-60	97	97.000,000	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87	
50	-60	98,6	98.600,000	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59	
50	-60	109,7	109.700,000	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83	
50	-60	112,9	112.900,000	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06	
50	-60	127,4	127.400,000	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34	
50	-60	129,1	129.100,000	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35	
50	-60	129,9	129.900,000	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43	
50	-60	142,3	142.300,000	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34	
50	-60	147,4	147.400,000	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19	
50	-60	147,8	147.800,000	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18	
50	-60	163,2	163.200,000	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44	
50	-60	164,7	164.700,000	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33	
50	-60	176,8	176.800,000	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7	
50	-60	198	198.000,000	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42	
Total de Válidos						34							<i>Soma dos K0</i>	575512757,5
Total de Censurados						0							<i>Somatoria^{1/4}</i>	154,8865616

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
												anterior +20	174,8865616
												Kjc Médio	161,3184988
												KjcMedio - 30	131,3184988
												-70	1,875978554
												Ln	0,629130419
												T - TO	33,11113395
												TO	-93,11113395
100	-60	30,4	30.400,000	6.262,400	79,13532713	Válido	59,135327	1,414214	83,62998164	103,6299816	48915669,93	29,6932	1647369,429
100	-60	57,5	57.500,000	11.845,000	108,8347371	Válido	88,834737	1,414214	125,63129	145,63129	249110066,1	29,6932	8389465,135
100	-60	63,3	63.300,000	13.039,800	114,1919437	Válido	94,191944	1,414214	133,2075242	153,2075242	314858213,1	29,6932	10603714,42
100	-60	64	64.000,000	13.184,000	114,8216008	Válido	94,821601	1,414214	134,0979938	154,0979938	323362104,1	29,6932	10890106,29
100	-60	68,5	68.500,000	14.111,000	118,7897302	Válido	98,78973	1,414214	139,7097763	159,7097763	380984396	29,6932	12830695,11
100	-60	82,8	82.800,000	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	29,6932	20158116,65
100	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23
100	-60	88,3	88.300,000	18.189,800	134,8695666	Válido	114,86957	1,414214	162,450099	182,450099	696433929,9	29,6932	23454323,88
100	-60	89,4	89.400,000	18.416,400	135,7070374	Válido	115,70704	1,414214	163,6344616	183,6344616	716966868,3	29,6932	24145826,93
100	-60	94,5	94.500,000	19.467,000	139,5241915	Válido	119,52419	1,414214	169,0327326	189,0327326	816362880,3	29,6932	27493260,42
100	-60	102,2	102.200,000	21.053,200	145,0972088	Válido	125,09721	1,414214	176,9141693	196,9141693	979603820,3	29,6932	32990847,07
100	-60	106,3	106.300,000	21.897,800	147,9790526	Válido	127,97905	1,414214	180,9897118	200,9897118	1073039117	29,6932	36137537,13
100	-60	107,7	107.700,000	22.186,200	148,9503273	Válido	128,95033	1,414214	182,3633017	202,3633017	1105986399	29,6932	37247127,27
100	-60	112,3	112.300,000	23.133,800	152,0979947	Válido	132,09799	1,414214	186,8147757	206,8147757	1217993278	29,6932	41019266,28
100	-60	113	113.000,000	23.278,000	152,5712948	Válido	132,57129	1,414214	187,4841231	207,4841231	1235543338	29,6932	41610312,73
100	-60	115,5	115.500,000	23.793,000	154,2497974	Válido	134,2498	1,414214	189,8578842	209,8578842	1299315284	29,6932	43758008,04
100	-60	128,1	128.100,000	26.388,600	162,4456832	Válido	142,44568	1,414214	201,4486171	221,4486171	1646861822	29,6932	55462591,51
100	-60	131,1	131.100,000	27.006,600	164,3368492	Válido	144,33685	1,414214	204,1231297	224,1231297	1736076561	29,6932	58467142,68
100	-60	132,7	132.700,000	27.336,200	165,3366263	Válido	145,33663	1,414214	205,537028	225,537028	1784679727	29,6932	60103987,67
100	-60	150,2	150.200,000	30.941,200	175,9011086	Válido	155,90111	1,414214	220,4774621	240,4774621	2362962366	29,6932	79579242,59
100	-60	153,5	153.500,000	31.621,000	177,8229457	Válido	157,82295	1,414214	223,1953502	243,1953502	2481650230	29,6932	83576382,15
100	-60	160,8	160.800,000	33.124,800	182,0021978	Válido	162,0022	1,414214	229,1057052	249,1057052	2755139650	29,6932	92786888,93
100	-60	168,9	168.900,000	34.793,400	186,5298904	Válido	166,52989	1,414214	235,5088295	255,5088295	3076300640	29,6932	103602866,7
100	-60	191,9	191.900,000	39.531,400	198,8250487	Válido	178,82505	1,414214	252,8968092	272,8968092	4090471768	29,6932	137757862,7
100	-60	225,7	225.700,000	46.494,200	215,6251377	Válido	195,62514	1,414214	276,6557228	296,6557228	5858124988	29,6932	197288436
100	-60	230	230.000,000	47.380,000	217,6694742	Válido	197,66947	1,414214	279,5468513	299,5468513	6106866407	29,6932	205665485,9
100	-60	241,9	241.900,000	49.831,400	223,2294783	Válido	203,22948	1,414214	287,4098845	307,4098845	6823493794	29,6932	229799879,9
100	-60	265,4	265.400,000	54.672,400	233,8212993	Válido	213,8213	1,414214	302,3889814	322,3889814	8361108288	29,6932	281583267,8
100	-60	282,6	282.600,000	58.215,600	241,2790915	Válido	221,27909	1,414214	312,9358923	332,9358923	9590064104	29,6932	322971727,7
100	-60	415,3	415.300,000	85.551,800	292,4923931	Válido	272,49239	1,414214	385,3624379	405,3624379	22053499959	29,6932	742712134,7
					Total de Válidos	30						Soma dos K0	3045837511
					Total de Censurados	0						Somatoria ^{1/4}	234,9236191
												anterior +20	254,9236191
												Kjc Médio	234,3443101
												KjcMedio - 30	204,3443101
												-70	2,91920443
												Ln	1,071311124

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
												T - T0	56,38310443
												T0	-116,3831044
25	-60	38,4	38.400,000	7.910,400	88,9404295	Válido					22588944,53	56,6932	398441,8684
25	-60	46,1	46.100,000	9.496,600	97,45050026	Válido					35982961,89	56,6932	634696,258
25	-60	55	55.000,000	11.330,000	106,4424727	Válido					55835283,59	56,6932	984867,3843
25	-60	63,6	63.600,000	13.101,600	114,4622208	Válido					79621912,89	56,6932	1404434,974
25	-60	64,1	64.100,000	13.204,600	114,9112701	Válido					81146751,92	56,6932	1431331,305
25	-60	77,7	77.700,000	16.006,200	126,5156117	Válido					128722084,2	56,6932	2270503,061
25	-60	78,7	78.700,000	16.212,200	127,3271377	Válido					132689998,7	56,6932	2340492,311
25	-60	87,8	87.800,000	18.086,800	134,4871741	Válido					171801655	56,6932	3030374,983
25	-60	89,1	89.100,000	18.354,600	135,4791497	Válido					177833800,3	56,6932	3136774,786
25	-60	116,3	116.300,000	23.957,800	154,783074	Válido					330020888	56,6932	5821172,346
25	-60	128,7	128.700,000	26.512,200	162,8256737	Válido					416126261,3	56,6932	7339967,779
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475
25	-60	131,7	131.700,000	27.130,200	164,7124768	Válido					438554837,8	56,6932	7735580,948
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	140,7	140.700,000	28.984,200	170,2474669	Válido					509599080,2	56,6932	8988716,11
25	-60	150,4	150.400,000	30.982,400	176,0181809	Válido					592517033	56,6932	10451289,27
25	-60	164,6	164.600,000	33.907,600	184,140164	Válido					725871010,5	56,6932	12803493,37
25	-60	166,1	166.100,000	34.216,600	184,9772959	Válido					740792750,6	56,6932	13066694,96
25	-60	176	176.000,000	36.256,000	190,4100838	Válido					843298173,6	56,6932	14874767,58
25	-60	197,6	197.600,000	40.705,600	201,7562886	Válido					1091334248	56,6932	19249826,21
25	-60	200,2	200.200,000	41.241,200	203,0792949	Válido					1123458215	56,6932	19816454,44
25	-60	217,1	217.100,000	44.722,600	211,4771855	Válido					1344213155	56,6932	23710306,61
25	-60	219,5	219.500,000	45.217,000	212,6428931	Válido					1377247421	56,6932	24292991,41
25	-60	234,5	234.500,000	48.307,000	219,7885347	Válido					1593243836	56,6932	28102908,92
25	-60	275,9	275.900,000	56.835,400	238,4017617	Válido					2275226038	56,6932	40132256,38
25	-60	369,1	369.100,000	76.034,600	275,7437216	Censurado					0	56,6932	4,649778533
25	-60	373,6	373.600,000	76.961,600	277,4195379	Censurado					0	56,6932	4,649778533
25	-60	427,1	427.100,000	87.982,600	296,6186103	Censurado					0	56,6932	4,649778533
25	-60	678,2	678.200,000	139.709,200	373,7769388	Censurado					0	56,6932	4,649778533
25	-60	687,7	687.700,000	141.666,200	376,3857064	Censurado					0	56,6932	4,649778533
					T. Válidos	26						Soma dos K0	493144580,4
					T. Censurados	5						Somatoria ^{1/4}	149,0196593
												anterior +20	169,0196593
												Kjc Médio	155,9655372
													125,9655372
													1,799507674
												LN	0,587513113
												T - T0	30,92081513
												T0	-90,92081513
25	-40	61,6		12.689,600	112,6481247	Válido					73679476,71	14,6932	5014528,946
25	-40	113,2		23.319,200	152,706254	Válido					310145554,3	14,6932	21108101,32

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
25	-40	136,6		28.139,600	167,7486215	Válido					476533843,6	14,6932	32432270,96	
25	-40	139,3		28.695,800	169,3983471	Válido					498176423,4	14,6932	33905236,67	
25	-40	155,4		32.012,400	178,9200939	Válido					637845141,6	14,6932	43410907,2	
25	-40	165,5		34.093,000	184,6428986	Válido					734804848,9	14,6932	50009858,23	
25	-40	195,2		40.211,200	200,5273049	Válido					1062115127	14,6932	72286168,21	
25	-40	203,4		41.900,400	204,695872	Válido					1163667099	14,6932	79197662,81	
25	-40	233,2		48.039,200	219,1784661	Válido					1573872452	14,6932	107115703,3	
25	-40	251		51.706,000	227,3895336	Válido					1849896113	14,6932	125901513,1	
25	-40	254,5		52.427,000	228,9694303	Válido					1906913682	14,6932	129782054,4	
25	-40	264,8		54.548,800	233,5568453	Válido					2079955231	14,6932	141559036,2	
25	-40	275,9		56.835,400	238,4017617	Válido					2275226038	14,6932	154848912,3	
25	-40	283		58.298,000	241,4497877	Válido					2404922433	14,6932	163675879,5	
25	-40	311,7		64.210,200	253,3973165	Válido					2967450160	14,6932	201960781,9	
25	-40	349,2		71.935,200	268,2073824	Censurado					0	14,6932	17,90551673	
25	-40	483,2		99.539,200	315,498336	Censurado					0	14,6932	17,90551673	
25	-40	548,6		113.011,600	336,1719798	Censurado					0	14,6932	17,90551673	
25	-40	562,8		115.936,800	340,4949339	Censurado					0	14,6932	17,90551673	
25	-40	619,9		127.699,400	357,3505282	Censurado					0	14,6932	17,90551673	
25	-40	758,7		156.292,200	395,3380832	Censurado					0	14,6932	17,90551673	
25	-40	773,9		159.423,400	399,2785995	Censurado					0	14,6932	17,90551673	
25	-40	1127,9		232.347,400	482,0242732	Censurado					0	14,6932	17,90551673	
25	-40	1174		241.844,000	491,7763719	Censurado					0	14,6932	17,90551673	
25	-40	1337,1		275.442,600	524,826257	Censurado					0	14,6932	17,90551673	
25	-40	1337,2		275.463,200	524,8458821	Censurado					0	14,6932	17,90551673	
25	-40	1433,6		295.321,600	543,4350007	Censurado					0	14,6932	17,90551673	
25	-40	1544,1		318.084,600	563,9898935	Censurado					0	14,6932	17,90551673	
25	-40	1573,3		324.099,800	569,2976374	Censurado					0	14,6932	17,90551673	
25	-40	1714,3		353.145,800	594,2607172	Censurado					0	14,6932	17,90551673	
						Total de Válidos	15						Soma dos K0	1362208884
						Total de Censurados	15						Somatoria 1/4	192,114846
											anterior +20	212,114846		
											Kjc Médio	195,2855855		
											KjcMedio - 30	165,2855855		
											-70	2,36122265		
											Ln	0,859179557		
											T - T0	45,21862008		
											T0	-85,21862008		
50	-40	49,1		10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	31,6932	2659419,493	
50	-40	50,6		10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	31,6932	2866504,294	
50	-40	60,6		12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	31,6932	4467968,269	
50	-40	93,8		19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	31,6932	12657451,31	
50	-40	107,4		22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	31,6932	17336234,52	
50	-40	107,5		22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	31,6932	17373554,61	
50	-40	119		24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	31,6932	21952219,86	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-40	122,7		25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	31,6932	23546938,09
50	-40	137,8		28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	31,6932	30674713,53
50	-40	139,9		28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	31,6932	31745299,34
50	-40	166,5		34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	31,6932	47000550,07
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	168,9		34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	31,6932	48532502,88
50	-40	187		38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	31,6932	60922779,52
50	-40	205,3		42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	31,6932	74961959,72
50	-40	210		43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	31,6932	78814558,67
50	-40	212,8		43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	31,6932	81157861,71
50	-40	217,1		44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	31,6932	84826597,16
50	-40	219,3		45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	31,6932	86736493,94
50	-40	245		50.470,000	224,6552915	Válido	204,65529	1,189207	243,3775288	263,3775288	3508503451	31,6932	110702089,1
50	-40	251,8		51.870,800	227,7516191	Válido	207,75162	1,189207	247,0597036	267,0597036	3725698132	31,6932	117555126,4
50	-40	271,9		56.011,400	236,667277	Válido	216,66728	1,189207	257,6622674	277,6622674	4407611391	31,6932	139071201,1
50	-40	272,7		56.176,200	237,0151894	Válido	217,01519	1,189207	258,0760073	278,0760073	4435989652	31,6932	139966606,5
50	-40	274,2		56.485,200	237,6661524	Válido	217,66615	1,189207	258,8501371	278,8501371	4489454740	31,6932	141653564,2
50	-40	308,7		63.592,200	252,1749393	Válido	232,17494	1,189207	276,1040897	296,1040897	5811541698	31,6932	183368725,7
50	-40	308,8		63.612,800	252,2157806	Válido	232,21578	1,189207	276,1526585	296,1526585	5815631956	31,6932	183497783,6
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	349,4		71.976,400	268,2841777	Válido	248,28418	1,189207	295,2613107	315,2613107	7600220161	31,6932	239806020,2
50	-40	386,6		79.639,600	282,2048901	Válido	262,20489	1,189207	311,8159209	331,8159209	9453511213	31,6932	298282004,1
50	-40	455,2		93.771,200	306,2208353	Válido	286,22084	1,189207	340,3758539	360,3758539	13422548294	31,6932	423515085,1
Total de Válidos						32						<i>Soma dos K0</i>	3178470837
Total de Censurados						0						<i>Somatoria 1/4</i>	237,4403686
												anterior +20	257,4403686
												Kjc Médio	236,6405923
												KjcMedio - 30	206,6405923
												-70	2,952008461
												Ln	1,082485773
												T - T0	56,97122624
												T0	-96,97122624
100	-40	40		8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259
100	-40	63,5		13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32
100	-40	75,5		15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16
100	-40	79,1		16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38
100	-40	81		16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28
100	-40	86,1		17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23
100	-40	91,5		18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1
100	-40	92,1		18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11
100	-40	94,8		19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7
100	-40	95,6		19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-40	96		19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2
100	-40	96,4		19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69
100	-40	99,6		20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86
100	-40	102,6		21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46
100	-40	108,2		22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49
100	-40	110,9		22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87
100	-40	112,4		23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68
100	-40	124		25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94
100	-40	141,2		29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62
100	-40	142,5		29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1
100	-40	153,4		31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84
100	-40	160,5		33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6
100	-40	166,8		34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9
100	-40	167,8		34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5
100	-40	175,4		36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4
100	-40	186,7		38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9
100	-40	187,7		38.666,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3
100	-40	214,1		44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8
100	-40	272,3		56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4
100	-40	282,2		58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8
						Válidos	30					Somatoria	2176116531
						Censurados	0					Somatoria ^{1/4}	215,9834813
										K0	235,9834813		
										Kjc Médio	217,0633283		
											187,0633283		
											2,672333262		
										Ln	0,982951972		
										T-T0	51,73276227		
										T0	-91,73276227		
25	-20	78,9		16.253,400	127,488823	Válido					133491382,3	2,6932	49566085,81
25	-20	102,7		21.156,200	145,4517102	Válido					247688786	2,6932	91968211,05
25	-20	258,8		53.312,800	230,8956474	Válido					1978201225	2,6932	734517015,2
25	-20	723,7		149.082,200	386,1116419	Censurado					0	2,6932	94,8344609
25	-20	772,5		159.135,000	398,9172847	Censurado					0	2,6932	94,8344609
25	-20	798,3		164.449,800	405,5241053	Censurado					0	2,6932	94,8344609
25	-20	914,9		188.469,400	434,1306255	Censurado					0	2,6932	94,8344609
25	-20	1133,7		233.542,200	483,2620407	Censurado					0	2,6932	94,8344609
25	-20	1340		276.040,000	525,3950894	Censurado					0	2,6932	94,8344609
25	-20	1348,6		277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1		280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5		281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6		281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1		282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3		284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391		286.546,000	535,2999159	Censurado					0	2,6932	94,8344609

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-20	1408,2		290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3		295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7		300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5		303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7		303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1480,1		304.900,600	552,178051	Censurado					0	2,6932	94,8344609
25	-20	1496,6		308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1497,2		308.423,200	555,3586229	Censurado					0	2,6932	94,8344609
25	-20	1499		308.794,000	555,6923609	Censurado					0	2,6932	94,8344609
25	-20	1524,5		314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8		318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3		319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
25	-20	1554,5		320.227,000	565,8860309	Censurado					0	2,6932	94,8344609
25	-20	1560,5		321.463,000	566,9770718	Censurado					0	2,6932	94,8344609
25	-20	1575		324.450,000	569,6051264	Censurado					0	2,6932	94,8344609
Total de Válidos						3						<i>Soma dos K0</i>	876053967,4
Total de Censurados						28						Somatoria1/4	172,0412999
												anterior +20	192,0412999
												Kjc Médio	176,970482
												KjcMedio - 30	146,970482
												-70	2,099578314
												Ln	0,741736522
												T - T0	39,03759314
												T0	-59,03759314
50	-20	139		28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	15,6932	63179790,43
50	-20	162		33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	15,6932	89259747,8
50	-20	168,1		34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	15,6932	96976714,87
50	-20	180,6		37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	15,6932	113846868,9
50	-20	195,2		40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	15,6932	135359917,3
50	-20	256		52.736,000	229,6432015	Válido	209,6432	1,189207	249,3091868	269,3091868	3863252807	15,6932	246173680,8
50	-20	259		53.354,000	230,984848	Válido	210,98485	1,189207	250,9046824	270,9046824	3963100309	15,6932	252536150
50	-20	291		59.946,000	244,8387224	Válido	224,83872	1,189207	267,3798084	287,3798084	5111100625	15,6932	325688873,2
50	-20	326,5		67.259,000	259,3434017	Válido	239,3434	1,189207	284,6288762	304,6288762	6563202928	15,6932	418219542,7
50	-20	328,8		67.732,800	260,2552593	Válido	240,25526	1,189207	285,7132638	305,7132638	6663794707	15,6932	424629438,6
50	-20	330		67.980,000	260,7297451	Válido	240,72975	1,189207	286,2775257	306,2775257	6716592804	15,6932	427993832
50	-20	362,3		74.633,800	273,191874	Válido	253,19187	1,189207	301,097578	321,097578	8219190536	15,6932	523742164,5
50	-20	380		78.280,000	279,7856322	Válido	259,78563	1,189207	308,9389222	328,9389222	9109415433	15,6932	580468956,8
50	-20	392		80.752,000	284,1689638	Válido	264,16896	1,189207	314,1516113	334,1516113	9739959848	15,6932	620648424
50	-20	417		85.902,000	293,0904297	Válido	273,09043	1,189207	324,7610821	344,7610821	11123870365	15,6932	708833785,7
50	-20	447		92.082,000	303,4501607	Válido	283,45016	1,189207	337,0809478	357,0809478	12910314607	15,6932	822669347,7
50	-20	480		98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	15,6932	23,0164498
50	-20	486,8		100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	15,6932	23,0164498
50	-20	502		103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	15,6932	23,0164498
50	-20	512		105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	15,6932	23,0164498

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-20	555		114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	15,6932	23,0164498	
50	-20	648,8		133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	15,6932	23,0164498	
50	-20	655,6		135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	15,6932	23,0164498	
50	-20	695		143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	15,6932	23,0164498	
50	-20	807		166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	15,6932	23,0164498	
50	-20	820		168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	15,6932	23,0164498	
50	-20	1017		209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	15,6932	23,0164498	
50	-20	1266		260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	15,6932	23,0164498	
50	-20	1582		325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	15,6932	23,0164498	
50	-20	1619		333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	15,6932	23,0164498	
Total de Válidos						16							<i>Soma dos K0</i>	5850227557
Total de Censurados						14							Somatoria^{1/4}	276,5624347
												anterior +20	296,5624347	
												Kjc Médio	272,3355654	
												KjcMedio - 30	242,3355654	
												-70	3,461936649	
												Ln	1,241828158	
												T - T0	65,35741593	
												T0	-85,35741593	
100	-20	58,6		12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	28,6932	9094023,649	
100	-20	74,4		15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	28,6932	16183323,52	
100	-20	82,8		17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	28,6932	20860656,51	
100	-20	100,6		20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	28,6932	32912764,68	
100	-20	112,2		23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	28,6932	42361850,36	
100	-20	123,7		25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	28,6932	52992450,69	
100	-20	130,8		26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	28,6932	60189963,99	
100	-20	133,4		27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	28,6932	62947579,85	
100	-20	186,1		38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	28,6932	133146650,4	
100	-20	188,4		38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	28,6932	136838701,6	
100	-20	191,7		39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	28,6932	142228740,4	
100	-20	193		39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	28,6932	144382133,7	
100	-20	212,3		43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	28,6932	178356321	
100	-20	212,5		43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	28,6932	178728106,3	
100	-20	223		45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	28,6932	198817215,2	
100	-20	224,4		46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	28,6932	201580471	
100	-20	231,2		47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	28,6932	215286151,8	
100	-20	247,3		50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	28,6932	249620412,8	
100	-20	288,5		59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	28,6932	349625329,1	
100	-20	299,8		61.758,800	248,5131787	Válido	228,51318	1,414214	323,1664365	343,1664365	10906992078	28,6932	380124631,6	
100	-20	301,3		62.067,800	249,1341004	Válido	229,1341	1,414214	324,0445524	344,0445524	11026023136	28,6932	384273038,1	
100	-20	315,9		65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	28,6932	425875530,7	
100	-20	318,2		65.549,200	256,02578	Válido	236,02578	1,414214	333,7908591	353,7908591	12413600285	28,6932	432632131,8	
100	-20	324,6		66.867,600	258,5877027	Válido	238,5877	1,414214	337,413965	357,413965	12961408950	28,6932	451724065,3	
100	-20	334,9		68.989,400	262,6583332	Válido	242,65833	1,414214	343,1707058	363,1707058	13868862163	28,6932	483350137,4	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068			
100	-20	371,9		76.611,400	276,7876442	Válido	256,78764	1,414214	363,1525691	383,1525691	17392278605	28,6932	606146355,4			
100	-20	373,5		76.941,000	277,3824075	Válido	257,38241	1,414214	363,9936914	383,9936914	17553973034	28,6932	611781642,8			
100	-20	384,1		79.124,600	281,2909526	Válido	261,29095	1,414214	369,5212089	389,5212089	18644789305	28,6932	649798185,8			
100	-20	588,7		121.272,200	348,2415828	Válido	328,24158	1,414214	464,2036981	484,2036981	46433816847	28,6932	1618286453			
100	-20	683,1		140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	28,6932	17,80269541			
Total de Válidos						29							<i>Soma dos K0</i>		8470145036	
Total de Censurados						1							<i>Somatoria^{1/4}</i>		303,370056	
													anterior +20		323,370056	
													Kjc Médio		296,7948391	
													KjcMedio - 30		266,7948391	
													-70		3,811354844	
													Ln		1,337984728	
													T - T0		70,41813624	
													T0		-90,41813624	
200	-20	112		23.072,000	151,8947004	Válido	131,8947	1,681793	221,8195615	241,8195615	2421025531	14,6932	164771835,4			
200	-20	117		24.102,000	155,2481884	Válido	135,24819	1,681793	227,4594336	247,4594336	2676799320	14,6932	182179465,4			
200	-20	125		25.750,000	160,4680654	Válido	140,46807	1,681793	236,2381852	256,2381852	3114586458	14,6932	211974686,1			
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6			
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6			
200	-20	166		34.196,000	184,921605	Válido	164,92161	1,681793	277,3639729	297,3639729	5918343906	14,6932	402794755,8			
200	-20	168		34.608,000	186,0322553	Válido	166,03226	1,681793	279,2318565	299,2318565	6079387909	14,6932	413755200,3			
200	-20	175		36.050,000	189,8683755	Válido	169,86838	1,681793	285,683416	305,683416	6661010537	14,6932	453339676,7			
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5			
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5			
200	-20	187		38.522,000	196,2702219	Válido	176,27022	1,681793	296,4499954	316,4499954	7723351343	14,6932	525641204,3			
200	-20	199		40.994,000	202,4697508	Válido	182,46975	1,681793	306,8763187	326,8763187	8868568054	14,6932	603583157,8			
200	-20	234		48.204,000	219,5540936	Válido	199,55409	1,681793	335,6086439	355,6086439	12686229143	14,6932	863408185			
200	-20	236		48.616,000	220,4903626	Válido	200,49036	1,681793	337,1832544	357,1832544	12925995256	14,6932	879726353,4			
200	-20	239		49.234,000	221,8873588	Válido	201,88736	1,681793	339,5327126	359,5327126	13290046261	14,6932	904503189,3			
						Válidos	15							Somatoria		7321985905
						Censurados	0							Somatoria ^{1/4}		292,5211163
													K0		312,5211163	
													Kjc Médio		286,8962665	
															256,8962665	
															3,669946665	
													Ln		1,300177129	
													T-T0		68,42832231	
													T0		-88,42832231	
Resumo do Kmin 20 com M=30																
								-91°C	Esp	T-T0	T0	Válidos	Censurados			
									25	5,609770771	-96,60977077	31	0			

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
									50	11,84952289	-102,8495229	34	0	
									100	12,34471888	-103,3447189	30	0	
									200	12,40177232	-103,4017723	15	0	
									-60°C	Esp	T-T0	T0	Válidos	Censurados
									25	30,92081513	-90,92081513	57	5	
									50	33,11113395	-93,11113395	34	0	
									100	56,38310443	-116,3831044	30	0	
									-40°C	Esp	T-T0	T0	Válidos	Censurados
									25	45,21862008	-85,21862008	15	15	
									50	56,97122624	-96,97122624	32	0	
									100	51,73276227	-91,73276227	30	0	
									-20°C	Esp	T-T0	T0	Válidos	Censurados
									25	39,03759314	-59,03759314	3	28	
									50	65,35741593	-85,35741593	16	14	
									100	70,41813624	-90,41813624	29	1	
									200	68,42832231	-88,42832231	15	0	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-91	19,9	0,020	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513
25	-91	21,3	0,021	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676
25	-91	23,1	0,023	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965
25	-91	23,7	0,024	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925
25	-91	29,1	0,291	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273
25	-91	29,4	0,029	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538
25	-91	38,6	0,039	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933
25	-91	39,7	0,040	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432
25	-91	42,3	0,042	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831
25	-91	46,3	0,046	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58
25	-91	47,3	0,473	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849
25	-91	48,9	0,489	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208
25	-91	51,4	0,514	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337
25	-91	52	0,052	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747
25	-91	55,9	0,056	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774
25	-91	56,6	0,566	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202
25	-91	59,4	0,594	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94
25	-91	63,3	0,063	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009
25	-91	68,5	0,069	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141
25	-91	70,2	0,070	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584
25	-91	70,6	0,071	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362
25	-91	71,4	0,071	14.708,400	121,28	Válido					105211635	30,6932	3427848,349
25	-91	76	0,076	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922
25	-91	76,5	0,077	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047
25	-91	76,6	0,766	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954
25	-91	76,8	0,077	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083
25	-91	77	0,077	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66
25	-91	77,2	0,077	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718
25	-91	93,9	0,939	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01
25	-91	112,8	0,113	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59
25	-91	124,3	0,124	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81
Total de Válidos						31						<i>Soma dos K0</i>	86037559,23
Total de Censurados						0						<i>Somatoria</i> ^{1/4}	96,31014138
												anterior +20	116,3101414
												Kjc Médio	107,873373
												KjcMedio - 30	77,87337299
												-70	1,112476757
												Ln	0,106588842
												T - T0	5,609770771
												T0	-96,60977077
50	-91	14,9	0,149	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238
50	-91	18,3	0,183	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082
50	-91	18,8	0,188	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199
50	-91	20,2	0,202	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-91	22,4	0,224	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851
50	-91	24,6	0,246	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697
50	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597
50	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768
50	-91	30,4	0,304	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514
50	-91	30,6	0,306	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749
50	-91	31,7	0,317	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956
50	-91	34,3	0,343	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456
50	-91	41,5	0,415	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782
50	-91	41,6	0,416	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143
50	-91	45,3	0,453	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134
50	-91	46,1	0,461	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339
50	-91	46,5	0,465	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53
50	-91	47,3	0,473	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211
50	-91	48,7	0,487	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848
50	-91	52,7	0,527	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821
50	-91	54,6	0,546	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685
50	-91	55,6	0,556	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766
50	-91	57,4	0,574	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204
50	-91	58,7	0,587	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154
50	-91	59,1	0,591	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411
50	-91	67	0,670	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081
50	-91	75,7	0,757	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655
50	-91	76,2	0,762	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988
50	-91	78,6	0,786	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85
50	-91	81	0,810	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651
50	-91	86	0,860	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58
50	-91	86,5	0,865	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447
50	-91	100,5	1,005	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05
50	-91	117,8	1,178	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14
Total de Válidos						34						Soma dos K0	131341550,9
Total de Censurados						0						Somatoria ^{1/4}	107,0534173
												anterior +20	127,0534173
												Kjc Médio	117,6755379
												KjcMedio - 30	87,67553792
												-70	1,252507685
												Ln	0,225147689
												T - T0	11,84952289
												T0	-102,8495229
100	-91	19,6	0,196	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238
100	-91	19,7	0,197	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394
100	-91	21,6	0,216	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417
100	-91	23,3	0,233	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288
100	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-91	25,9	0,259	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274
100	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394
100	-91	29,5	0,295	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764
100	-91	32	0,320	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786
100	-91	32,1	0,321	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622
100	-91	32,9	0,329	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551
100	-91	33	0,330	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606
100	-91	33,4	0,334	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893
100	-91	35,8	0,358	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8
100	-91	35,9	0,359	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865
100	-91	37,6	0,376	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563
100	-91	39,6	0,396	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659
100	-91	40,1	0,401	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191
100	-91	40,6	0,406	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782
100	-91	41,1	0,411	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	42,3	0,423	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732
100	-91	42,7	0,427	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546
100	-91	45,6	0,456	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886
100	-91	46,6	0,466	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784
100	-91	47,6	0,476	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644
100	-91	49,2	0,492	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097
100	-91	53,7	0,537	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728
100	-91	126,4	1,264	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33
Total de Válidos						30						Soma dos K0	135856648,7
Total de Censurados						0						Somatoria ^{1/4}	107,9618267
												anterior +20	127,9618267
												Kjc Médio	118,5043707
												KjcMedio - 30	88,50437072
												-70	1,264348153
												Ln	0,234556695
												T - T0	12,34471888
												T0	-103,3447189
200	-91	13,8	0,138	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716
200	-91	20,4	0,204	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78
200	-91	23	0,230	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622
200	-91	23,2	0,232	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806
200	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051
200	-91	25,6	0,256	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041
200	-91	25,8	0,258	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143
200	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331
200	-91	33,9	0,339	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802
200	-91	36,9	0,369	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068		
200	-91	38,8	0,388	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87		
200	-91	40,9	0,409	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07		
200	-91	44,6	0,446	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11		
200	-91	44,8	0,448	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46		
200	-91	50,7	0,507	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39		
Total de Válidos							15							Soma dos K0	136387006,3
Total de Censurados							0							Somatoria ^{1/4}	108,0670383
														anterior +20	128,0670383
														Kjc Médio	118,6003657
														KjcMedio - 30	88,60036572
														-70	1,26571951
														Ln	0,235640743
														T - T0	12,40177232
														T0	-103,4017723
Mt															
25	-60	34	34.000,000	7.004,000	83,68990381	Válido					16454412,17	53,6932	306452,4404		
25	-60	40,2	40.200,000	8.281,200	91,00109889	Válido					25413254,26	53,6932	473304,8927		
25	-60	46,9	46.900,000	9.661,400	98,29242087	Válido					37573260,89	53,6932	699776,8972		
25	-60	52	52.000,000	10.712,000	103,4987923	Válido					48609457,63	53,6932	905318,6927		
25	-60	54,2	54.200,000	11.165,200	105,66551	Válido					53854750,56	53,6932	1003008,771		
25	-60	56,1	56.100,000	11.556,600	107,5016279	Válido					58622526,43	53,6932	1091805,414		
25	-60	62,3	62.300,000	12.833,800	113,2863628	Válido					75730816,98	53,6932	1410435,902		
25	-60	67,4	67.400,000	13.884,400	117,8320839	Válido					91606273,8	53,6932	1706105,686		
25	-60	68	68.000,000	14.008,000	118,355397	Válido					93582099,2	53,6932	1742904,114		
25	-60	69	69.000,000	14.214,000	119,2224811	Válido					96926008,89	53,6932	1805182,2		
25	-60	74,6	74.600,000	15.367,600	123,9661244	Válido					116833508,7	53,6932	2175946,092		
25	-60	78,2	78.200,000	16.109,200	126,9220233	Válido					130697919,3	53,6932	2434161,482		
25	-60	81,3	81.300,000	16.747,800	129,4132914	Válido					143311265,7	53,6932	2669076,638		
25	-60	81,4	81.400,000	16.768,400	129,4928569	Válido					143728585,3	53,6932	2676848,937		
25	-60	82,3	82.300,000	16.953,800	130,2067587	Válido					147513890,6	53,6932	2747347,719		
25	-60	90	90.000,000	18.540,000	136,1616686	Válido					182075439,7	53,6932	3391033,496		
25	-60	90,4	90.400,000	18.622,400	136,4639146	Válido					183977848,2	53,6932	3426464,583		
25	-60	100,3	100.300,000	20.661,800	143,7421302	Válido					234460859,4	53,6932	4366676,961		
25	-60	112,2	112.200,000	23.113,200	152,0302601	Válido					303874261,2	53,6932	5659455,224		
25	-60	120,3	120.300,000	24.781,800	157,4223618	Válido					356639656,8	53,6932	6642175,485		
25	-60	123,4	123.400,000	25.420,400	159,4377622	Válido					378025952,7	53,6932	7040480,967		
25	-60	127,4	127.400,000	26.244,400	162,0012346	Válido					406601035,8	53,6932	7572672,812		
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	53,6932	7791322,19		
25	-60	140,9	140.900,000	29.025,400	170,3684243	Válido					511242082,6	53,6932	9521542,44		
25	-60	141,9	141.900,000	29.231,400	170,9719275	Válido					519499100,1	53,6932	9675323,879		
25	-60	142,5	142.500,000	29.355,000	171,3330091	Válido					524486930,2	53,6932	9768218,884		
25	-60	143,1	143.100,000	29.478,600	171,6933313	Válido					529499988,6	53,6932	9861583,749		
25	-60	191,8	191.800,000	39.510,800	198,7732376	Válido					1021433322	53,6932	19023513,63		
25	-60	193,2	193.200,000	39.799,200	199,4973684	Válido					1038083632	53,6932	19333614,53		
25	-60	261	261.000,000	53.766,000	231,8749663	Censurado					0	53,6932	1,89152057		
25	-60	284,9	284.900,000	58.689,400	242,2589524	Censurado					0	53,6932	1,89152057		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
				Total de Válidos		29							
				Total de Censurados		2							
50	-60	46,7	46.700,000	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473
50	-60	48	48.000,000	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099
50	-60	49,9	49.900,000	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382
50	-60	52,9	52.900,000	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894
50	-60	59,4	59.400,000	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046
50	-60	63,1	63.100,000	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323
50	-60	68,1	68.100,000	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889
50	-60	68,2	68.200,000	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856
50	-60	69,2	69.200,000	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228
50	-60	75,1	75.100,000	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502
50	-60	76,2	76.200,000	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988
50	-60	76,5	76.500,000	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749
50	-60	80,6	80.600,000	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779
50	-60	81,9	81.900,000	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736
50	-60	82,9	82.900,000	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962
50	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309
50	-60	86,2	86.200,000	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153
50	-60	94,4	94.400,000	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48
50	-60	95,1	95.100,000	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2
50	-60	96,8	96.800,000	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39
50	-60	97	97.000,000	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87
50	-60	98,6	98.600,000	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59
50	-60	109,7	109.700,000	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83
50	-60	112,9	112.900,000	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06
50	-60	127,4	127.400,000	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34
50	-60	129,1	129.100,000	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35
50	-60	129,9	129.900,000	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43
50	-60	142,3	142.300,000	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34
50	-60	147,4	147.400,000	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19
50	-60	147,8	147.800,000	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18
50	-60	163,2	163.200,000	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44
50	-60	164,7	164.700,000	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33
50	-60	176,8	176.800,000	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7
50	-60	198	198.000,000	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42
				Total de Válidos		34						Soma dos K0	57551275,5
				Total de Censurados		0						Somatoria ^{1/4}	154,8865616

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
												anterior +20	174,8865616	
												Kjc Médio	161,3184988	
												KjcMedio - 30	131,3184988	
												-70	1,875978554	
												Ln	0,629130419	
												T - T0	33,11113395	
												T0	-93,11113395	
100	-60	30,4	30.400,000	6.262,400	79,13532713	Válido	59,135327	1,414214	83,62998164	103,6299816	48915669,93	29,6932	1647369,429	
100	-60	57,5	57.500,000	11.845,000	108,8347371	Válido	88,834737	1,414214	125,63129	145,63129	249110066,1	29,6932	8389465,135	
100	-60	63,3	63.300,000	13.039,800	114,1919437	Válido	94,191944	1,414214	133,2075242	153,2075242	314858213,1	29,6932	10603714,42	
100	-60	64	64.000,000	13.184,000	114,8216008	Válido	94,821601	1,414214	134,0979938	154,0979938	323362104,1	29,6932	10890106,29	
100	-60	68,5	68.500,000	14.111,000	118,7897302	Válido	98,78973	1,414214	139,7097763	159,7097763	380984396	29,6932	12830695,11	
100	-60	82,8	82.800,000	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	29,6932	20158116,65	
100	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-60	88,3	88.300,000	18.189,800	134,8695666	Válido	114,86957	1,414214	162,450099	182,450099	696433929,9	29,6932	23454323,88	
100	-60	89,4	89.400,000	18.416,400	135,7070374	Válido	115,70704	1,414214	163,6344616	183,6344616	716966868,3	29,6932	24145826,93	
100	-60	94,5	94.500,000	19.467,000	139,5241915	Válido	119,52419	1,414214	169,0327326	189,0327326	816362880,3	29,6932	27493260,42	
100	-60	102,2	102.200,000	21.053,200	145,0972088	Válido	125,09721	1,414214	176,9141693	196,9141693	979603820,3	29,6932	32990847,07	
100	-60	106,3	106.300,000	21.897,800	147,9790526	Válido	127,97905	1,414214	180,9897118	200,9897118	1073039117	29,6932	36137537,13	
100	-60	107,7	107.700,000	22.186,200	148,9503273	Válido	128,95033	1,414214	182,3633017	202,3633017	1105986399	29,6932	37247127,27	
100	-60	112,3	112.300,000	23.133,800	152,0979947	Válido	132,09799	1,414214	186,8147757	206,8147757	1217993278	29,6932	41019266,28	
100	-60	113	113.000,000	23.278,000	152,5712948	Válido	132,57129	1,414214	187,4841231	207,4841231	1235543338	29,6932	41610312,73	
100	-60	115,5	115.500,000	23.793,000	154,2497974	Válido	134,2498	1,414214	189,8578842	209,8578842	1299315284	29,6932	43758008,04	
100	-60	128,1	128.100,000	26.388,600	162,4456832	Válido	142,44568	1,414214	201,4486171	221,4486171	1646861822	29,6932	55462591,51	
100	-60	131,1	131.100,000	27.006,600	164,3368492	Válido	144,33685	1,414214	204,1231297	224,1231297	1736076561	29,6932	58467142,68	
100	-60	132,7	132.700,000	27.336,200	165,3366263	Válido	145,33663	1,414214	205,537028	225,537028	1784679727	29,6932	60103987,67	
100	-60	150,2	150.200,000	30.941,200	175,9011086	Válido	155,90111	1,414214	220,4774621	240,4774621	2362962366	29,6932	79579242,59	
100	-60	153,5	153.500,000	31.621,000	177,8229457	Válido	157,82295	1,414214	223,1953502	243,1953502	2481650230	29,6932	83576382,15	
100	-60	160,8	160.800,000	33.124,800	182,0021978	Válido	162,0022	1,414214	229,1057052	249,1057052	2755139650	29,6932	92786888,93	
100	-60	168,9	168.900,000	34.793,400	186,5298904	Válido	166,52989	1,414214	235,5088295	255,5088295	3076300640	29,6932	103602866,7	
100	-60	191,9	191.900,000	39.531,400	198,8250487	Válido	178,82505	1,414214	252,8968092	272,8968092	4090471768	29,6932	137757862,7	
100	-60	225,7	225.700,000	46.494,200	215,6251377	Válido	195,62514	1,414214	276,6557228	296,6557228	5858124988	29,6932	197288436	
100	-60	230	230.000,000	47.380,000	217,6694742	Válido	197,66947	1,414214	279,5468513	299,5468513	6106866407	29,6932	205665485,9	
100	-60	241,9	241.900,000	49.831,400	223,2294783	Válido	203,22948	1,414214	287,4098845	307,4098845	6823493794	29,6932	229799879,9	
100	-60	265,4	265.400,000	54.672,400	233,8212993	Válido	213,8213	1,414214	302,3889814	322,3889814	8361108288	29,6932	281583267,8	
100	-60	282,6	282.600,000	58.215,600	241,2790915	Válido	221,27909	1,414214	312,9358923	332,9358923	9590064104	29,6932	322971727,7	
100	-60	415,3	415.300,000	85.551,800	292,4923931	Válido	272,49239	1,414214	385,3624379	405,3624379	22053499959	29,6932	742712134,7	
Total de Válidos												30	Soma dos K0	3045837511
Total de Censurados												0	Somatoria ^{1/4}	234,9236191
												anterior +20	254,9236191	
												Kjc Médio	234,3443101	
												KjcMedio - 30	204,3443101	
												-70	2,91920443	
												Ln	1,071311124	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
												T - T0	56,38310443
												T0	-116,3831044
25	-60	38,4	38.400,000	7.910,400	88,9404295	Válido					22588944,53	53,6932	420704,0097
25	-60	46,1	46.100,000	9.496,600	97,45050026	Válido					35982961,89	53,6932	670158,6401
25	-60	55	55.000,000	11.330,000	106,4424727	Válido					55835283,59	53,6932	1039894,877
25	-60	63,6	63.600,000	13.101,600	114,4622208	Válido					79621912,89	53,6932	1482904,965
25	-60	64,1	64.100,000	13.204,600	114,9112701	Válido					81146751,92	53,6932	1511304,074
25	-60	77,7	77.700,000	16.006,200	126,5156117	Válido					128722084,2	53,6932	2397362,872
25	-60	78,7	78.700,000	16.212,200	127,3271377	Válido					132689998,7	53,6932	2471262,63
25	-60	87,8	87.800,000	18.086,800	134,4871741	Válido					171801655	53,6932	3199691,116
25	-60	89,1	89.100,000	18.354,600	135,4791497	Válido					177833800,3	53,6932	3312035,794
25	-60	116,3	116.300,000	23.957,800	154,783074	Válido					330020888	53,6932	6146418,69
25	-60	128,7	128.700,000	26.512,200	162,8256737	Válido					416126261,3	53,6932	7750073,776
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	53,6932	7791322,19
25	-60	131,7	131.700,000	27.130,200	164,7124768	Válido					438554837,8	53,6932	8167791,039
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	53,6932	8452738,386
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	53,6932	8452738,386
25	-60	140,7	140.700,000	28.984,200	170,2474669	Válido					509599080,2	53,6932	9490942,618
25	-60	150,4	150.400,000	30.982,400	176,0181809	Válido					592517033	53,6932	11035234,13
25	-60	164,6	164.600,000	33.907,600	184,140164	Válido					725871010,5	53,6932	13518862,92
25	-60	166,1	166.100,000	34.216,600	184,9772959	Válido					740792750,6	53,6932	13796770,37
25	-60	176	176.000,000	36.256,600	190,4100838	Válido					843298173,6	53,6932	15705865,43
25	-60	197,6	197.600,000	40.705,600	201,7562886	Válido					1091334248	53,6932	20325371,7
25	-60	200,2	200.200,000	41.241,200	203,0792949	Válido					1123458215	53,6932	20923659,14
25	-60	217,1	217.100,000	44.722,600	211,4771855	Válido					1344213155	53,6932	25035072,5
25	-60	219,5	219.500,000	45.217,000	212,6428931	Válido					1377247421	53,6932	25650313,64
25	-60	234,5	234.500,000	48.307,000	219,7885347	Válido					1593243836	53,6932	29673102,67
25	-60	275,9	275.900,000	56.835,400	238,4017617	Censurado					0	53,6932	4,251817185
25	-60	369,1	369.100,000	76.034,600	275,7437216	Censurado					0	53,6932	4,251817185
25	-60	373,6	373.600,000	76.961,600	277,4195379	Censurado					0	53,6932	4,251817185
25	-60	427,1	427.100,000	87.982,600	296,6186103	Censurado					0	53,6932	4,251817185
25	-60	678,2	678.200,000	139.709,200	373,7769388	Censurado					0	53,6932	4,251817185
25	-60	687,7	687.700,000	141.666,200	376,3857064	Censurado					0	53,6932	4,251817185
												T. Válidos	25
												T. Censurados	6
												Soma dos K0	395343380,5
												Somatoria ^{1/4}	141,0079562
												anterior +20	161,0079562
												Kjc Médio	148,6556592
													118,6556592
													1,695080846
												LN	0,527730437
												T - T0	27,77445288
												T0	-87,77445288
25	-40	61,6		12.689,600	112,6481247	Válido					73679476,71	9,6932	7601150,983
25	-40	113,2		23.319,200	152,706254	Válido					310145554,3	9,6932	31996198,81

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-40	136,6		28.139,600	167,7486215	Válido					476533843,6	9,6932	49161664,22
25	-40	139,3		28.695,800	169,3983471	Válido					498176423,4	9,6932	51394423,25
25	-40	155,4		32.012,400	178,9200939	Válido					637845141,6	9,6932	65803361,29
25	-40	165,5		34.093,000	184,6428986	Válido					734804848,9	9,6932	75806219,71
25	-40	195,2		40.211,200	200,5273049	Válido					1062115127	9,6932	109573219
25	-40	203,4		41.900,400	204,695872	Válido					1163667099	9,6932	120049839
25	-40	233,2		48.039,200	219,1784661	Válido					1573872452	9,6932	162368717,5
25	-40	251		51.706,000	227,3895336	Válido					1849896113	9,6932	190844727,5
25	-40	254,5		52.427,000	228,9694303	Censurado					0	9,6932	23,50534917
25	-40	264,8		54.548,800	233,5568453	Censurado					0	9,6932	23,50534917
25	-40	275,9		56.835,400	238,4017617	Censurado					0	9,6932	23,50534917
25	-40	283		58.298,000	241,4497877	Censurado					0	9,6932	23,50534917
25	-40	311,7		64.210,200	253,3973165	Censurado					0	9,6932	23,50534917
25	-40	349,2		71.935,200	268,2073824	Censurado					0	9,6932	23,50534917
25	-40	483,2		99.539,200	315,498336	Censurado					0	9,6932	23,50534917
25	-40	548,6		113.011,600	336,1719798	Censurado					0	9,6932	23,50534917
25	-40	562,8		115.936,800	340,4949339	Censurado					0	9,6932	23,50534917
25	-40	619,9		127.699,400	357,3505282	Censurado					0	9,6932	23,50534917
25	-40	758,7		156.292,200	395,3380832	Censurado					0	9,6932	23,50534917
25	-40	773,9		159.423,400	399,2785995	Censurado					0	9,6932	23,50534917
25	-40	1127,9		232.347,400	482,0242732	Censurado					0	9,6932	23,50534917
25	-40	1174		241.844,000	491,7763719	Censurado					0	9,6932	23,50534917
25	-40	1337,1		275.442,600	524,826257	Censurado					0	9,6932	23,50534917
25	-40	1377,2		275.463,200	524,8458821	Censurado					0	9,6932	23,50534917
25	-40	1433,6		295.321,600	543,4350007	Censurado					0	9,6932	23,50534917
25	-40	1544,1		318.084,600	563,9898935	Censurado					0	9,6932	23,50534917
25	-40	1573,3		324.099,800	569,2976374	Censurado					0	9,6932	23,50534917
25	-40	1714,3		353.145,800	594,2607172	Censurado					0	9,6932	23,50534917
				Total de Válidos	10							Soma dos K0	864599991,4
				Total de Censurados	20							Somatoria ^{1/4}	171,4761826
												anterior +20	191,4761826
												Kjc Médio	176,454869
												KjcMedio - 30	146,454869
												-70	2,092212414
												Ln	0,738222078
												T - T0	38,85262794
												T0	-78,85262794
50	-40	49,1		10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	29,6932	2838545,993
50	-40	50,6		10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	29,6932	3059579,092
50	-40	60,6		12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	29,6932	4768910,456
50	-40	93,8		19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	29,6932	13510000,13
50	-40	107,4		22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	29,6932	18503925,07
50	-40	107,5		22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	29,6932	18543758,88
50	-40	119		24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	29,6932	23430822,36

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-40	122,7		25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	29,6932	25132953,61	
50	-40	137,8		28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	29,6932	32740823,86	
50	-40	139,9		28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	29,6932	33883519,5	
50	-40	166,5		34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	29,6932	50166295,1	
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	29,6932	50504670,4	
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	29,6932	50504670,4	
50	-40	168,9		34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	29,6932	51801433,33	
50	-40	187		38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	29,6932	65026263,11	
50	-40	205,3		42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	29,6932	80011059,16	
50	-40	210		43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	29,6932	84123151,79	
50	-40	212,8		43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	29,6932	86624289,16	
50	-40	217,1		44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	29,6932	90540134,08	
50	-40	219,3		45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	29,6932	92578672,88	
50	-40	245		50.470,000	224,6552915	Válido	204,65529	1,189207	243,3775288	263,3775288	3508503451	29,6932	118158482,5	
50	-40	251,8		51.870,800	227,7516191	Válido	207,75162	1,189207	247,0597036	267,0597036	3725698132	29,6932	125473109,4	
50	-40	271,9		56.011,400	236,667277	Válido	216,66728	1,189207	257,6622674	277,6622674	4407611391	29,6932	148438409,8	
50	-40	272,7		56.176,200	237,0151894	Válido	217,01519	1,189207	258,0760073	278,0760073	4435989652	29,6932	149394125,6	
50	-40	274,2		56.485,200	237,6661524	Válido	217,66615	1,189207	258,8501371	278,8501371	4489454740	29,6932	151194709,2	
50	-40	308,7		63.592,200	252,1749393	Válido	232,17494	1,189207	276,1040897	296,1040897	5811541698	29,6932	195719615,9	
50	-40	308,8		63.612,800	252,2157806	Válido	232,21578	1,189207	276,1526585	296,1526585	5815631956	29,6932	195857366,5	
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	29,6932	201828319,9	
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	29,6932	201828319,9	
50	-40	349,4		71.976,400	268,2841777	Válido	248,28418	1,189207	295,2613107	315,2613107	7600220161	29,6932	255958271,9	
50	-40	386,6		79.639,600	282,2048901	Censurado	262,20489	1,189207	311,8159209	331,8159209	0	29,6932	10,85155254	
50	-40	455,2		93.771,200	306,2208353	Censurado	286,22084	1,189207	340,3758539	360,3758539	0	29,6932	10,85155254	
				Total de Válidos			30					Soma dos K0		2622144231
				Total de Censurados			2					Somatoria ^{1/4}		226,2893652
											anterior +20		246,2893652	
											Kjc Médio		226,4664168	
											KjcMedio - 30		196,4664168	
											-70		2,806663097	
											Ln		1,031996268	
											T - T0		54,31396357	
											T0		-94,31396357	
100	-40	40		8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259	
100	-40	63,5		13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32	
100	-40	75,5		15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16	
100	-40	79,1		16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38	
100	-40	81		16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28	
100	-40	86,1		17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-40	91,5		18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1	
100	-40	92,1		18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11	
100	-40	94,8		19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7	
100	-40	95,6		19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-40	96		19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2	
100	-40	96,4		19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69	
100	-40	99,6		20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86	
100	-40	102,6		21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46	
100	-40	108,2		22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49	
100	-40	110,9		22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87	
100	-40	112,4		23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68	
100	-40	124		25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94	
100	-40	141,2		29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62	
100	-40	142,5		29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1	
100	-40	153,4		31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84	
100	-40	160,5		33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6	
100	-40	166,8		34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9	
100	-40	167,8		34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5	
100	-40	175,4		36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4	
100	-40	186,7		38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9	
100	-40	187,7		38.666,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3	
100	-40	214,1		44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8	
100	-40	272,3		56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4	
100	-40	282,2		58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8	
						Válidos	30						Somatoria	2176116531
						Censurados	0						Somatoria ^{1/4}	215,9834813
											K0	235,9834813		
											Kjc Médio	217,0633283		
												187,0633283		
												2,672333262		
											Ln	0,982951972		
											T-T0	51,73276227		
											T0	-91,73276227		
25	-20	78,9		16.253,400	127,488823	Válido					133491382,3	1,6932	78839701,34	
25	-20	102,7		21.156,200	145,4517102	Válido					247688786	1,6932	146284423,6	
25	-20	258,8		53.312,800	230,8956474	Censurado					0	1,6932	130,6342804	
25	-20	723,7		149.082,200	386,1116419	Censurado					0	1,6932	130,6342804	
25	-20	772,5		159.135,000	398,9172847	Censurado					0	1,6932	130,6342804	
25	-20	798,3		164.449,800	405,5241053	Censurado					0	1,6932	130,6342804	
25	-20	914,9		188.469,400	434,1306255	Censurado					0	1,6932	130,6342804	
25	-20	1133,7		233.542,200	483,2620407	Censurado					0	1,6932	130,6342804	
25	-20	1340		276.040,000	525,3950894	Censurado					0	1,6932	130,6342804	
25	-20	1348,6		277.811,600	527,0783623	Censurado					0	1,6932	130,6342804	
25	-20	1361,1		280.386,600	529,5154389	Censurado					0	1,6932	130,6342804	
25	-20	1368,5		281.911,000	530,9529169	Censurado					0	1,6932	130,6342804	
25	-20	1368,6		281.931,600	530,9723157	Censurado					0	1,6932	130,6342804	
25	-20	1371,1		282.446,600	531,4570538	Censurado					0	1,6932	130,6342804	
25	-20	1381,3		284.547,800	533,4302204	Censurado					0	1,6932	130,6342804	
25	-20	1391		286.546,000	535,2999159	Censurado					0	1,6932	130,6342804	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-20	1408,2		290.089,200	538,5992945	Censurado					0	1,6932	130,6342804
25	-20	1436,3		295.877,800	543,9465047	Censurado					0	1,6932	130,6342804
25	-20	1459,7		300.698,200	548,3595536	Censurado					0	1,6932	130,6342804
25	-20	1472,5		303.335,000	550,7585678	Censurado					0	1,6932	130,6342804
25	-20	1473,7		303.582,200	550,9829398	Censurado					0	1,6932	130,6342804
25	-20	1480,1		304.900,600	552,178051	Censurado					0	1,6932	130,6342804
25	-20	1496,6		308.299,600	555,2473323	Censurado					0	1,6932	130,6342804
25	-20	1497,2		308.423,200	555,3586229	Censurado					0	1,6932	130,6342804
25	-20	1499		308.794,000	555,6923609	Censurado					0	1,6932	130,6342804
25	-20	1524,5		314.047,000	560,398965	Censurado					0	1,6932	130,6342804
25	-20	1547,8		318.846,800	564,6652105	Censurado					0	1,6932	130,6342804
25	-20	1553,3		319.979,800	565,6675702	Censurado					0	1,6932	130,6342804
25	-20	1554,5		320.227,000	565,8860309	Censurado					0	1,6932	130,6342804
25	-20	1560,5		321.463,000	566,9770718	Censurado					0	1,6932	130,6342804
25	-20	1575		324.450,000	569,6051264	Censurado					0	1,6932	130,6342804
Total de Válidos						2						Soma dos K0	225127913,3
Total de Censurados						29						Somatoria ^{1/4}	122,4918902
												anterior +20	142,4918902
												Kjc Médio	131,7616006
												KjcMedio - 30	101,7616006
												-70	1,453737152
												Ln	0,374137587
												T - T0	19,6908612
												T0	-39,6908612
50	-20	139		28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	10,6932	92721831,37
50	-20	162		33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	10,6932	130996434,6
50	-20	168,1		34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	10,6932	142321754,2
50	-20	180,6		37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	10,6932	167080170,8
50	-20	195,2		40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	10,6932	198652438,3
50	-20	256		52.736,000	229,6432015	Válido	209,6432	1,189207	249,3091868	269,3091868	3863252807	10,6932	361281263,5
50	-20	259		53.354,000	230,984848	Válido	210,98485	1,189207	250,9046824	270,9046824	3963100309	10,6932	370618739,9
50	-20	291		59.946,000	244,8387224	Válido	224,83872	1,189207	267,3798084	287,3798084	5111100625	10,6932	477976716,5
50	-20	326,5		67.259,000	259,3434017	Válido	239,3434	1,189207	284,6288762	304,6288762	6563202928	10,6932	613773512,9
50	-20	328,8		67.732,800	260,2552593	Válido	240,25526	1,189207	285,7132638	305,7132638	6663794707	10,6932	623180592
50	-20	330		67.980,000	260,7297451	Válido	240,72975	1,189207	286,2775257	306,2775257	6716592804	10,6932	628118131,6
50	-20	362,3		74.633,800	273,191874	Censurado	253,19187	1,189207	301,097578	321,097578	0	10,6932	29,25315621
50	-20	380		78.280,000	279,7856322	Censurado	259,78563	1,189207	308,9389222	328,9389222	0	10,6932	29,25315621
50	-20	392		80.752,000	284,1689638	Censurado	264,16896	1,189207	314,1516113	334,1516113	0	10,6932	29,25315621
50	-20	417		85.902,000	293,0904297	Censurado	273,09043	1,189207	324,7610821	344,7610821	0	10,6932	29,25315621
50	-20	447		92.082,000	303,4501607	Censurado	283,45016	1,189207	337,0809478	357,0809478	0	10,6932	29,25315621
50	-20	480		98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	10,6932	29,25315621
50	-20	486,8		100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	10,6932	29,25315621
50	-20	502		103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	10,6932	29,25315621
50	-20	512		105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	10,6932	29,25315621

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-20	555		114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	10,6932	29,25315621	
50	-20	648,8		133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	10,6932	29,25315621	
50	-20	655,6		135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	10,6932	29,25315621	
50	-20	695		143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	10,6932	29,25315621	
50	-20	807		166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	10,6932	29,25315621	
50	-20	820		168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	10,6932	29,25315621	
50	-20	1017		209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	10,6932	29,25315621	
50	-20	1266		260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	10,6932	29,25315621	
50	-20	1582		325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	10,6932	29,25315621	
50	-20	1619		333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	10,6932	29,25315621	
Total de Válidos						11							Soma dos K0	3806722141
Total de Censurados						19							Somatoria ^{1/4}	248,3921088
													anterior +20	268,3921088
													Kjc Médio	246,6329601
													KjcMedio - 30	216,6329601
													-70	3,094756572
													Ln	1,129709251
													T - T0	59,45659788
													T0	-79,45659788
100	-20	58,6		12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	27,6932	9422408,366	
100	-20	74,4		15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	27,6932	16767702,48	
100	-20	82,8		17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	27,6932	21613933,72	
100	-20	100,6		20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	27,6932	34101242,89	
100	-20	112,2		23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	27,6932	43891534,56	
100	-20	123,7		25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	27,6932	54906005,3	
100	-20	130,8		26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	27,6932	62363420,44	
100	-20	133,4		27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	27,6932	65220613,66	
100	-20	186,1		38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	27,6932	137954569	
100	-20	188,4		38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	27,6932	141779939,9	
100	-20	191,7		39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	27,6932	147364612,7	
100	-20	193		39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	27,6932	149595765	
100	-20	212,3		43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	27,6932	184796758,4	
100	-20	212,5		43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	27,6932	185181968,8	
100	-20	223		45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	27,6932	205996494,5	
100	-20	224,4		46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	27,6932	208859531,2	
100	-20	231,2		47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	27,6932	223060123,4	
100	-20	247,3		50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	27,6932	258634192,8	
100	-20	288,5		59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	27,6932	362250281,4	
100	-20	299,8		61.758,800	248,5131787	Válido	228,51318	1,414214	323,1664365	343,1664365	10906992078	27,6932	393850912,1	
100	-20	301,3		62.067,800	249,1341004	Válido	229,1341	1,414214	324,0445524	344,0445524	11026023136	27,6932	398149117,3	
100	-20	315,9		65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	27,6932	441253873,8	
100	-20	318,2		65.549,200	256,02578	Válido	236,02578	1,414214	333,7908591	353,7908591	12413600285	27,6932	448254455,4	
100	-20	324,6		66.867,600	258,5877027	Válido	238,5877	1,414214	337,413965	357,413965	12961408950	27,6932	468035797,6	
100	-20	334,9		68.989,400	262,6583332	Válido	242,65833	1,414214	343,1707058	363,1707058	13868862163	27,6932	500803885,5	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-20	371,9		76.611,400	276,7876442	Válido	256,78764	1,414214	363,1525691	383,1525691	17392278605	27,6932	628034268,5	
100	-20	373,5		76.941,000	277,3824075	Válido	257,38241	1,414214	363,9936914	383,9936914	17553973034	27,6932	633873045,9	
100	-20	384,1		79.124,600	281,2909526	Válido	261,29095	1,414214	369,5212089	389,5212089	18644789305	27,6932	673262364,2	
100	-20	588,7		121.272,200	348,2415828	Censurado	328,24158	1,414214	464,2036981	484,2036981	0	27,6932	15,97431608	
100	-20	683,1		140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	27,6932	15,97431608	
Total de Válidos						28							Soma dos K0	7099278851
Total de Censurados						2							Somatoria ^{1/4}	290,2709396
													anterior +20	310,2709396
													Kjc Médio	284,8432053
													KjcMedio - 30	254,8432053
													-70	3,640617219
													Ln	1,292153233
													T - T0	68,00602465
													T0	-88,00602465
200	-20	112		23.072,000	151,8947004	Válido	131,8947	1,681793	221,8195615	241,8195615	2421025531	14,6932	164771835,4	
200	-20	117		24.102,000	155,2481884	Válido	135,24819	1,681793	227,4594336	247,4594336	2676799320	14,6932	182179465,4	
200	-20	125		25.750,000	160,4680654	Válido	140,46807	1,681793	236,2381852	256,2381852	3114586458	14,6932	211974686,1	
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6	
200	-20	162		33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6	
200	-20	166		34.196,000	184,921605	Válido	164,92161	1,681793	277,3639729	297,3639729	5918343906	14,6932	402794755,8	
200	-20	168		34.608,000	186,0322553	Válido	166,03226	1,681793	279,2318565	299,2318565	6079387909	14,6932	413755200,3	
200	-20	175		36.050,000	189,8683755	Válido	169,86838	1,681793	285,683416	305,683416	6661010537	14,6932	453339676,7	
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5	
200	-20	179		36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5	
200	-20	187		38.522,000	196,2702219	Válido	176,27022	1,681793	296,4499954	316,4499954	7723351343	14,6932	525641204,3	
200	-20	199		40.994,000	202,4697508	Válido	182,46975	1,681793	306,8763187	326,8763187	8868568054	14,6932	603583157,8	
200	-20	234		48.204,000	219,5540936	Válido	199,55409	1,681793	335,6086439	355,6086439	12686229143	14,6932	863408185	
200	-20	236		48.616,000	220,4903626	Válido	200,49036	1,681793	337,1832544	357,1832544	12925995256	14,6932	879726353,4	
200	-20	239		49.234,000	221,8873588	Válido	201,88736	1,681793	339,5327126	359,5327126	13290046261	14,6932	904503189,3	
Válidos						15							Somatoria	7321985905
Censurados						0							Somatoria ^{1/4}	292,5211163
													K0	312,5211163
													Kjc Médio	286,8962665
														256,8962665
														3,669946665
													Ln	1,300177129
													T-T0	68,42832231
													T0	-88,42832231

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
Resumo do Kmin com M=40													
								-91°C	Esp	T-T0	T0	Válidos	Censurados
									25	5,609770771	-96,60977077	31	0
									50	11,84952289	-102,8495229	34	0
									100	12,34471888	-103,3447189	30	0
									200	12,40177232	-103,4017723	15	0
								-60°C	Esp	T-T0	T0	Válidos	Censurados
									25	27,77445288	-87,77445288	54	8
									50	33,11113395	-93,11113395	34	0
									100	56,38310443	-116,3831044	30	0
								-40°C	Esp	T-T0	T0	Válidos	Censurados
									25	38,85262794	-78,85262794	10	20
									50	54,31396357	-94,31396357	30	2
									100	51,73276227	-91,73276227	30	0
								-20°C	Esp	T-T0	T0	Válidos	Censurados
									25	19,6908612	-39,6908612	2	29
									50	59,45659788	-79,45659788	11	19
									100	68,00602465	-88,00602465	28	2
									200	68,42832231	-88,42832231	15	0

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-91	19,9	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513
25	-91	21,3	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676
25	-91	23,1	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965
25	-91	23,7	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925
25	-91	29,1	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273
25	-91	29,4	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538
25	-91	38,6	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933
25	-91	39,7	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432
25	-91	42,3	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831
25	-91	46,3	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58
25	-91	47,3	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849
25	-91	48,9	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208
25	-91	51,4	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337
25	-91	52	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747
25	-91	55,9	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774
25	-91	56,6	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202
25	-91	59,4	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94
25	-91	63,3	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009
25	-91	68,5	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141
25	-91	70,2	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584
25	-91	70,6	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362
25	-91	71,4	14.708,400	121,28	Válido					105211635	30,6932	3427848,349
25	-91	76	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922
25	-91	76,5	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047
25	-91	76,6	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954
25	-91	76,8	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083
25	-91	77	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66
25	-91	77,2	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718
25	-91	93,9	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01
25	-91	112,8	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59
25	-91	124,3	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81
Total de Válidos					31						Somatoria	86037559,23
Total de Censurados					0						Somatoria ^{1/4}	96,31014138
											K0	116,3101414
											Kjc Médio	107,873373
												77,87337299
												1,112476757
											Ln	0,106588842
											T-T0	5,609770771
											T0	-96,60977077
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411
50	-91	67	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85
50	-91	81	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651
50	-91	86	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14
Total de Válidos					34						Somatoria	131341550,9
Total de Censurados					0						Somatoria ^{1/4}	107,0534173
											K0	127,0534173
											Kjc Médio	117,6755379
												87,67553792
												1,252507685
											Ln	0,225147689
											T-T0	11,84952289
											T0	-102,8495229
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764
100	-91	32	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551
100	-91	33	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33
Total de Válidos					30						Somatoria	135856648,7
Total de Censurados					0						Somatoria ^{1/4}	107,9618267
											K0	127,9618267
											Kjc Médio	118,5043707
												88,50437072
												1,264348153
											Ln	0,234556695
											T-T0	12,34471888
											T0	-103,3447189
200	-91	13,8	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716
200	-91	20,4	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78
200	-91	23	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622
200	-91	23,2	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806
200	-91	25,4	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051
200	-91	25,6	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041
200	-91	25,8	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143
200	-91	30,2	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331
200	-91	33,9	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802
200	-91	36,9	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
200	-91	38,8	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87	
200	-91	40,9	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07	
200	-91	44,6	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11	
200	-91	44,8	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46	
200	-91	50,7	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39	
Total de Válidos					15							Soma dos K0	136387006,3
Total de Censurados					0							Somatoria^{1/4}	108,0670383
											anterior +20	128,0670383	
											Kjc Médio	118,6003657	
												88,60036572	
												1,26571951	
											Ln	0,235640743	
											T - T0	12,40177232	
											T0	-103,4017723	
25	-60	34	7.004,000	83,68990381	Válido					16454412,17	50,6932	324588,1533	
25	-60	40,2	8.281,200	91,00109889	Válido					25413254,26	50,6932	501314,8561	
25	-60	46,9	9.661,400	98,29242087	Válido					37573260,89	50,6932	741189,3685	
25	-60	52	10.712,000	103,4987923	Válido					48609457,63	50,6932	958895,0319	
25	-60	54,2	11.165,200	105,66551	Válido					53854750,56	50,6932	1062366,364	
25	-60	56,1	11.556,600	107,5016279	Válido					58622526,43	50,6932	1156417,95	
25	-60	62,3	12.833,800	113,2863628	Válido					75730816,98	50,6932	1493904,843	
25	-60	67,4	13.884,400	117,8320839	Válido					91606273,8	50,6932	1807072,227	
25	-60	68	14.008,000	118,355397	Válido					93582099,2	50,6932	1846048,369	
25	-60	69	14.214,000	119,2224811	Válido					96926008,89	50,6932	1912012,043	
25	-60	74,6	15.367,600	123,9661244	Válido					116833508,7	50,6932	2304717,57	
25	-60	78,2	16.109,200	126,9220233	Válido					130697919,3	50,6932	2578214,026	
25	-60	81,3	16.747,800	129,4132914	Válido					143311265,7	50,6932	2827031,352	
25	-60	81,4	16.768,400	129,4928569	Válido					143728585,3	50,6932	2835263,612	
25	-60	82,3	16.953,800	130,2067587	Válido					147513890,6	50,6932	2909934,48	
25	-60	90	18.540,000	136,1616686	Válido					182075439,7	50,6932	3591713,281	
25	-60	90,4	18.622,400	136,4639146	Válido					183977848,2	50,6932	3629241,164	
25	-60	100,3	20.661,800	143,7421302	Válido					234460859,4	50,6932	4625094,872	
25	-60	112,2	23.113,200	152,0302601	Válido					303874261,2	50,6932	5994379,152	
25	-60	120,3	24.781,800	157,4223618	Válido					356639656,8	50,6932	7035256,342	
25	-60	123,4	25.420,400	159,4377622	Válido					378025952,7	50,6932	7457133,356	
25	-60	127,4	26.244,400	162,0012346	Válido					406601035,8	50,6932	8020820,067	
25	-60	129	26.574,000	163,0153367	Válido					418341020,6	50,6932	8252409,014	
25	-60	140,9	29.025,400	170,3684243	Válido					511242082,6	50,6932	10085022,89	
25	-60	141,9	29.231,400	170,9719275	Válido					519499100,1	50,6932	10247905,05	
25	-60	142,5	29.355,000	171,3330091	Válido					524486930,2	50,6932	10346297,53	
25	-60	143,1	29.478,600	171,6933313	Válido					529499988,6	50,6932	10445187,69	
25	-60	191,8	39.510,800	198,7732376	Válido					1021433322	50,6932	20149316,32	
25	-60	193,2	39.799,200	199,4973684	Válido					1038083632	50,6932	20477768,85	
25	-60	261	53.766,000	231,8749663	Censurado					0	50,6932	0	
25	-60	284,9	58.689,400	242,2589524	Censurado					0	50,6932	0	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
Total de Válidos					29								
Total de Censurados					2								
50	-60	46,7	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473	
50	-60	48	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099	
50	-60	49,9	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382	
50	-60	52,9	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894	
50	-60	59,4	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046	
50	-60	63,1	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323	
50	-60	68,1	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889	
50	-60	68,2	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856	
50	-60	69,2	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228	
50	-60	75,1	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502	
50	-60	76,2	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988	
50	-60	76,5	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749	
50	-60	80,6	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779	
50	-60	81,9	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736	
50	-60	82,9	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962	
50	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309	
50	-60	86,2	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153	
50	-60	94,4	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48	
50	-60	95,1	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2	
50	-60	96,8	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39	
50	-60	97	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87	
50	-60	98,6	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59	
50	-60	109,7	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83	
50	-60	112,9	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06	
50	-60	127,4	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34	
50	-60	129,1	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35	
50	-60	129,9	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43	
50	-60	142,3	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34	
50	-60	147,4	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19	
50	-60	147,8	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18	
50	-60	163,2	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44	
50	-60	164,7	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33	
50	-60	176,8	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7	
50	-60	198	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42	
Total de Válidos					34							Somatoria	575512757,5

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
Total de Censurados						0						Somatoria ^{1/4}	154,8865616
												K0	174,8865616
												Kjc Médio	161,3184988
													131,3184988
													1,875978554
												Ln	0,629130419
												T-T0	33,11113395
												T0	-93,11113395
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,414214	83,62998164	103,6299816	48915669,93	29,6932	1647369,429	
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,414214	125,63129	145,63129	249110066,1	29,6932	8389465,135	
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,414214	133,2075242	153,2075242	314858213,1	29,6932	10603714,42	
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,414214	134,0979938	154,0979938	323362104,1	29,6932	10890106,29	
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,414214	139,7097763	159,7097763	380984396	29,6932	12830695,11	
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	29,6932	20158116,65	
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,414214	162,450099	182,450099	696433929,9	29,6932	23454323,88	
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,414214	163,6344616	183,6344616	716966868,3	29,6932	24145826,93	
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,414214	169,0327326	189,0327326	816362880,3	29,6932	27493260,42	
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,414214	176,9141693	196,9141693	979603820,3	29,6932	32990847,07	
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,414214	180,9897118	200,9897118	1073039117	29,6932	36137537,13	
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,414214	182,3633017	202,3633017	1105986399	29,6932	37247127,27	
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,414214	186,8147757	206,8147757	1217993278	29,6932	41019266,28	
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,414214	187,4841231	207,4841231	1235543338	29,6932	41610312,73	
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,414214	189,8578842	209,8578842	1299315284	29,6932	43758008,04	
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,414214	201,4486171	221,4486171	1646861822	29,6932	55462591,51	
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,414214	204,1231297	224,1231297	1736076561	29,6932	58467142,68	
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,414214	205,537028	225,537028	1784679727	29,6932	60103987,67	
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,414214	220,4774621	240,4774621	2362962366	29,6932	79579242,59	
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,414214	223,1953502	243,1953502	2481650230	29,6932	83576382,15	
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,414214	229,1057052	249,1057052	2755139650	29,6932	92786888,93	
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,414214	235,5088295	255,5088295	3076300640	29,6932	103602866,7	
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,414214	252,8968092	272,8968092	4090471768	29,6932	137757862,7	
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,414214	276,6557228	296,6557228	5858124988	29,6932	197288436	
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,414214	279,5468513	299,5468513	6106866407	29,6932	205665485,9	
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,414214	287,4098845	307,4098845	6823493794	29,6932	229799879,9	
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,414214	302,3889814	322,3889814	8361108288	29,6932	281583267,8	
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,414214	312,9358923	332,9358923	9590064104	29,6932	322971727,7	
100	-60	415,3	85.551,800	292,4923931	Válido	272,49239	1,414214	385,3624379	405,3624379	22053499959	29,6932	742712134,7	
Total de Válidos						30						Somatoria	3045837511
Total de Censurados						0						Somatoria ^{1/4}	234,9236191
												K0	254,9236191
												Kjc Médio	234,3443101
													204,3443101
													2,91920443

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
											Ln	1,071311124
											T-T0	56,38310443
											T0	-116,3831044
25	-60	38,4	7.910,400	88,9404295	Válido					22588944,53	50,6932	445601,0773
25	-60	46,1	9.496,600	97,45050026	Válido					35982961,89	50,6932	709818,3167
25	-60	55	11.330,000	106,4424727	Válido					55835283,59	50,6932	1101435,372
25	-60	63,6	13.101,600	114,4622208	Válido					79621912,89	50,6932	1570662,592
25	-60	64,1	13.204,600	114,9112701	Válido					81146751,92	50,6932	1600742,347
25	-60	77,7	16.006,200	126,5156117	Válido					128722084,2	50,6932	2539237,692
25	-60	78,7	16.212,200	127,3271377	Válido					132689998,7	50,6932	2617510,803
25	-60	87,8	18.086,800	134,4871741	Válido					171801655	50,6932	3389047,348
25	-60	89,1	18.354,600	135,4791497	Válido					177833800,3	50,6932	3508040,532
25	-60	116,3	23.957,800	154,783074	Válido					330020888	50,6932	6510160,89
25	-60	128,7	26.512,200	162,8256737	Válido					416126261,3	50,6932	8208719,538
25	-60	129	26.574,000	163,0153367	Válido					418341020,6	50,6932	8252409,014
25	-60	131,7	27.130,200	164,7124768	Válido					438554837,8	50,6932	8651157,114
25	-60	133,7	27.542,200	165,9584285	Válido					453854572,7	50,6932	8952967,513
25	-60	133,7	27.542,200	165,9584285	Válido					453854572,7	50,6932	8952967,513
25	-60	140,7	28.984,200	170,2474669	Válido					509599080,2	50,6932	10052612,19
25	-60	150,4	30.982,400	176,0181809	Válido					592517033	50,6932	11688294,15
25	-60	164,6	33.907,600	184,140164	Válido					725871010,5	50,6932	14318902,94
25	-60	166,1	34.216,600	184,9772959	Válido					740792750,6	50,6932	14613256,82
25	-60	176	36.256,000	190,4100838	Válido					843298173,6	50,6932	16635331,24
25	-60	197,6	40.705,600	201,7562886	Válido					1091334248	50,6932	21528217,74
25	-60	200,2	41.241,200	203,0792949	Válido					1123458215	50,6932	22161911,55
25	-60	217,1	44.722,600	211,4771855	Censurado					0	50,6932	4,027997175
25	-60	219,5	45.217,000	212,6428931	Censurado					0	50,6932	4,027997175
25	-60	234,5	48.307,000	219,7885347	Censurado					0	50,6932	4,027997175
25	-60	275,9	56.835,400	238,4017617	Censurado					0	50,6932	4,027997175
25	-60	369,1	76.034,600	275,7437216	Censurado					0	50,6932	4,027997175
25	-60	373,6	76.961,600	277,4195379	Censurado					0	50,6932	4,027997175
25	-60	427,1	87.982,600	296,6186103	Censurado					0	50,6932	4,027997175
25	-60	678,2	139.709,200	373,7769388	Censurado					0	50,6932	4,027997175
25	-60	687,7	141.666,200	376,3857064	Censurado					0	50,6932	4,027997175
				T. Válidos	22						Soma dos K ₀	333625556,4
				T. Censurados	9						Somatoria ^{1/4}	135,1496196
											anterior +20	155,1496196
											Kjc Médio	143,310513
												113,310513
												1,618721614
											LN	0,48163671
											T - T0	25,34854007
											T0	-85,34854007
25	-40	61,6	12.689,600	112,6481247	Válido					73679476,71	6,6932	11008109,23

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-40	113,2	23.319,200	152,706254	Válido					310145554,3	6,6932	46337410,25
25	-40	136,6	28.139,600	167,7486215	Válido					476533843,6	6,6932	71196713,62
25	-40	139,3	28.695,800	169,3983471	Válido					498176423,4	6,6932	74430231,2
25	-40	155,4	32.012,400	178,9200939	Válido					637845141,6	6,6932	95297487,25
25	-40	165,5	34.093,000	184,6428986	Válido					734804848,9	6,6932	109783787,9
25	-40	195,2	40.211,200	200,5273049	Válido					1062115127	6,6932	158685699,9
25	-40	203,4	41.900,400	204,695872	Censurado					0	6,6932	30,44703958
25	-40	233,2	48.039,200	219,1784661	Censurado					0	6,6932	30,44703958
25	-40	251	51.706,000	227,3895336	Censurado					0	6,6932	30,44703958
25	-40	254,5	52.427,000	228,9694303	Censurado					0	6,6932	30,44703958
25	-40	264,8	54.548,800	233,5568453	Censurado					0	6,6932	30,44703958
25	-40	275,9	56.835,400	238,4017617	Censurado					0	6,6932	30,44703958
25	-40	283	58.298,000	241,4497877	Censurado					0	6,6932	30,44703958
25	-40	311,7	64.210,200	253,3973165	Censurado					0	6,6932	30,44703958
25	-40	349,2	71.935,200	268,2073824	Censurado					0	6,6932	30,44703958
25	-40	483,2	99.539,200	315,498336	Censurado					0	6,6932	30,44703958
25	-40	548,6	113.011,600	336,1719798	Censurado					0	6,6932	30,44703958
25	-40	562,8	115.936,800	340,4949339	Censurado					0	6,6932	30,44703958
25	-40	619,9	127.699,400	357,3505282	Censurado					0	6,6932	30,44703958
25	-40	758,7	156.292,200	395,3380832	Censurado					0	6,6932	30,44703958
25	-40	773,9	159.423,400	399,2785995	Censurado					0	6,6932	30,44703958
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	6,6932	30,44703958
25	-40	1174	241.844,000	491,7763719	Censurado					0	6,6932	30,44703958
25	-40	1337,1	275.442,600	524,826257	Censurado					0	6,6932	30,44703958
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	6,6932	30,44703958
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	6,6932	30,44703958
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	6,6932	30,44703958
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	6,6932	30,44703958
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	6,6932	30,44703958
Total de Válidos					7						Somatoria	566740139,6
Total de Censurados					23						Somatoria ^{1/4}	154,2929182
											K0	174,2929182
											Kjc Médio	160,7768586
												130,7768586
												1,868240837
											Ln	0,624997259
											T-T0	32,89360576
											T0	-72,89360576
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	24,6932	3413308,679
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	24,6932	3679097,642
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	24,6932	5734542,787
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	24,6932	16245571,08
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	24,6932	22250690,38
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	24,6932	22298589,94

specimen width W, mm	test W, mm	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	24,6932	28175209,95
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	24,6932	30221997,08
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	24,6932	39370346,13
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	24,6932	40744420,37
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	24,6932	60324212,07
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	24,6932	60731103,27
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	24,6932	60731103,27
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	24,6932	62290441,1
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	24,6932	78193099,14
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	24,6932	96212090,04
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	24,6932	101156819,3
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	24,6932	104164399,2
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	24,6932	108873143,6
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	24,6932	111324455,7
50	-40	245	50.470,000	224,6552915	Válido	204,65529	1,189207	243,3775288	263,3775288	3508503451	24,6932	142083790,3
50	-40	251,8	51.870,800	227,7516191	Válido	207,75162	1,189207	247,0597036	267,0597036	3725698132	24,6932	150879518,7
50	-40	271,9	56.011,400	236,667277	Válido	216,66728	1,189207	257,6622674	277,6622674	4407611391	24,6932	178494945,6
50	-40	272,7	56.176,200	237,0151894	Válido	217,01519	1,189207	258,0760073	278,0760073	4435989652	24,6932	179644179,4
50	-40	274,2	56.485,200	237,6661524	Válido	217,66615	1,189207	258,8501371	278,8501371	4489454740	24,6932	181809354
50	-40	308,7	63.592,200	252,1749393	Censurado	232,17494	1,189207	276,1040897	296,1040897	0	24,6932	11,67122649
50	-40	308,8	63.612,800	252,2157806	Censurado	232,21578	1,189207	276,1526585	296,1526585	0	24,6932	11,67122649
50	-40	313,1	64.498,600	253,9657457	Censurado	233,96575	1,189207	278,2337295	298,2337295	0	24,6932	11,67122649
50	-40	313,1	64.498,600	253,9657457	Censurado	233,96575	1,189207	278,2337295	298,2337295	0	24,6932	11,67122649
50	-40	349,4	71.976,400	268,2841777	Censurado	248,28418	1,189207	295,2613107	315,2613107	0	24,6932	11,67122649
50	-40	386,6	79.639,600	282,2048901	Censurado	262,20489	1,189207	311,8159209	331,8159209	0	24,6932	11,67122649
50	-40	455,2	93.771,200	306,2208353	Censurado	286,22084	1,189207	340,3758539	360,3758539	0	24,6932	11,67122649
Total de Válidos					25						Somatoria	1889046511
Total de Censurados					7						Somatoria ^{1/4}	208,4782067
											K0	228,4782067
											Kjc Médio	210,2155158
												180,2155158
												2,574507369
											Ln	0,945658203
											T-T0	49,76999121
											T0	-89,76999121
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49	
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62	
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1	
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9	
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9	
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3	
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8	
					Válidos	30						Somatoria	2176116531
					Censurados	0						Somatoria ^{1/4}	215,9834813
											K0	235,9834813	
											Kjc Médio	217,0633283	
												187,0633283	
												2,672333262	
											Ln	0,982951972	
											T-T0	51,73276227	
											T0	-91,73276227	
25	-20	78,9	16.253,400	127,488823	Válido					133491382,3	1,6932	78839701,34	
25	-20	102,7	21.156,200	145,4517102	Válido					247688786	1,6932	146284423,6	
25	-20	258,8	53.312,800	230,8956474	Censurado					0	1,6932	116,8428525	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	1,6932	116,8428525	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	1,6932	116,8428525	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	1,6932	116,8428525	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	1,6932	116,8428525	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	1,6932	116,8428525	
25	-20	1340	276.040,000	525,3950894	Censurado					0	1,6932	116,8428525	
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	1,6932	116,8428525	
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	1,6932	116,8428525	
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	1,6932	116,8428525	
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	1,6932	116,8428525	
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	1,6932	116,8428525	
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	1,6932	116,8428525	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-20	1391	286.546,000	535,2999159	Censurado					0	1,6932	116,8428525
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	1,6932	116,8428525
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	1,6932	116,8428525
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	1,6932	116,8428525
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	1,6932	116,8428525
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	1,6932	116,8428525
25	-20	1480,1	304.900,600	552,178051	Censurado					0	1,6932	116,8428525
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	1,6932	116,8428525
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	1,6932	116,8428525
25	-20	1499	308.794,000	555,6923609	Censurado					0	1,6932	116,8428525
25	-20	1524,5	314.047,000	560,398965	Censurado					0	1,6932	116,8428525
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	1,6932	116,8428525
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	1,6932	116,8428525
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	1,6932	116,8428525
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	1,6932	116,8428525
25	-20	1575	324.450,000	569,6051264	Censurado					0	1,6932	116,8428525
Total de Válidos					2						Somatoria	225127513,4
Total de Censurados					29						Somatoria ^{1/4}	122,4918358
											K0	142,4918358
											Kjc Médio	131,761551
												101,761551
												1,453736443
											Ln	0,374137099
											T-T0	19,69083553
											T0	-39,69083553
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	6,6932	148134388,2
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	6,6932	209282715,9
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	6,6932	227376289,6
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	6,6932	266930867,6
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	6,6932	317371399,9
50	-20	256	52.736,000	229,6432015	Válido	209,6432	1,189207	249,3091868	269,3091868	3863252807	6,6932	577190702,1
50	-20	259	53.354,000	230,984848	Válido	210,98485	1,189207	250,9046824	270,9046824	3963100309	6,6932	592108454,7
50	-20	291	59.946,000	244,8387224	Censurado	224,83872	1,189207	267,3798084	287,3798084	0	6,6932	41,80147463
50	-20	326,5	67.259,000	259,3434017	Censurado	239,3434	1,189207	284,6288762	304,6288762	0	6,6932	41,80147463
50	-20	328,8	67.732,800	260,2552593	Censurado	240,25526	1,189207	285,7132638	305,7132638	0	6,6932	41,80147463
50	-20	330	67.980,000	260,7297451	Censurado	240,72975	1,189207	286,2775257	306,2775257	0	6,6932	41,80147463
50	-20	362,3	74.633,800	273,191874	Censurado	253,19187	1,189207	301,097578	321,097578	0	6,6932	41,80147463
50	-20	380	78.280,000	279,7856322	Censurado	259,78563	1,189207	308,9389222	328,9389222	0	6,6932	41,80147463
50	-20	392	80.752,000	284,1689638	Censurado	264,16896	1,189207	314,1516113	334,1516113	0	6,6932	41,80147463
50	-20	417	85.902,000	293,0904297	Censurado	273,09043	1,189207	324,7610821	344,7610821	0	6,6932	41,80147463
50	-20	447	92.082,000	303,4501607	Censurado	283,45016	1,189207	337,0809478	357,0809478	0	6,6932	41,80147463
50	-20	480	98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	6,6932	41,80147463
50	-20	486,8	100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	6,6932	41,80147463
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	6,6932	41,80147463

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	6,6932	41,80147463	
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	6,6932	41,80147463	
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	6,6932	41,80147463	
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	6,6932	41,80147463	
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	6,6932	41,80147463	
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	6,6932	41,80147463	
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	6,6932	41,80147463	
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	6,6932	41,80147463	
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	6,6932	41,80147463	
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	6,6932	41,80147463	
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	6,6932	41,80147463	
Total de Válidos											7	Somatoria	2338395779
Total de Censurados											23	Somatoria ^{1/4}	219,9021647
												K0	239,9021647
												Kjc Médio	220,6387351
													190,6387351
													2,723410502
												Ln	1,001884956
												T-T0	52,72920522
												T0	-72,72920522
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	27,6932	9422408,366	
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	27,6932	16767702,48	
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	27,6932	21613933,72	
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	27,6932	34101242,89	
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	27,6932	43891534,56	
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	27,6932	54906005,3	
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	27,6932	62363420,44	
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	27,6932	65220613,66	
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	27,6932	137954569	
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	27,6932	141779939,9	
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	27,6932	147364612,7	
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	27,6932	149595765	
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	27,6932	184796758,4	
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	27,6932	185181968,8	
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	27,6932	205996494,5	
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	27,6932	208859531,2	
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	27,6932	223860123,4	
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	27,6932	258634192,8	
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	27,6932	362250281,4	
100	-20	299,8	61.758,800	248,5131787	Válido	228,51318	1,414214	323,1664365	343,1664365	10906992078	27,6932	393850912,1	
100	-20	301,3	62.067,800	249,1341004	Válido	229,1341	1,414214	324,0445524	344,0445524	11026023136	27,6932	398149117,3	
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	27,6932	441253873,8	
100	-20	318,2	65.549,200	256,02578	Válido	236,02578	1,414214	333,7908591	353,7908591	12413600285	27,6932	448254455,4	
100	-20	324,6	66.867,600	258,5877027	Válido	238,5877	1,414214	337,413965	357,413965	12961408950	27,6932	468035797,6	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-91	19,9	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513
25	-91	21,3	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676
25	-91	23,1	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965
25	-91	23,7	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925
25	-91	29,1	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273
25	-91	29,4	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538
25	-91	38,6	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933
25	-91	39,7	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432
25	-91	42,3	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831
25	-91	46,3	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58
25	-91	47,3	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849
25	-91	48,9	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208
25	-91	51,4	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337
25	-91	52	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747
25	-91	55,9	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774
25	-91	56,6	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202
25	-91	59,4	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94
25	-91	63,3	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009
25	-91	68,5	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141
25	-91	70,2	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584
25	-91	70,6	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362
25	-91	71,4	14.708,400	121,28	Válido					105211635	30,6932	3427848,349
25	-91	76	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922
25	-91	76,5	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047
25	-91	76,6	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954
25	-91	76,8	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083
25	-91	77	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66
25	-91	77,2	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718
25	-91	93,9	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01
25	-91	112,8	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59
25	-91	124,3	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81
Total de Válidos					31						Somatoria	86037559,23
Total de Censurados					0						Somatoria ^{1/4}	96,31014138
											K0	116,3101414
											Kjc Médio	107,873373
												77,87337299
												1,112476757
											Ln	0,106588842
											T-T0	5,609770771
											T0	-96,60977077
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851	
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697	
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597	
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768	
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514	
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749	
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956	
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456	
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782	
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143	
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134	
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339	
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53	
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211	
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848	
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821	
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685	
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766	
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204	
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154	
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411	
50	-91	67	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081	
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655	
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988	
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85	
50	-91	81	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651	
50	-91	86	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58	
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447	
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05	
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14	
Total de Válidos					34							Somatoria	131341550,9
Total de Censurados					0							Somatoria ^{1/4}	107,0534173
												K0	127,0534173
												Kjc Médio	117,6755379
													87,67553792
													1,252507685
												Ln	0,225147689
												T-T0	11,84952289
												T0	-102,8495229
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238	
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394	
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417	
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288	
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274	
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394	
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764	
100	-91	32	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786	
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622	
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551	
100	-91	33	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606	
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893	
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8	
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865	
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563	
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659	
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191	
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782	
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851	
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732	
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546	
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886	
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784	
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644	
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097	
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728	
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33	
Total de Válidos					30							Somatoria	135856648,7
Total de Censurados					0							Somatoria ^{1/4}	107,9618267
												K0	127,9618267
												Kjc Médio	118,5043707
													88,50437072
													1,264348153
												Ln	0,234556695
												T-T0	12,34471888
												T0	-103,3447189
200	-91	13,8	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716	
200	-91	20,4	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78	
200	-91	23	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622	
200	-91	23,2	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806	
200	-91	25,4	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051	
200	-91	25,6	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041	
200	-91	25,8	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143	
200	-91	30,2	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331	
200	-91	33,9	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802	
200	-91	36,9	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068		
200	-91	38,8	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87		
200	-91	40,9	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07		
200	-91	44,6	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11		
200	-91	44,8	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46		
200	-91	50,7	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39		
Total de Válidos						15							Soma dos K0	136387006,3
Total de Censurados						0							Somatoria^{1/4}	108,0670383
												anterior +20	128,0670383	
												Kjc Médio	118,6003657	
													88,60036572	
													1,26571951	
												Ln	0,235640743	
												T - T0	12,40177232	
												T0	-103,4017723	
25	-60	34	7.004,000	83,68990381	Válido					16454412,17	45,6932	360106,3654		
25	-60	40,2	8.281,200	91,00109889	Válido					25413254,26	45,6932	556171,4711		
25	-60	46,9	9.661,400	98,29242087	Válido					37573260,89	45,6932	822294,3653		
25	-60	52	10.712,000	103,4987923	Válido					48609457,63	45,6932	1063822,574		
25	-60	54,2	11.165,200	105,66551	Válido					53854750,56	45,6932	1178616,305		
25	-60	56,1	11.556,600	107,5016279	Válido					58622526,43	45,6932	1282959,531		
25	-60	62,3	12.833,800	113,2863628	Válido					75730816,98	45,6932	1657376,086		
25	-60	67,4	13.884,400	117,8320839	Válido					91606273,8	45,6932	2004811,959		
25	-60	68	14.008,000	118,355397	Válido					93582099,2	45,6932	2048053,084		
25	-60	69	14.214,000	119,2224811	Válido					96926008,89	45,6932	2121234,864		
25	-60	74,6	15.367,600	123,9661244	Válido					116833508,7	45,6932	2556912,379		
25	-60	78,2	16.109,200	126,9220233	Válido					130697919,3	45,6932	2860336,314		
25	-60	81,3	16.747,800	129,4132914	Válido					143311265,7	45,6932	3136380,593		
25	-60	81,4	16.768,400	129,4928569	Válido					143728585,3	45,6932	3145513,673		
25	-60	82,3	16.953,800	130,2067587	Válido					147513890,6	45,6932	3228355,435		
25	-60	90	18.540,000	136,1616686	Válido					182075439,7	45,6932	3984738,204		
25	-60	90,4	18.622,400	136,4639146	Válido					183977848,2	45,6932	4026372,593		
25	-60	100,3	20.661,800	143,7421302	Válido					234460859,4	45,6932	5131198,064		
25	-60	112,2	23.113,200	152,0302601	Válido					303874261,2	45,6932	6650316,923		
25	-60	120,3	24.781,800	157,4223618	Válido					356639656,8	45,6932	7805092,591		
25	-60	123,4	25.420,400	159,4377622	Válido					378025952,7	45,6932	8273133,697		
25	-60	127,4	26.244,400	162,0012346	Válido					406601035,8	45,6932	8898502,093		
25	-60	129	26.574,000	163,0153367	Válido					418341020,6	45,6932	9155432,77		
25	-60	140,9	29.025,400	170,3684243	Válido					511242082,6	45,6932	11188581,29		
25	-60	141,9	29.231,400	170,9719275	Válido					519499100,1	45,6932	11369286,9		
25	-60	142,5	29.355,000	171,3330091	Válido					524486930,2	45,6932	11478446,03		
25	-60	143,1	29.478,600	171,6933313	Válido					529499988,6	45,6932	11588157,29		
25	-60	191,8	39.510,800	198,7732376	Censurado					0	45,6932	4,079403531		
25	-60	193,2	39.799,200	199,4973684	Censurado					0	45,6932	4,079403531		
25	-60	261	53.766,000	231,8749663	Censurado					0	45,6932	4,079403531		
25	-60	284,9	58.689,400	242,2589524	Censurado					0	45,6932	4,079403531		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
			Total de Válidos		27							
			Total de Censurados		4							
50	-60	46,7	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473
50	-60	48	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099
50	-60	49,9	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382
50	-60	52,9	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894
50	-60	59,4	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046
50	-60	63,1	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323
50	-60	68,1	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889
50	-60	68,2	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856
50	-60	69,2	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228
50	-60	75,1	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502
50	-60	76,2	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988
50	-60	76,5	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749
50	-60	80,6	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779
50	-60	81,9	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736
50	-60	82,9	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962
50	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309
50	-60	86,2	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153
50	-60	94,4	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48
50	-60	95,1	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2
50	-60	96,8	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39
50	-60	97	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87
50	-60	98,6	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59
50	-60	109,7	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83
50	-60	112,9	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06
50	-60	127,4	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34
50	-60	129,1	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35
50	-60	129,9	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43
50	-60	142,3	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34
50	-60	147,4	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19
50	-60	147,8	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18
50	-60	163,2	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44
50	-60	164,7	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33
50	-60	176,8	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7
50	-60	198	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42
Total de Válidos					34						Somatoria	575512757,5

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
Total de Censurados						0					Somatoria ^{1/4}	154,8865616	
											K0	174,8865616	
											Kjc Médio	161,3184988	
												131,3184988	
												1,875978554	
											Ln	0,629130419	
											T-T0	33,11113395	
											T0	-93,11113395	
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,414214	83,62998164	103,6299816	48915669,93	28,6932	1704782,664	
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,414214	125,63129	145,63129	249110066,1	28,6932	8681850,269	
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,414214	133,2075242	153,2075242	314858213,1	28,6932	10973269,38	
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,414214	134,0979938	154,0979938	323362104,1	28,6932	11269642,43	
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,414214	139,7097763	159,7097763	380984396	28,6932	13277863,61	
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	28,6932	20860656,51	
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	28,6932	22873981,33	
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,414214	162,450099	182,450099	696433929,9	28,6932	24271741,39	
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,414214	163,6344616	183,6344616	716966868,3	28,6932	24987344,33	
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,414214	169,0327326	189,0327326	816362880,3	28,6932	28451440,77	
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,414214	176,9141693	196,9141693	979603820,3	28,6932	34140626,36	
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,414214	180,9897118	200,9897118	1073039117	28,6932	37396983,17	
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,414214	182,3633017	202,3633017	1105986399	28,6932	38545244,15	
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,414214	186,8147757	206,8147757	1217993278	28,6932	42448847,72	
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,414214	187,4841231	207,4841231	1235543338	28,6932	43060493,01	
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,414214	189,8578842	209,8578842	1299315284	28,6932	45283038,64	
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,414214	201,4486171	221,4486171	1646861822	28,6932	57395543,97	
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,414214	204,1231297	224,1231297	1736076561	28,6932	60504808,15	
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,414214	205,537028	225,537028	1784679727	28,6932	62198699,58	
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,414214	220,4774621	240,4774621	2362962366	28,6932	82352695,62	
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,414214	223,1953502	243,1953502	2481650230	28,6932	86489141,34	
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,414214	229,1057052	249,1057052	2755139650	28,6932	96020647,76	
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,414214	235,5088295	255,5088295	3076300640	28,6932	107213578,1	
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,414214	252,8968092	272,8968092	4090471768	28,6932	142558925,7	
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,414214	276,6557228	296,6557228	5858124988	28,6932	204164226,7	
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,414214	279,5468513	299,5468513	6106866407	28,6932	212833229	
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,414214	287,4098845	307,4098845	6823493794	28,6932	237808741,9	
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,414214	302,3889814	322,3889814	8361108288	28,6932	291396856,7	
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,414214	312,9358923	332,9358923	9590064104	28,6932	334227764,9	
100	-60	415,3	85.551,800	292,4923931	Censurado	272,49239	1,414214	385,3624379	405,3624379	0	28,6932	12,99269513	
Total de Válidos											29	Somatoria	2383392678
Total de Censurados											1	Somatoria ^{1/4}	220,95249
												K0	240,95249
												Kjc Médio	221,5970519
													191,5970519
													2,737100741

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
											Ln	1,006899237
											T-T0	52,99310682
											T0	-112,9931068
25	-60	38,4	7.910,400	88,9404295	Válido					22588944,53	45,6932	494361,1858
25	-60	46,1	9.496,600	97,45050026	Válido					35982961,89	45,6932	787490,5214
25	-60	55	11.330,000	106,4424727	Válido					55835283,59	45,6932	1221960,458
25	-60	63,6	13.101,600	114,4622208	Válido					79621912,89	45,6932	1742533,088
25	-60	64,1	13.204,600	114,9112701	Válido					81146751,92	45,6932	1775904,334
25	-60	77,7	16.006,200	126,5156117	Válido					128722084,2	45,6932	2817094,976
25	-60	78,7	16.212,200	127,3271377	Válido					132689998,7	45,6932	2903933,16
25	-60	87,8	18.086,800	134,4871741	Válido					171801655	45,6932	3759895,455
25	-60	89,1	18.354,600	135,4791497	Válido					177833800,3	45,6932	3891909,525
25	-60	116,3	23.957,800	154,783074	Válido					330020888	45,6932	7222538,321
25	-60	128,7	26.512,200	162,8256737	Válido					416126261,3	45,6932	9106962,552
25	-60	129	26.574,000	163,0153367	Válido					418341020,6	45,6932	9155432,77
25	-60	131,7	27.130,200	164,7124768	Válido					438554837,8	45,6932	9597814,069
25	-60	133,7	27.542,200	165,9584285	Válido					453854572,7	45,6932	9932650,213
25	-60	133,7	27.542,200	165,9584285	Válido					453854572,7	45,6932	9932650,213
25	-60	140,7	28.984,200	170,2474669	Válido					509599080,2	45,6932	11152624,03
25	-60	150,4	30.982,400	176,0181809	Válido					592517033	45,6932	12967291,26
25	-60	164,6	33.907,600	184,140164	Válido					725871010,5	45,6932	15885755,66
25	-60	166,1	34.216,600	184,9772959	Válido					740792750,6	45,6932	16212319,35
25	-60	176	36.256,000	190,4100838	Censurado					0	45,6932	4,079403531
25	-60	197,6	40.705,600	201,7562886	Censurado					0	45,6932	4,079403531
25	-60	200,2	41.241,200	203,0792949	Censurado					0	45,6932	4,079403531
25	-60	217,1	44.722,600	211,4771855	Censurado					0	45,6932	4,079403531
25	-60	219,5	45.217,000	212,6428931	Censurado					0	45,6932	4,079403531
25	-60	234,5	48.307,000	219,7885347	Censurado					0	45,6932	4,079403531
25	-60	275,9	56.835,400	238,4017617	Censurado					0	45,6932	4,079403531
25	-60	369,1	76.034,600	275,7437216	Censurado					0	45,6932	4,079403531
25	-60	373,6	76.961,600	277,4195379	Censurado					0	45,6932	4,079403531
25	-60	427,1	87.982,600	296,6186103	Censurado					0	45,6932	4,079403531
25	-60	678,2	139.709,200	373,7769388	Censurado					0	45,6932	4,079403531
25	-60	687,7	141.666,200	376,3857064	Censurado					0	45,6932	4,079403531
				T. Válidos	19						Soma dos K0	258133389,9
				T. Censurados	12						Somatoria ^{1/4}	126,753817
											anterior +20	146,753817
											Kjc Médio	135,6501826
												105,6501826
												1,509288323
											LN	0,41163823
											T - T0	21,66452006
											T0	-81,66452006
25	-40	61,6	12.689,600	112,6481247	Válido					73679476,71	5,6932	12941663,16

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
25	-40	113,2	23.319,200	152,706254	Válido					310145554,3	5,6932	54476490,25	
25	-40	136,6	28.139,600	167,7486215	Válido					476533843,6	5,6932	83702284,06	
25	-40	139,3	28.695,800	169,3983471	Válido					498176423,4	5,6932	87503762,99	
25	-40	155,4	32.012,400	178,9200939	Válido					637845141,6	5,6932	112036313,8	
25	-40	165,5	34.093,000	184,6428986	Válido					734804848,9	5,6932	129067106,2	
25	-40	195,2	40.211,200	200,5273049	Censurado					0	5,6932	186,0322553	
25	-40	203,4	41.900,400	204,695872	Censurado					0	5,6932	186,0322553	
25	-40	233,2	48.039,200	219,1784661	Censurado					0	5,6932	186,0322553	
25	-40	251	51.706,000	227,3895336	Censurado					0	5,6932	186,0322553	
25	-40	254,5	52.427,000	228,9694303	Censurado					0	5,6932	186,0322553	
25	-40	264,8	54.548,800	233,5568453	Censurado					0	5,6932	186,0322553	
25	-40	275,9	56.835,400	238,4017617	Censurado					0	5,6932	186,0322553	
25	-40	283	58.298,000	241,4497877	Censurado					0	5,6932	186,0322553	
25	-40	311,7	64.210,200	253,3973165	Censurado					0	5,6932	186,0322553	
25	-40	349,2	71.935,200	268,2073824	Censurado					0	5,6932	186,0322553	
25	-40	483,2	99.539,200	315,498336	Censurado					0	5,6932	186,0322553	
25	-40	548,6	113.011,600	336,1719798	Censurado					0	5,6932	186,0322553	
25	-40	562,8	115.936,800	340,4949339	Censurado					0	5,6932	186,0322553	
25	-40	619,9	127.699,400	357,3505282	Censurado					0	5,6932	186,0322553	
25	-40	758,7	156.292,200	395,3380832	Censurado					0	5,6932	186,0322553	
25	-40	773,9	159.423,400	399,2785995	Censurado					0	5,6932	186,0322553	
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	5,6932	186,0322553	
25	-40	1174	241.844,000	491,7763719	Censurado					0	5,6932	186,0322553	
25	-40	1337,1	275.442,600	524,826257	Censurado					0	5,6932	186,0322553	
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	5,6932	186,0322553	
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	5,6932	186,0322553	
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	5,6932	186,0322553	
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	5,6932	186,0322553	
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	5,6932	186,0322553	
Total de Válidos					6							Somatoria	479732085,2
Total de Censurados					24							Somatoria ^{1/4}	147,9959025
												K0	167,9959025
												Kjc Médio	155,0314614
													125,0314614
													1,786163735
												Ln	0,580070155
												T-T0	30,52909226
												T0	-70,52909226
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	19,6932	4279929,817	
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	19,6932	4613201,201	
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	19,6932	7190513,068	
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	19,6932	20370236,22	
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	19,6932	27900023,75	
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	19,6932	27960084,75	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	19,6932	35328747,71	
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	19,6932	37895203,33	
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	19,6932	49366270,13	
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	19,6932	51089214,61	
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	19,6932	75640212,54	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	19,6932	76150411,27	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	19,6932	76150411,27	
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	19,6932	78105656,78	
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	19,6932	98045916,14	
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	19,6932	120639834,1	
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	19,6932	126840004,2	
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	19,6932	130611192,8	
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	19,6932	136515462,7	
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	19,6932	139589150	
50	-40	245	50.470,000	224,6552915	Censurado	204,65529	1,189207	243,3775288	263,3775288	0	19,6932	13,3594002	
50	-40	251,8	51.870,800	227,7516191	Censurado	207,75162	1,189207	247,0597036	267,0597036	0	19,6932	13,3594002	
50	-40	271,9	56.011,400	236,667277	Censurado	216,66728	1,189207	257,6622674	277,6622674	0	19,6932	13,3594002	
50	-40	272,7	56.176,200	237,0151894	Censurado	217,01519	1,189207	258,0760073	278,0760073	0	19,6932	13,3594002	
50	-40	274,2	56.485,200	237,6661524	Censurado	217,66615	1,189207	258,8501371	278,8501371	0	19,6932	13,3594002	
50	-40	308,7	63.592,200	252,1749393	Censurado	232,17494	1,189207	276,1040897	296,1040897	0	19,6932	13,3594002	
50	-40	308,8	63.612,800	252,2157806	Censurado	232,21578	1,189207	276,1526585	296,1526585	0	19,6932	13,3594002	
50	-40	313,1	64.498,600	253,9657457	Censurado	233,96575	1,189207	278,2337295	298,2337295	0	19,6932	13,3594002	
50	-40	313,1	64.498,600	253,9657457	Censurado	233,96575	1,189207	278,2337295	298,2337295	0	19,6932	13,3594002	
50	-40	349,4	71.976,400	268,2841777	Censurado	248,28418	1,189207	295,2613107	315,2613107	0	19,6932	13,3594002	
50	-40	386,6	79.639,600	282,2048901	Censurado	262,20489	1,189207	311,8159209	331,8159209	0	19,6932	13,3594002	
50	-40	455,2	93.771,200	306,2208353	Censurado	286,22084	1,189207	340,3758539	360,3758539	0	19,6932	13,3594002	
Total de Válidos											20	Somatoria	1324281837
Total de Censurados											12	Somatoria ^{1/4}	190,7634225
												K0	210,7634225
												Kjc Médio	194,0525467
													164,0525467
													2,34360781
												Ln	0,851691541
												T-T0	44,82452582
												T0	-84,82452582
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259	
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32	
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16	
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38	
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28	
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1	
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11	
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49	
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62	
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1	
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9	
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9	
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3	
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8	
					Válidos	30						Somatoria	2176116531
					Censurados	0						Somatoria ^{1/4}	215,9834813
											K0	235,9834813	
											Kjc Médio	217,0633283	
												187,0633283	
												2,672333262	
											Ln	0,982951972	
											T-T0	51,73276227	
											T0	-91,73276227	
25	-20	78,9	16.253,400	127,488823	Válido					133491382,3	1,6932	78839701,34	
25	-20	102,7	21.156,200	145,4517102	Válido					247688786	1,6932	146284423,6	
25	-20	258,8	53.312,800	230,8956474	Censurado					0	1,6932	106,6624433	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	1,6932	106,6624433	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	1,6932	106,6624433	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	1,6932	106,6624433	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	1,6932	106,6624433	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	1,6932	106,6624433	
25	-20	1340	276.040,000	525,3950894	Censurado					0	1,6932	106,6624433	
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	1,6932	106,6624433	
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	1,6932	106,6624433	
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	1,6932	106,6624433	
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	1,6932	106,6624433	
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	1,6932	106,6624433	
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	1,6932	106,6624433	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-20	1391	286.546,000	535,2999159	Censurado					0	1,6932	106,6624433
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	1,6932	106,6624433
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	1,6932	106,6624433
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	1,6932	106,6624433
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	1,6932	106,6624433
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	1,6932	106,6624433
25	-20	1480,1	304.900,600	552,178051	Censurado					0	1,6932	106,6624433
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	1,6932	106,6624433
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	1,6932	106,6624433
25	-20	1499	308.794,000	555,6923609	Censurado					0	1,6932	106,6624433
25	-20	1524,5	314.047,000	560,398965	Censurado					0	1,6932	106,6624433
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	1,6932	106,6624433
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	1,6932	106,6624433
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	1,6932	106,6624433
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	1,6932	106,6624433
25	-20	1575	324.450,000	569,6051264	Censurado					0	1,6932	106,6624433
Total de Válidos						2					Somatoria	225127218,1
Total de Censurados						29					Somatoria ^{1/4}	122,4917957
											K0	142,4917957
											Kjc Médio	131,7615144
												101,7615144
												1,453735919
											Ln	0,374136739
											T-T0	19,69081658
											T0	-39,69081658
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	4,6932	211261631,1
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	4,6932	298468225,1
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	4,6932	324272347,6
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	4,6932	380683048,4
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	4,6932	452618736,4
50	-20	256	52.736,000	229,6432015	Censurado	209,6432	1,189207	249,3091868	269,3091868	0	4,6932	54,42090045
50	-20	259	53.354,000	230,984848	Censurado	210,98485	1,189207	250,9046824	270,9046824	0	4,6932	54,42090045
50	-20	291	59.946,000	244,8387224	Censurado	224,83872	1,189207	267,3798084	287,3798084	0	4,6932	54,42090045
50	-20	326,5	67.259,000	259,3434017	Censurado	239,3434	1,189207	284,6288762	304,6288762	0	4,6932	54,42090045
50	-20	328,8	67.732,800	260,2552593	Censurado	240,25526	1,189207	285,7132638	305,7132638	0	4,6932	54,42090045
50	-20	330	67.980,000	260,7297451	Censurado	240,72975	1,189207	286,2775257	306,2775257	0	4,6932	54,42090045
50	-20	362,3	74.633,800	273,191874	Censurado	253,19187	1,189207	301,097578	321,097578	0	4,6932	54,42090045
50	-20	380	78.280,000	279,7856322	Censurado	259,78563	1,189207	308,9389222	328,9389222	0	4,6932	54,42090045
50	-20	392	80.752,000	284,1689638	Censurado	264,16896	1,189207	314,1516113	334,1516113	0	4,6932	54,42090045
50	-20	417	85.902,000	293,0904297	Censurado	273,09043	1,189207	324,7610821	344,7610821	0	4,6932	54,42090045
50	-20	447	92.082,000	303,4501607	Censurado	283,45016	1,189207	337,0809478	357,0809478	0	4,6932	54,42090045
50	-20	480	98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	4,6932	54,42090045
50	-20	486,8	100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	4,6932	54,42090045
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	4,6932	54,42090045

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	4,6932	54,42090045
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	4,6932	54,42090045
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	4,6932	54,42090045
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	4,6932	54,42090045
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	4,6932	54,42090045
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	4,6932	54,42090045
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	4,6932	54,42090045
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	4,6932	54,42090045
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	4,6932	54,42090045
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	4,6932	54,42090045
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	4,6932	54,42090045
Total de Válidos						5					Somatoria	1667305349
Total de Censurados						25					Somatoria ^{1/4}	202,0709047
											K0	222,0709047
											Kjc Médio	204,3694935
												174,3694935
												2,490992764
											Ln	0,912681331
											T-TO	48,03441846
											TO	-68,03441846
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	23,6932	11013144,67
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	23,6932	19598506,68
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	23,6932	25262901,99
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	23,6932	39858378,76
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	23,6932	51301514,56
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	23,6932	64175501,24
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	23,6932	72891913,08
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	23,6932	76231471,4
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	23,6932	161244722,9
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	23,6932	165715911,4
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	23,6932	172243415,5
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	23,6932	174851241,7
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	23,6932	215995036,1
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	23,6932	216445279,6
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	23,6932	240773813,6
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	23,6932	244120202
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	23,6932	260718206,5
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	23,6932	302298061,4
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	23,6932	423407116,5
100	-20	299,8	61.758,800	248,5131787	Válido	228,51318	1,414214	323,1664365	343,1664365	10906992078	23,6932	460342717,7
100	-20	301,3	62.067,800	249,1341004	Válido	229,1341	1,414214	324,0445524	344,0445524	11026023136	23,6932	465366566,6
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	23,6932	515748475,4
100	-20	318,2	65.549,200	256,02578	Válido	236,02578	1,414214	333,7908591	353,7908591	12413600285	23,6932	523930928,9
100	-20	324,6	66.867,600	258,5877027	Válido	238,5877	1,414214	337,413965	357,413965	12961408950	23,6932	547051852,5

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-20	334,9	68.989,400	262,6583332	Censurado	242,65833	1,414214	343,1707058	363,1707058	0	23,6932	15,24495214	
100	-20	371,9	76.611,400	276,7876442	Censurado	256,78764	1,414214	363,1525691	383,1525691	0	23,6932	15,24495214	
100	-20	373,5	76.941,000	277,3824075	Censurado	257,38241	1,414214	363,9936914	383,9936914	0	23,6932	15,24495214	
100	-20	384,1	79.124,600	281,2909526	Censurado	261,29095	1,414214	369,5212089	389,5212089	0	23,6932	15,24495214	
100	-20	588,7	121.272,200	348,2415828	Censurado	328,24158	1,414214	464,2036981	484,2036981	0	23,6932	15,24495214	
100	-20	683,1	140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	23,6932	15,24495214	
Total de Válidos						24						Somatoria	5450586972
Total de Censurados						6						Somatoria ^{1/4}	271,7132508
											K0	291,7132508	
											Kjc Médio	267,91117	
												237,91117	
												3,398731001	
											Ln	1,223402127	
											T-T0	64,38765394	
											T0	-84,38765394	
200	-20	112	23.072,000	151,8947004	Válido	131,8947	1,681793	221,8195615	241,8195615	2421025531	14,6932	164771835,4	
200	-20	117	24.102,000	155,2481884	Válido	135,24819	1,681793	227,4594336	247,4594336	2676799320	14,6932	182179465,4	
200	-20	125	25.750,000	160,4680654	Válido	140,46807	1,681793	236,2381852	256,2381852	3114586458	14,6932	211974686,1	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,681793	273,5941387	293,5941387	5603084296	14,6932	381338598,6	
200	-20	166	34.196,000	184,921605	Válido	164,92161	1,681793	277,3639729	297,3639729	5918343906	14,6932	402794755,8	
200	-20	168	34.608,000	186,0322553	Válido	166,03226	1,681793	279,2318565	299,2318565	6079387909	14,6932	413755200,3	
200	-20	175	36.050,000	189,8683755	Válido	169,86838	1,681793	285,683416	305,683416	6661010537	14,6932	453339676,7	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,681793	289,3121606	309,3121606	7005945497	14,6932	476815499,5	
200	-20	187	38.522,000	196,2702219	Válido	176,27022	1,681793	296,4499954	316,4499954	7723351343	14,6932	525641204,3	
200	-20	199	40.994,000	202,4697508	Válido	182,46975	1,681793	306,8763187	326,8763187	8868568054	14,6932	603583157,8	
200	-20	234	48.204,000	219,5540936	Válido	199,55409	1,681793	335,6086439	355,6086439	12686229143	14,6932	863408185	
200	-20	236	48.616,000	220,4903626	Válido	200,49036	1,681793	337,1832544	357,1832544	12925995256	14,6932	879726353,4	
200	-20	239	49.234,000	221,8873588	Válido	201,88736	1,681793	339,5327126	359,5327126	13290046261	14,6932	904503189,3	
Válidos						15						Somatoria	7321985905
Censurados						0						Somatoria ^{1/4}	292,5211163
											K0	312,5211163	
											Kjc Médio	286,8962665	
												256,8962665	
												3,669946665	
											Ln	1,300177129	
											T-T0	68,42832231	
											T0	-88,42832231	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ⁴	r-0,3068	Kjc-20 ⁴ / r - 0,3068
Resumo do Kmin 20 com M=60												
-91°C												
		Esp	T-T0	T0	Válidos	Censurados						
		25	5,609770771	-96,60977077	31	0						
		50	11,84952289	-102,8495229	34	0						
		100	12,34471888	-103,3447189	30	0						
		200	12,40177232	-103,4017723	15	0						
-60°C												
		Esp	T-T0	T0	Válidos	Censurados						
		25	21,66452006	-81,66452006	46	16						
		50	33,11113395	-93,11113395	34	0						
		100	52,99310682	-112,9931068	29	1						
-40°C												
		Esp	T-T0	T0	Válidos	Censurados						
		25	30,52909226	-70,52909226	6	24						
		50	44,82452582	-84,82452582	20	12						
		100	51,73276227	-91,73276227	30	0						
-20°C												
		Esp	T-T0	T0	Válidos	Censurados						
		25	19,69081658	-39,69081658	2	29						
		50	48,03441846	-68,03441846	5	25						
		100	64,38765394	-84,38765394	24	6						
		200	68,42832231	-88,42832231	15	0						

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068
25	-91	19,9	4.099,400	64,03	Válido					85338,33611	30,6932	2780,366209
25	-91	21,3	4.387,800	66,24	Válido					98870,50393	30,6932	3221,251089
25	-91	23,1	4.758,600	68,98	Válido					117523,7591	30,6932	3828,98359
25	-91	23,7	4.882,200	69,87	Válido					124047,9881	30,6932	4041,546276
25	-91	29,1	5.994,600	77,42	Válido					189364,4821	30,6932	6169,590727
25	-91	29,4	6.056,400	77,82	Válido					193329,9161	30,6932	6298,786574
25	-91	38,6	7.951,600	89,17	Válido					330968,1361	30,6932	10783,10949
25	-91	39,7	8.178,200	90,43	Válido					349410,5204	30,6932	11383,97171
25	-91	42,3	8.713,800	93,35	Válido					394602,7949	30,6932	12856,3589
25	-91	46,3	9.537,800	97,66	Válido					468403,3819	30,6932	15260,8194
25	-91	47,3	9.743,800	98,71	Válido					487642,0315	30,6932	15887,62434
25	-91	48,9	10.073,400	100,37	Válido					519065,7735	30,6932	16911,42577
25	-91	51,4	10.588,400	102,90	Válido					569721,7872	30,6932	18561,82435
25	-91	52	10.712,000	103,50	Válido					582157,6134	30,6932	18966,98987
25	-91	55,9	11.515,400	107,31	Válido					665563,4352	30,6932	21684,39378
25	-91	56,6	11.659,600	107,98	Válido					680998,8205	30,6932	22187,28645
25	-91	59,4	12.236,400	110,62	Válido					744127,2223	30,6932	24244,04175
25	-91	63,3	13.039,800	114,19	Válido					835682,4395	30,6932	27226,9571
25	-91	68,5	14.111,000	118,79	Válido					964129,559	30,6932	31411,8293
25	-91	70,2	14.461,200	120,25	Válido					1007661,372	30,6932	32830,1178
25	-91	70,6	14.543,600	120,60	Válido					1018012,553	30,6932	33167,36452
25	-91	71,4	14.708,400	121,28	Válido					1038837,999	30,6932	33845,86811
25	-91	76	15.656,000	125,12	Válido					1161729,108	30,6932	37849,72269
25	-91	76,5	15.759,000	125,53	Válido					1175405,618	30,6932	38295,3103
25	-91	76,6	15.779,600	125,62	Válido					1178148,339	30,6932	38384,66954
25	-91	76,8	15.820,800	125,78	Válido					1183641,188	30,6932	38563,62933
25	-91	77	15.862,000	125,94	Válido					1189143,902	30,6932	38742,91055
25	-91	77,2	15.903,200	126,11	Válido					1194656,47	30,6932	38922,51279
25	-91	93,9	19.343,400	139,08	Válido					1688583,416	30,6932	55014,90285
25	-91	112,8	23.236,800	152,44	Válido					2322845,327	30,6932	75679,47712
25	-91	124,3	25.605,800	160,02	Válido					2745065,828	30,6932	89435,63485
Total de Válidos					31						<i>Soma dos K0</i>	824439,2771
Total de Censurados					0						<i>Somatoria</i> ^{1/3}	93,76761964
											anterior +20	113,7676196
											Kjc Médio	105,5535762
												75,55357616
												1,079336802
											LN	0,076346781
											T - T0	4,018131062
											T0	-95,01813106
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,25992105	44,60	64,60	88740,01523	33,6932	2633,766316
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,25992105	52,16	72,16	141902,4892	33,6932	4211,606177
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,25992105	53,21	73,21	150643,2002	33,6932	4471,026802
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,25992105	56,08	76,08	176329,7589	33,6932	5233,393056
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,25992105	60,39	80,39	220209,117	33,6932	6535,713943

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,25992105	64,49	84,49	268232,2536	33,6932	7961,020432	
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,25992105	69,98	89,98	342636,3215	33,6932	10169,30186	
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,25992105	74,18	94,18	408144,1255	33,6932	12113,54592	
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,25992105	74,51	94,51	413590,9304	33,6932	12275,2048	
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,25992105	74,83	94,83	419067,855	33,6932	12437,75762	
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,25992105	76,62	96,62	449725,5575	33,6932	13347,66533	
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,25992105	80,71	100,71	525722,4087	33,6932	15603,2199	
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,25992105	91,29	111,29	760920,7273	33,6932	22583,80704	
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,25992105	91,44	111,44	764433,4414	33,6932	22688,06291	
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,25992105	96,51	116,51	898953,9258	33,6932	26680,57429	
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,25992105	97,58	117,58	929186,0421	33,6932	27577,85078	
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,25992105	98,11	118,11	944452,4633	33,6932	28030,95174	
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,25992105	99,17	119,17	975284,0629	33,6932	28946,02065	
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,25992105	101,00	121,00	1030189,862	33,6932	30575,60165	
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,25992105	106,08	126,08	1193601,463	33,6932	35425,58923	
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,25992105	108,42	128,42	1274541,039	33,6932	37827,84178	
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,25992105	109,64	129,64	1317982,332	33,6932	39117,16109	
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,25992105	111,81	131,81	1397619,997	33,6932	41480,77349	
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,25992105	113,35	133,35	1456277,31	33,6932	43221,69786	
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,25992105	113,82	133,82	1474516,473	33,6932	43763,02854	
50	-91	67	13.802,000	117,48	Válido	97,48	1,25992105	122,82	142,82	1852687,333	33,6932	54986,98054	
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,25992105	132,14	152,14	2307105,868	33,6932	68473,93147	
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,25992105	132,66	152,66	2334384,574	33,6932	69283,552	
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,25992105	135,12	155,12	2467038,651	33,6932	73220,66917	
50	-91	81	16.686,000	129,17	Válido	109,17	1,25992105	137,55	157,55	2602503,09	33,6932	77241,19674	
50	-91	86	17.716,000	133,10	Válido	113,10	1,25992105	142,50	162,50	2893574,626	33,6932	85880,07746	
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,25992105	142,99	162,99	2923329,97	33,6932	86763,20354	
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,25992105	156,09	176,09	3802682,564	33,6932	112862,0186	
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,25992105	171,07	191,07	5006320,747	33,6932	148585,4934	
Total de Válidos					34						Soma dos K0		1312209,306
Total de Censurados					0						Somatoria ^{1/3}		109,4798947
										anterior +20		129,4798947	
										Kjc Médio		119,889456	
												89,88945595	
												1,284135085	
												LN	0,250085406
												T - T0	13,16199492
												T0	-104,1619949
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,587401052	69,12	89,12	330208,6637	29,6932	11120,68297	
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,587401052	69,38	89,38	333905,5546	29,6932	11245,18592	
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,587401052	74,14	94,14	407529,5515	29,6932	13724,67607	
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,587401052	78,23	98,23	478726,7094	29,6932	16122,43576	
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,587401052	83,08	103,08	573383,1128	29,6932	19310,24992	
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,587401052	84,20	104,20	596986,3893	29,6932	20105,15503	
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,587401052	88,16	108,16	685272,643	29,6932	23078,43691	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,587401052	92,00	112,00	778637,4959	29,6932	26222,75457	
100	-91	32	6.592,000	81,19	Válido	61,19	1,587401052	97,13	117,13	916485,2184	29,6932	30865,15493	
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,587401052	97,34	117,34	922192,7368	29,6932	31057,37128	
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,587401052	98,93	118,93	968380,7299	29,6932	32612,8787	
100	-91	33	6.798,000	82,45	Válido	62,45	1,587401052	99,13	119,13	974219,915	29,6932	32809,52929	
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,587401052	99,92	119,92	997721,7845	29,6932	33601,01924	
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,587401052	104,57	124,57	1143548,59	29,6932	38512,13713	
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,587401052	104,76	124,76	1149801,662	29,6932	38722,72647	
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,587401052	107,96	127,96	1258232,478	29,6932	42374,43178	
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,587401052	111,63	131,63	1390868,51	29,6932	46841,31416	
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,587401052	112,53	132,53	1424870,109	29,6932	47986,41133	
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,587401052	113,42	133,42	1459204,933	29,6932	49142,73076	
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,587401052	114,32	134,32	1493871,131	29,6932	50310,21012	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,587401052	114,67	134,67	1507829,986	29,6932	50780,31288	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,587401052	114,67	134,67	1507829,986	29,6932	50780,31288	
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,587401052	116,43	136,43	1578411,18	29,6932	53157,32827	
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,587401052	117,13	137,13	1607008,779	29,6932	54120,43091	
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,587401052	122,10	142,10	1820487,681	29,6932	61309,91882	
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,587401052	123,78	143,78	1896569,329	29,6932	63872,17709	
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,587401052	125,44	145,44	1973896,223	29,6932	66476,37246	
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,587401052	128,06	148,06	2100179,477	29,6932	70729,30762	
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,587401052	135,21	155,21	2471877,328	29,6932	83247,25283	
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,587401052	224,40	244,40	11299992,8	29,6932	380558,2692	
Total de Válidos						30						Soma dos K0	1550797,175
Total de Censurados						0						Somatoria ^{1/3}	115,7492895
												anterior +20	135,7492895
												Kjc Médio	125,6096517
													95,60965171
													1,365852167
												LN	0,311778532
												T - T0	16,40890415
												T0	-107,4089042
200	-91	13,8	2.842,800	53,32	Válido	33,32	2	66,64	86,64	295885,3159	14,6932	20137,56812	
200	-91	20,4	4.202,400	64,83	Válido	44,83	2	89,65	109,65	720572,4337	14,6932	49041,21864	
200	-91	23	4.738,000	68,83	Válido	48,83	2	97,67	117,67	931609,0815	14,6932	63404,09724	
200	-91	23,2	4.779,200	69,13	Válido	49,13	2	98,26	118,26	948804,8719	14,6932	64574,42027	
200	-91	25,4	5.232,400	72,34	Válido	52,34	2	104,67	124,67	1146766,226	14,6932	78047,41143	
200	-91	25,6	5.273,600	72,62	Válido	52,62	2	105,24	125,24	1165551,693	14,6932	79325,92577	
200	-91	25,8	5.314,800	72,90	Válido	52,90	2	105,81	125,81	1184466,769	14,6932	80613,26115	
200	-91	30,2	6.221,200	78,87	Válido	58,87	2	117,75	137,75	1632576,502	14,6932	111111,0243	
200	-91	33,9	6.983,400	83,57	Válido	63,57	2	127,13	147,13	2054848,468	14,6932	139850,3027	
200	-91	36,9	7.601,400	87,19	Válido	67,19	2	134,37	154,37	2426199,45	14,6932	165123,9655	
200	-91	38,8	7.992,800	89,40	Válido	69,40	2	138,80	158,80	2674327,534	14,6932	182011,2388	
200	-91	40,9	8.425,400	91,79	Válido	71,79	2	143,58	163,58	2959930,008	14,6932	201448,9702	
200	-91	44,6	9.187,600	95,85	Válido	75,85	2	151,70	171,70	3491327,322	14,6932	237615,1772	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068		
200	-91	44,8	9.228,800	96,07	Válido	76,07	2	152,13	172,13	3521054,497	14,6932	239638,3699		
200	-91	50,7	10.444,200	102,20	Válido	82,20	2	164,39	184,39	4442790,241	14,6932	302370,5007		
Total de Válidos					15								<i>Soma dos K0</i>	2014313,452
Total de Censurados					0								<i>Somatoria</i> ^{1/3}	126,2919545
											anterior +20	146,2919545		
											Kjc Médio	135,2287793		
												105,2287793		
												1,503268275		
											LN	0,407641588		
											T - T0	21,45417677		
											T0	-112,4541768		
25	-60	34	7.004,000	83,68990381	Válido					258351,9709	56,6932	4557,01867		
25	-60	40,2	8.281,200	91,00109889	Válido					357927,6188	56,6932	6313,413581		
25	-60	46,9	9.661,400	98,29242087	Válido					479909,3	56,6932	8465,024024		
25	-60	52	10.712,000	103,4987923	Válido					582157,6134	56,6932	10268,56155		
25	-60	54,2	11.165,200	105,66551	Válido					628663,164	56,6932	11088,86364		
25	-60	56,1	11.556,600	107,5016279	Válido					669959,2664	56,6932	11817,27732		
25	-60	62,3	12.833,800	113,2863628	Válido					811810,1585	56,6932	14319,35679		
25	-60	67,4	13.884,400	117,8320839	Válido					936362,2866	56,6932	16516,30683		
25	-60	68	14.008,000	118,355397	Válido					951468,8776	56,6932	16782,76897		
25	-60	69	14.214,000	119,2224811	Válido					976855,3237	56,6932	17230,55541		
25	-60	74,6	15.367,600	123,9661244	Válido					1123765,163	56,6932	19821,86863		
25	-60	78,2	16.109,200	126,9220233	Válido					1222366,686	56,6932	21561,08115		
25	-60	81,3	16.747,800	129,4132914	Válido					1309815,872	56,6932	23103,57983		
25	-60	81,4	16.768,400	129,4928569	Válido					1312675,451	56,6932	23154,01937		
25	-60	82,3	16.953,800	130,2067587	Válido					1338519,455	56,6932	23609,87659		
25	-60	90	18.540,000	136,1616686	Válido					1567431,338	56,6932	27647,60745		
25	-60	90,4	18.622,400	136,4639146	Válido					1579698,302	56,6932	27863,98195		
25	-60	100,3	20.661,800	143,7421302	Válido					1894753,702	56,6932	33421,18107		
25	-60	112,2	23.113,200	152,0302601	Válido					2301550,121	56,6932	40596,58162		
25	-60	120,3	24.781,800	157,4223618	Válido					2595208,32	56,6932	45776,35978		
25	-60	123,4	25.420,400	159,4377622	Válido					2711073,004	56,6932	47820,07372		
25	-60	127,4	26.244,400	162,0012346	Válido					2863362,682	56,6932	50506,28086		
25	-60	129	26.574,000	163,0153367	Válido					2925147,962	56,6932	51596,09903		
25	-60	140,9	29.025,400	170,3684243	Válido					3399929,772	56,6932	59970,68029		
25	-60	141,9	29.231,400	170,9719275	Válido					3441031,115	56,6932	60695,65865		
25	-60	142,5	29.355,000	171,3330091	Válido					3465780,092	56,6932	61132,20091		
25	-60	143,1	29.478,600	171,6933313	Válido					3490595,032	56,6932	61569,90666		
25	-60	191,8	39.510,800	198,7732376	Válido					5713569,523	56,6932	100780,5085		
25	-60	193,2	39.799,200	199,4973684	Válido					5783280,507	56,6932	102010,1266		
25	-60	261	53.766,000	231,8749663	Válido					9511279,398	56,6932	167767,5523		
25	-60	284,9	58.689,400	242,2589524	Válido					10979379,3	56,6932	193663,0725		
Total de Válidos					31									
Total de Censurados					0									

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068
												136,4614128
												1,949448754
											LN	0,667546643
											T - T0	35,1329798
											T0	-95,1329798
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,587401052	93,8714805	113,8714805	827181,8607	29,6932	27857,61928
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,587401052	141,016355	161,0163551	2804196,582	29,6932	94439,01573
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,587401052	149,52039	169,5203905	3342729,758	29,6932	112575,5984
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,587401052	150,519909	170,5199088	3410215,621	29,6932	114848,37
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,587401052	156,818922	176,8189216	3856518,236	29,6932	129878,8354
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,587401052	175,56923	195,5692304	5411843,336	29,6932	182258,6766
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,587401052	179,660189	199,6601893	5799032,713	29,6932	195298,3415
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,587401052	182,344071	202,3440709	6062823,691	29,6932	204182,2266
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,587401052	183,673473	203,6734729	6196398,114	29,6932	208680,7119
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,587401052	189,732827	209,7328272	6830105,859	29,6932	230022,5593
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,587401052	198,579441	218,5794408	7830740,827	29,6932	263721,688
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,587401052	203,154083	223,1540827	8384490,242	29,6932	282370,7193
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,587401052	204,695885	224,6958852	8576840,576	29,6932	288848,6447
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,587401052	209,692496	229,6924958	9220376,736	29,6932	310521,491
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,587401052	210,443813	230,4438128	9319840,617	29,6932	313871,2102
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,587401052	213,10827	233,1082696	9678340,746	29,6932	325944,6859
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,587401052	226,118427	246,1184274	11561331,91	29,6932	389359,5808
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,587401052	229,120466	249,1204662	12027951,08	29,6932	405074,2621
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,587401052	230,707513	250,7075135	12279628,14	29,6932	413550,1779
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,587401052	247,477584	267,4775838	15156802,84	29,6932	510446,9321
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,587401052	250,52831	270,52831	15724267,6	29,6932	529557,865
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,587401052	257,162459	277,1624592	17006804,15	29,6932	572750,8034
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,587401052	264,349723	284,3497232	18472963,82	29,6932	622127,754
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,587401052	283,86707	303,8670705	22874154,36	29,6932	770349,9238
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,587401052	310,535549	330,5355493	29945665,77	29,6932	1008502,478
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,587401052	313,780731	333,7807313	30894332,23	29,6932	1040451,424
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,587401052	322,606688	342,6066877	33575315,2	29,6932	1130740,884
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,587401052	339,420155	359,4201554	39103252,65	29,6932	1316909,348
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,587401052	351,258663	371,2586626	43339223,96	29,6932	1459567,307
100	-60	415,3	85.551,800	292,4923931	Válido	272,49239	1,587401052	432,554711	452,5547114	80932534,34	29,6932	2725625,205
Total de Válidos					30						Soma dos K0	16180334,34
Total de Censurados					0						Somatoria ^{1/3}	252,9273713
											anterior +20	272,9273713
											Kjc Médio	250,7709336
												220,7709336
												3,15387048
											LN	1,148630422
											T - T0	60,45241913
											T0	-120,4524191
25	-60	128,7	26.512,200	162,8256737	Válido					2913525,633	56,6932	51391,09511

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
25	-60	176	36.256,000	190,4100838	Válido					4948640,098	56,6932	87288,07154	
25	-60	131,7	27.130,200	164,7124768	Válido					3030525,409	56,6932	53454,83072	
25	-60	150,4	30.982,400	176,0181809	Válido					3797743,504	56,6932	66987,63704	
25	-60	133,7	27.542,200	165,9584285	Válido					3109478,344	56,6932	54847,46574	
25	-60	78,7	16.212,200	127,3271377	Válido					1236313,587	56,6932	21807,08775	
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821	
25	-60	46,1	9.496,600	97,45050026	Válido					464593,021	56,6932	8194,863247	
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821	
25	-60	275,9	56.835,400	238,4017617	Válido					10417617,6	56,6932	183754,2704	
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821	
25	-60	140,7	28.984,200	170,2474669	Válido					3391731,592	56,6932	59826,07423	
25	-60	89,1	18.354,600	135,4791497	Válido					1539964,58	56,6932	27163,1268	
25	-60	87,8	18.086,800	134,4871741	Válido					1500619,23	56,6932	26469,12204	
25	-60	219,5	45.217,000	212,6428931	Válido					7149225,171	56,6932	126103,7509	
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821	
25	-60	197,6	40.705,600	201,7562886	Válido					6004382,329	56,6932	105910,0973	
25	-60	64,1	13.204,600	114,9112701	Válido					854974,8815	56,6932	15080,7307	
25	-60	234,5	48.307,000	219,7885347	Válido					7974650,989	56,6932	140663,2716	
25	-60	133,7	27.542,200	165,9584285	Válido					3109478,344	56,6932	54847,46574	
25	-60	38,4	7.910,400	88,9404295	Válido					327658,8889	56,6932	5779,509517	
25	-60	116,3	23.957,800	154,783074	Válido					2448533,619	56,6932	43189,19411	
25	-60	166,1	34.216,600	184,9772959	Válido					4490270,898	56,6932	79202,98904	
25	-60	217,1	44.722,600	211,4771855	Válido					7020226,2	56,6932	123828,3639	
25	-60	129	26.574,000	163,0153367	Válido					2925147,962	56,6932	51596,09903	
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821	
25	-60	164,6	33.907,600	184,140164	Válido					4422263,222	56,6932	78003,41526	
25	-60	77,7	16.006,200	126,5156117	Válido					1208480,918	56,6932	21316,15287	
25	-60	200,2	41.241,200	203,0792949	Válido					6136456,969	56,6932	108239,7354	
25	-60	63,6	13.101,600	114,4622208	Válido					842896,8976	56,6932	14867,68956	
25	-60	55	11.330,000	106,4424727	Válido					645924,1833	56,6932	11393,3273	
					T. Válidos	26						Soma dos K0	2982643,802
					T. Censurados	5						Somatoria ^{1/3}	143,9462859
										anterior +20	163,9462859		
										Kjc Médio	151,3365913		
											121,3365913		
											1,733379876		
										LN	0,550073188		
										T - T0	28,95035188		
										T0	-88,95035188		
25	-40	155,4	32.012,400	178,9200939	Válido					4013621,727	14,6932	273161,8522	
25	-40	203,4	41.900,400	204,695872	Válido					6300449,96	14,6932	428800,3947	
25	-40	275,9	56.835,400	238,4017617	Válido					10417617,6	14,6932	709009,4468	
25	-40	349,2	71.935,200	268,2073824	Censurado					0	14,6932	17,90551673	
25	-40	165,5	34.093,000	184,6428986	Válido					4463021,82	14,6932	303747,4355	
25	-40	311,7	64.210,200	253,3973165	Válido					12714157,15	14,6932	865308,9287	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068
25	-40	254,5	52.427,000	228,9694303	Válido					9125323,637	14,6932	621057,6074
25	-40	548,6	113.011,600	336,1719798	Censurado					0	14,6932	17,90551673
25	-40	773,9	159.423,400	399,2785995	Censurado					0	14,6932	17,90551673
25	-40	758,7	156.292,200	395,3380832	Censurado					0	14,6932	17,90551673
25	-40	139,3	28.695,800	169,3983471	Válido					3334551,105	14,6932	226945,1927
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	14,6932	17,90551673
25	-40	136,6	28.139,600	167,7486215	Válido					3225301,454	14,6932	219509,8041
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	14,6932	17,90551673
25	-40	1337,1	275.442,600	524,826257	Censurado					0	14,6932	17,90551673
25	-40	483,2	99.539,200	315,498336	Censurado					0	14,6932	17,90551673
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	14,6932	17,90551673
25	-40	619,9	127.699,400	357,3505282	Censurado					0	14,6932	17,90551673
25	-40	562,8	115.936,800	340,4949339	Censurado					0	14,6932	17,90551673
25	-40	264,8	54.548,800	233,5568453	Válido					9739585,859	14,6932	662863,4919
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	14,6932	17,90551673
25	-40	1174	241.844,000	491,7763719	Censurado					0	14,6932	17,90551673
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	14,6932	17,90551673
25	-40	61,6	12.689,600	112,6481247	Válido					795261,3929	14,6932	54124,45165
25	-40	251	51.706,000	227,3895336	Válido					8919910,666	14,6932	607077,4689
25	-40	113,2	23.319,200	152,706254	Válido					2337083,182	14,6932	159058,8287
25	-40	233,2	48.039,200	219,1784661	Válido					7901820,328	14,6932	537787,5703
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	14,6932	17,90551673
25	-40	283	58.298,000	241,4497877	Válido					10859899,47	14,6932	739110,573
25	-40	195,2	40.211,200	200,5273049	Válido					5883404,328	14,6932	400416,8137
					15						<i>Soma dos K0</i>	6808248,443
					15						<i>Somatoria^{1/3}</i>	189,5302193
											anterior +20	209,5302193
											Kjc Médio	192,9273721
												162,9273721
												2,327533887
											LN	0,84480929
											T - T0	44,46231291
											T0	-84,46231291
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,25992105	222,086563	242,086563	10953851,51	31,6932	345621,5058
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,189207115	153,184102	173,1841016	3594521,464	31,6932	113416,1733
50	-40	245	50.470,000	224,6552915	Válido	204,65529	1,189207115	243,377529	263,3775288	14415889,05	31,6932	454857,4788
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,189207115	162,409389	182,4093895	4283841,573	31,6932	135165,9527
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,189207115	278,233729	298,2337295	21539188,22	31,6932	679615,445
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,189207115	220,775947	240,7759467	10761065,31	31,6932	339538,6175
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,189207115	227,706031	247,7060314	11806566,09	31,6932	372526,791
50	-40	308,7	63.592,200	252,1749393	Válido	232,17494	1,189207115	276,10409	296,1040897	21048372,39	31,6932	664128,9736
50	-40	274,2	56.485,200	237,6661524	Válido	217,66615	1,189207115	258,850137	278,8501371	17343837,6	31,6932	547241,6037
50	-40	455,2	93.771,200	306,2208353	Válido	286,22084	1,189207115	340,375854	360,3758539	39434490,26	31,6932	1244257,136
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207115	196,787331	216,7873313	7620639,343	31,6932	240450,2967

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,189207115	95,8160437	115,8160437	879659,7167	31,6932	27755,47173	
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,189207115	141,523346	161,5233464	2834550,949	31,6932	89437,19628	
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,189207115	153,101772	173,1017716	3588728,87	31,6932	113233,4024	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,189207115	196,787331	216,7873313	7620639,343	31,6932	240450,2967	
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,189207115	225,203	245,2030001	11421483,47	31,6932	360376,4678	
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,189207115	165,281838	185,2818378	4515183,447	31,6932	142465,3694	
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,189207115	228,977067	248,9770672	12005381,51	31,6932	378799,9164	
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,189207115	198,03853	218,0385305	7766924,529	31,6932	245065,9614	
50	-40	272,7	56.176,200	237,0151894	Válido	217,01519	1,189207115	258,076007	278,0760073	17188694,52	31,6932	542346,4503	
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,189207115	109,086006	129,0860064	1298096,947	31,6932	40958,2165	
50	-40	271,9	56.011,400	236,667277	Válido	216,66728	1,189207115	257,662267	277,6622674	17106157,75	31,6932	539742,208	
50	-40	386,6	79.639,600	282,2048901	Válido	262,20489	1,189207115	311,815921	331,8159209	30317602,72	31,6932	956596,4536	
50	-40	308,8	63.612,800	252,2157806	Válido	232,21578	1,189207115	276,152659	296,1526585	21059482,05	31,6932	664479,5114	
50	-40	349,4	71.976,400	268,2841777	Válido	248,28418	1,189207115	295,261311	315,2613107	25740657,13	31,6932	812182,3334	
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,189207115	196,456887	216,456887	7582314,148	31,6932	239241,0406	
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,189207115	176,578024	196,5780237	5505667,188	31,6932	173717,6173	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,189207115	278,233729	298,2337295	21539188,22	31,6932	679615,445	
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,189207115	178,098958	198,0989584	5649163,422	31,6932	178245,2836	
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,189207115	97,6291868	117,6291868	930548,5055	31,6932	29361,14073	
50	-40	251,8	51.870,800	227,7516191	Válido	207,75162	1,189207115	247,059704	267,0597036	15080153,01	31,6932	475816,6739	
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,189207115	223,559503	243,5595027	11173247,13	31,6932	352543,9882	
					32						Soma dos KJ		12419250,42
					0						Somatoria ^{1/3}		231,5786199
											anterior +20		251,5786199
											Kjc Médio		231,2923328
													201,2923328
													2,875604754
											LN		1,056263001
											T - T0		55,59112176
											T0		-95,59112176
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,587401052	166,219411	186,2194111	4592458,26	29,6932	154663,6354	
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,587401052	170,884205	190,8842051	4990060,003	29,6932	168053,9653	
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,587401052	280,394124	300,3941238	22044828,46	29,6932	742420,0984	
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,587401052	301,623585	321,6235852	27440744,72	29,6932	924142,3868	
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,587401052	186,188905	206,188905	6454481,993	29,6932	217372,3948	
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,587401052	263,383946	283,3839459	18271234,82	29,6932	615333,9762	
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,587401052	240,226178	260,2261778	13863120,37	29,6932	466878,6244	
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,587401052	250,436348	270,4363483	15706958,19	29,6932	528974,9231	
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,587401052	208,182804	228,1828038	9022659,329	29,6932	303862,8147	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,587401052	209,79997	229,7999699	9234561,214	29,6932	310999,1922	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,587401052	195,630765	215,6307648	7487062,5	29,6932	252147,3772	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,587401052	205,244098	225,2440981	8645936,326	29,6932	291175,6337	
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,587401052	186,902285	206,9022848	6528957,342	29,6932	219880,5566	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,587401052	256,892827	276,8928273	16953365,91	29,6932	570951,1239	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,587401052	191,483691	211,4836912	7020941,791	29,6932	236449,4831	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,587401052	262,503216	282,5032159	18088555,41	29,6932	609181,7458	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,587401052	238,982751	258,9827514	13648963,43	29,6932	459666,3019	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,587401052	279,561521	299,5615213	21849031,22	29,6932	735826,0887	
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,587401052	173,3034	193,3034	5205006,18	29,6932	175292,8677	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,587401052	191,01814	211,0181397	6969856,453	29,6932	234729,0441	
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,587401052	179,660189	199,6601893	5799032,713	29,6932	195298,3415	
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,587401052	149,806529	169,8065286	3361957,52	29,6932	113223,146	
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,587401052	112,34743	132,3474296	1418043,071	29,6932	47756,4921	
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,587401052	190,084106	210,0841056	6868112,666	29,6932	231302,5429	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,587401052	344,214103	364,2141031	40783639,63	29,6932	1373500,991	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,587401052	350,987507	370,9875074	43238933,87	29,6932	1456189,763	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,587401052	269,993495	289,9934953	19681577,46	29,6932	662831,135	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,587401052	199,029739	219,0297393	7884132,65	29,6932	265519,8042	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,587401052	221,9582	241,9582	10934868,95	29,6932	368261,7216	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,587401052	191,948274	211,9482739	7072169,044	29,6932	238174,7014	
					Válidos	30						Somatoria	13170060,87
					Censurados	0						Somatoria ^{1/3}	236,1543379
											K0	256,1543379	
											Kjc Médio	235,4672179	
												205,4672179	
												2,935245969	
											Ln	1,076791255	
											T-T0	56,67152377	
											T0	-96,67152377	
25	-20	258,8	53.312,800	230,8956474	Válido					9380000,249	2,6932	3482845,778	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	78,9	16.253,400	127,488823	Válido					1241909,424	2,6932	461127,8123	
25	-20	102,7	21.156,200	145,4517102	Válido					1974375,524	2,6932	733096,5111	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609	
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609	
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609	
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
Total de Válidos					3						<i>Soma dos K0</i>	4679725,466
Total de Censurados					28						<i>Somatoria</i> ^{1/3}	167,2656614
											anterior +20	187,2656614
											Kjc Médio	172,6131894
												142,6131894
												2,037331277
											LN	0,711640754
											T - T0	37,45365289
											T0	-57,45365289
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,25992105	227,450151	247,4501515	11766808,66	13,6932	859317,6654
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,25992105	217,818109	237,8181088	10334321,05	13,6932	754704,6012
50	-20	328,8	67.732,800	260,2552593	Válido	240,25526	1,25992105	302,702659	322,7026586	27736311,48	13,6932	2025553,667
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,25992105	209,257281	229,2572807	9163085,358	13,6932	669170,4903
50	-20	362,3	74.633,800	273,191874	Válido	253,19187	1,25992105	319,001772	339,0017717	32462299,86	13,6932	2370687,631
50	-20	326,5	67.259,000	259,3434017	Válido	239,3434	1,25992105	301,55379	321,5537899	27421699,87	13,6932	2002577,913
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,25992105	437,818022	457,8180222	0	13,6932	26,37818041
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,25992105	435,410519	455,4105187	0	13,6932	26,37818041
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,25992105	551,484937	571,4849368	0	13,6932	26,37818041
50	-20	486,8	100.280,800	316,6714386	Censurado	296,67144	1,25992105	373,78259	393,7825903	0	13,6932	26,37818041
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,25992105	702,414439	722,4144393	0	13,6932	26,37818041
50	-20	256	52.736,000	229,6432015	Válido	209,6432	1,25992105	264,133883	284,1338826	18427751,43	13,6932	1345759,314
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,25992105	451,528134	471,5281344	0	13,6932	26,37818041
50	-20	417	85.902,000	293,0904297	Censurado	273,09043	1,25992105	344,072381	364,0723809	0	13,6932	0
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,25992105	694,052094	714,0520942	0	13,6932	26,37818041
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,25992105	488,50648	508,5064804	0	13,6932	26,37818041
50	-20	447	92.082,000	303,4501607	Censurado	283,45016	1,25992105	357,124824	377,124824	0	13,6932	0
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,25992105	379,963667	399,963667	0	13,6932	26,37818041
50	-20	380	78.280,000	279,7856322	Válido	259,78563	1,25992105	327,309387	347,3093865	35065124,1	13,6932	2560769,148
50	-20	291	59.946,000	244,8387224	Válido	224,83872	1,25992105	283,279039	303,2790392	22732297,04	13,6932	1660115,754
50	-20	259	53.354,000	230,984848	Válido	210,98485	1,25992105	265,824251	285,8242512	18783814,79	13,6932	1371762,247
50	-20	480	98.880,000	314,4519041	Censurado	294,4519	1,25992105	370,986152	390,9861522	0	13,6932	26,37818041
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,25992105	618,220451	638,2204509	0	13,6932	26,37818041

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
50	-20	330	67.980,000	260,7297451	Válido	240,72975	1,25992105	303,300473	323,3004732	27900967,54	13,6932	2037578,326	
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,25992105	204,964017	224,9640171	8610589,251	13,6932	628822,2805	
50	-20	392	80.752,000	284,1689638	Válido	264,16896	1,25992105	332,832038	352,8320382	36870189,85	13,6932	2692591,202	
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,25992105	400,81515	420,8151495	0	13,6932	26,37818041	
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,25992105	492,627598	512,6275978	0	13,6932	26,37818041	
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,25992105	383,979247	403,9792467	0	13,6932	26,37818041	
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,25992105	188,000176	208,0001759	6644690,652	13,6932	485254,7726	
14												Soma dos K0	21465034,31
16												Somatoria ^{1/3}	277,9140665
												anterior +20	297,9140665
												Kjc Médio	273,5687943
													243,5687943
													3,479554204
												LN	1,246904183
												T - T0	65,62456717
												T0	-85,62456717
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,587401052	284,770355	304,7703547	23093211,27	27,6932	833894,6481	
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,587401052	142,661055	162,6610552	2903463,002	27,6932	104843,8968	
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,587401052	279,060889	299,0608891	21731861,12	27,6932	784736,3655	
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,587401052	280,975627	300,9756267	22182267,87	27,6932	801000,5298	
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,587401052	283,702559	303,7025591	22834408,16	27,6932	824549,2815	
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,587401052	228,821819	248,8218188	11980978,8	27,6932	432632,5162	
100	-20	373,5	76.941,000	277,3824075	Válido	257,38241	1,587401052	408,569104	428,5691045	68201914,82	27,6932	2462767,568	
100	-20	371,9	76.611,400	276,7876442	Válido	256,78764	1,587401052	407,624977	427,6249766	67730200,4	27,6932	2445733,985	
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,587401052	373,196089	393,1960894	51977005,2	27,6932	1876886,933	
100	-20	334,9	68.989,400	262,6583332	Válido	242,65833	1,587401052	385,196093	405,1960934	57153867,25	27,6932	2063823,15	
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,587401052	231,398837	251,3988369	12390348,31	27,6932	447414,8277	
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,587401052	209,584974	229,5849738	9206200,484	27,6932	332435,4168	
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,587401052	300,375582	320,3755823	27101534,24	27,6932	978634,9804	
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,587401052	314,680938	334,680938	31160994,39	27,6932	1125221,873	
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,587401052	326,540036	346,5400362	34818440,04	27,6932	1257292,044	
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,587401052	300,219252	320,2192521	27059241,34	27,6932	977107,7859	
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,587401052	309,548373	329,5483734	29660985,64	27,6932	1071056,636	
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,587401052	196,769374	216,7693738	7618553,304	27,6932	275105,5604	
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,587401052	221,651111	241,6511115	10889545,16	27,6932	393220,9047	
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,587401052	175,56923	195,5692304	5411843,336	27,6932	195421,3791	
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,587401052	308,482058	328,4820576	29355516,55	27,6932	1060026,164	
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,587401052	164,771973	184,7719727	4473526,601	27,6932	161538,811	
100	-20	683,1	140.718,600	375,1247792	Censurado	355,12478	1,587401052	563,725448	583,7254481	0	27,6932	18,44555125	
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,587401052	355,236133	375,2361335	44828210,55	27,6932	1618744,333	
100	-20	299,8	61.758,800	248,5131787	Válido	228,51318	1,587401052	362,74206	382,7420603	47730254,07	27,6932	1723536,972	
100	-20	301,3	62.067,800	249,1341004	Válido	229,1341	1,587401052	363,727712	383,7277121	48120393,76	27,6932	1737624,896	
100	-20	384,1	79.124,600	281,2909526	Válido	261,29095	1,587401052	414,773533	434,773533	71356429	27,6932	2576676,91	
100	-20	324,6	66.867,600	258,5877027	Válido	238,5877	1,587401052	378,73437	398,7343703	54325553,26	27,6932	1961692,88	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068	
100	-20	588,7	121.272,200	348,2415828	Censurado	328,24158	1,587401052	521,051034	541,0510339	0	27,6932	0	
100	-20	318,2	65.549,200	256,02578	Válido	236,02578	1,587401052	374,667571	394,6675714	52594255,96	27,6932	1899175,825	
					Total de Válidos	28						Soma dos K0	32422815,52
					Total de Censurados	2						Somatoria ^{1/3}	318,8723838
											anterior +20	338,8723838	
											Kjc Médio	310,939163	
												280,939163	
												4,013416614	
											LN	1,389642902	
											T - T0	73,13690593	
											T0	-93,13690593	
200	-20	117	24.102,000	155,2481884	Válido	135,24819	2	270,496377	290,4963768	19791757,3	14,6932	1347001,15	
200	-20	234	48.204,000	219,5540936	Válido	199,55409	2	399,108187	419,1081871	63572883,51	14,6932	4326687,414	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	2	344,05208	364,0520798	40726075,55	14,6932	2771763,506	
200	-20	175	36.050,000	189,8683755	Válido	169,86838	2	339,736751	359,7367509	39212775,89	14,6932	2668770,308	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	2	325,360096	345,3600963	34442357	14,6932	2344101,83	
200	-20	166	34.196,000	184,921605	Válido	164,92161	2	329,84321	349,84321	35885801,05	14,6932	2442340,746	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	2	325,360096	345,3600963	34442357	14,6932	2344101,83	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	2	344,05208	364,0520798	40726075,55	14,6932	2771763,506	
200	-20	199	40.994,000	202,4697508	Válido	182,46975	2	364,939502	384,9395017	48602949,33	14,6932	3307853,247	
200	-20	239	49.234,000	221,8873588	Válido	201,88736	2	403,774718	423,7747176	65829016,43	14,6932	4480236,874	
200	-20	112	23.072,000	151,8947004	Válido	131,8947	2	263,789401	283,7894007	18355745,34	14,6932	1249268,052	
200	-20	236	48.616,000	220,4903626	Válido	200,49036	2	400,980725	420,9807252	64471903,23	14,6932	4387873,522	
200	-20	125	25.750,000	160,4680654	Válido	140,46807	2	280,936131	300,9361307	22172914,89	14,6932	1509059,626	
200	-20	168	34.608,000	186,0322553	Válido	166,03226	2	332,064511	352,0645105	36615703,97	14,6932	2492016,986	
200	-20	187	38.522,000	196,2702219	Válido	176,27022	2	352,540444	372,5404438	43815406,03	14,6932	2982019,304	
					Válidos	15						Somatoria	41424857,9
					Censurados	0						Somatoria ^{1/3}	346,0086923
											K0	366,0086923	
											Kjc Médio	335,6983308	
												305,6983308	
												4,367119012	
											Ln	1,474103527	
											T-T0	77,58206861	
											T0	-97,58206861	
Resumo do Kmin 20 com 1/3													
							-91°C	Esp	T-T0	T0	Válidos	Censurados	
								25	4,018131062	-95,01813106	31	0	
								50	13,16199492	-104,1619949	34	0	
								100	16,40890415	-107,4089042	30	0	
								200	21,45417677	-112,4541768	15	0	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc) (Kjc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20 (Kjc)	Kjc-20 ³	r-0,3068	Kjc-20 ³ / r - 0,3068
							-60°C	Esp	T-T0	T0	Válidos	Censurados
								25	28,95035188	-88,95035188	57	5
								50	35,1329798	-95,1329798	34	0
								100	60,45241913	-120,4524191	30	0
							-40°C	Esp	T-T0	T0	Válidos	Censurados
								25	44,46231291	-84,46231291	15	15
								50	55,59112176	-95,59112176	32	0
								100	56,67152377	-96,67152377	30	0
							-20°C	Esp	T-T0	T0	Válidos	Censurados
								25	37,45365289	-57,45365289	3	28
								50	65,62456717	-85,62456717	14	16
								100	73,13690593	-93,13690593	28	2
								200	77,58206861	-97,58206861	15	0

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068
25	-91	76,8	15.820,800	125,78	Válido					12173722,95	30,6932	396626,059
25	-91	70,6	14.543,600	120,60	Válido					10210460,32	30,6932	332661,9682
25	-91	23,7	4.882,200	69,87	Válido					876034,7745	30,6932	28541,6566
25	-91	42,3	8.713,800	93,35	Válido					3379508,293	30,6932	110106,0917
25	-91	77,2	15.903,200	126,11	Válido					12305999,11	30,6932	400935,6831
25	-91	68,5	14.111,000	118,79	Válido					9582775,143	30,6932	312211,6672
25	-91	52	10.712,000	103,50	Válido					5319620,837	30,6932	173315,9409
25	-91	29,4	6.056,400	77,82	Válido					1470106,867	30,6932	47896,82622
25	-91	46,3	9.537,800	97,66	Válido					4127844,789	30,6932	134487,2737
25	-91	124,3	25.605,800	160,02	Válido					32482159,21	30,6932	1058285,197
25	-91	39,7	8.178,200	90,43	Válido					2932414,15	30,6932	95539,53809
25	-91	63,3	13.039,800	114,19	Válido					8110509,843	30,6932	264244,5181
25	-91	71,4	14.708,400	121,28	Válido					10454560,93	30,6932	340614,8898
25	-91	76	15.656,000	125,12	Válido					11911204,56	30,6932	388073,0767
25	-91	55,9	11.515,400	107,31	Válido					6219006,782	30,6932	202618,3904
25	-91	21,3	4.387,800	66,24	Válido					672322,8509	30,6932	21904,61897
25	-91	76,5	15.759,000	125,53	Válido					12074960,61	30,6932	393408,3317
25	-91	23,1	4.758,600	68,98	Válido					822520,2902	30,6932	26798,1276
25	-91	70,2	14.461,200	120,25	Válido					10089439,62	30,6932	328719,0523
25	-91	38,6	7.951,600	89,17	Válido					2752647,172	30,6932	89682,63891
25	-91	112,8	23.236,800	152,44	Válido					26731521,23	30,6932	870926,4993
25	-91	19,9	4.099,400	64,03	Válido					566241,2875	30,6932	18448,42791
25	-91	77	15.862,000	125,94	Válido					12239776,34	30,6932	398778,1118
25	-91	47,3	9.743,800	98,71	Válido					4326313,504	30,6932	140953,4849
25	-91	48,9	10.073,400	100,37	Válido					4653282,921	30,6932	151606,3141
25	-91	93,9	19.343,400	139,08	Válido					18426503,74	30,6932	600344,8235
25	-91	29,1	5.994,600	77,42	Válido					1434988,03	30,6932	46752,63675
25	-91	56,6	11.659,600	107,98	Válido					6387595,697	30,6932	208111,1027
25	-91	51,4	10.588,400	102,90	Válido					5187283,284	30,6932	169004,3164
25	-91	76,6	15.779,600	125,62	Válido					12107839,01	30,6932	394479,5268
25	-91	59,4	12.236,400	110,62	Válido					7083616,78	30,6932	230787,822
Total de Válidos					31						Somatoria	8376864,612
Total de Censurados					0						Somatoria ^{1/3,5}	95,06557617
											K0	115,0655762
											Kjc Médio	106,7378317
												76,73783169
												1,096254738
											Ln	0,091899587
											T-T0	4,836675272
											T0	-95,83667527
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,219014	58,43	78,43	1524530,716	30,6932	49669,98279
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,219014	74,13	94,13	3506984,376	30,6932	114259,327
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,219014	43,16	63,16	528000,6001	30,6932	17202,52695
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,219014	94,93	114,93	8334351,03	30,6932	271537,3773

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,219014	62,40	82,40	1919071,543	30,6932	62524,32275	
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,219014	109,67	129,67	13812737,68	30,6932	450025,9889	
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,219014	88,47	108,47	6512153,437	30,6932	212169,2569	
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,219014	72,09	92,09	3180493,471	30,6932	103622,088	
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,219014	94,41	114,41	8177391,509	30,6932	266423,5566	
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,219014	97,72	117,72	9223558,024	30,6932	300508,1915	
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,219014	71,77	91,77	3131680,699	30,6932	102031,7431	
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,219014	95,95	115,95	8652627,007	30,6932	281906,9699	
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,219014	106,08	126,08	12294839,22	30,6932	400572,0883	
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,219014	88,33	108,33	6477254,838	30,6932	211032,2429	
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,219014	50,47	70,47	913026,4315	30,6932	29746,86352	
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,219014	104,90	124,90	11823365,86	30,6932	385211,2474	
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,219014	151,02	171,02	42325304,02	30,6932	1378979,84	
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,219014	67,70	87,70	2553488,852	30,6932	83193,95995	
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,219014	128,35	148,35	23953159,49	30,6932	780406,0668	
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,219014	127,85	147,85	23626920,05	30,6932	769777,0208	
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,219014	130,73	150,73	25548590,57	30,6932	832386,0193	
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,219014	110,12	130,12	14014778,37	30,6932	456608,5769	
50	-91	81	16.686,000	129,17	Válido	109,17	1,219014	133,08	153,08	27192645,66	30,6932	885950,1668	
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,219014	138,34	158,34	31142428,75	30,6932	1014636,1	
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,219014	165,52	185,52	58335570,55	30,6932	1900602,432	
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,219014	102,63	122,63	10952104,19	30,6932	356825,1011	
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,219014	108,18	128,18	13165851,66	30,6932	428950,1147	
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,219014	78,09	98,09	4207694,865	30,6932	137088,8296	
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,219014	51,48	71,48	978970,1641	30,6932	31895,34373	
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,219014	93,38	113,38	7867836,741	30,6932	256338,1055	
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,219014	72,40	92,40	3229684,317	30,6932	105224,7507	
50	-91	86	17.716,000	133,10	Válido	113,10	1,219014	137,87	157,87	30772926,72	30,6932	1002597,537	
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,219014	54,26	74,26	1176363,525	30,6932	38326,51939	
50	-91	67	13.802,000	117,48	Válido	97,48	1,219014	118,83	138,83	18292124,76	30,6932	595966,6885	
Total de Válidos					31							Somatoria	14314196,95
Total de Censurados					0							Somatoria ^{1/3,5}	110,7910948
												K0	130,7910948
												Kjc Médio	121,0857949
													91,08579486
													1,301225641
												Ln	0,263306621
												T-T0	13,85782746
												T0	-104,8578275
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,485994	69,40	89,40	2785109,614	29,6932	93796,20971	
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,485994	210,07	230,07	134353152,9	29,6932	4524711,143	
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,485994	117,43	137,43	17546952,62	29,6932	590941,7853	
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,485994	104,49	124,49	11663361,99	29,6932	392795,7241	
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,485994	126,57	146,57	22813297,71	29,6932	768300,4091	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
100	-91	33	6.798,000	82,45	Válido	62,45	1,485994	92,80	112,80	7698802,378	29,6932	259278,2987	
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,485994	105,34	125,34	11996682,27	29,6932	404021,199	
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,485994	109,65	129,65	13804201,57	29,6932	464894,3722	
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,485994	107,01	127,01	12677160,59	29,6932	426938,1741	
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,485994	73,23	93,23	3360667,942	29,6932	113179,7159	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,485994	107,34	127,34	12815467,1	29,6932	431596,0253	
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,485994	114,30	134,30	15966474,69	29,6932	537714,8534	
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,485994	78,82	98,82	4347922,919	29,6932	146428,2367	
100	-91	32	6.592,000	81,19	Válido	61,19	1,485994	90,93	110,93	7169183,728	29,6932	241441,9371	
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,485994	82,53	102,53	5106977,703	29,6932	171991,4897	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,485994	107,34	127,34	12815467,1	29,6932	431596,0253	
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,485994	93,54	113,54	7915913,358	29,6932	266590,1068	
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,485994	91,12	111,12	7221298,794	29,6932	243197,055	
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,485994	98,07	118,07	9340785,993	29,6932	314576,6032	
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,485994	97,89	117,89	9281547,568	29,6932	312581,5866	
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,485994	106,18	126,18	12334617,09	29,6932	415402,0817	
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,485994	92,61	112,61	7644994,252	29,6932	257466,1624	
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,485994	101,06	121,06	10376344,32	29,6932	349451,8716	
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,485994	64,94	84,94	2207416,337	29,6932	74340,80318	
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,485994	119,88	139,88	18863508,85	29,6932	635280,4294	
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,485994	108,99	128,99	13518033,17	29,6932	455256,8659	
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,485994	86,12	106,12	5927631,547	29,6932	199629,2601	
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,485994	77,77	97,77	4148034,716	29,6932	139696,4529	
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,485994	64,70	84,70	2178929,652	29,6932	73381,43588	
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,485994	115,87	135,87	16747635,94	29,6932	564022,6023	
Total de Válidos					30							Somatoria	14300498,92
Total de Censurados					0							Somatoria ^{1/3,5}	110,7607924
												K0	130,7607924
												Kjc Médio	121,058147
													91,05814699
													1,300830671
												Ln	0,263003038
												T-T0	13,84184991
												T0	-104,8418499
200	-91	50,7	10.444,200	102,20	Válido	82,20	1,811447	148,90	168,90	40279442,07	14,6932	2741366,215	
200	-91	33,9	6.983,400	83,57	Válido	63,57	1,811447	115,15	135,15	16383050,49	14,6932	1115009,017	
200	-91	44,8	9.228,800	96,07	Válido	76,07	1,811447	137,79	157,79	30709296,92	14,6932	2090034,636	
200	-91	40,9	8.425,400	91,79	Válido	71,79	1,811447	130,04	150,04	25079181,06	14,6932	1706856,305	
200	-91	44,6	9.187,600	95,85	Válido	75,85	1,811447	137,40	157,40	30407029,62	14,6932	2069462,719	
200	-91	25,8	5.314,800	72,90	Válido	52,90	1,811447	95,83	115,83	8615127,245	14,6932	586334,3074	
200	-91	25,4	5.232,400	72,34	Válido	52,34	1,811447	94,80	114,80	8296069,432	14,6932	564619,6493	
200	-91	25,6	5.273,600	72,62	Válido	52,62	1,811447	95,32	115,32	8454834,9	14,6932	575425,0198	
200	-91	13,8	2.842,800	53,32	Válido	33,32	1,811447	60,35	80,35	1707899,522	14,6932	116237,4106	
200	-91	23	4.738,000	68,83	Válido	48,83	1,811447	88,46	108,46	6510150,09	14,6932	443072,3117	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
200	-91	20,4	4.202,400	64,83	Válido	44,83	1,811447	81,20	101,20	4824388,273	14,6932	328341,5643	
200	-91	30,2	6.221,200	78,87	Válido	58,87	1,811447	106,65	126,65	12526722,79	14,6932	852552,3912	
200	-91	23,2	4.779,200	69,13	Válido	49,13	1,811447	89,00	109,00	6650557,6	14,6932	452628,2634	
200	-91	38,8	7.992,800	89,40	Válido	69,40	1,811447	125,72	145,72	22279325,09	14,6932	1516301,765	
200	-91	36,9	7.601,400	87,19	Válido	67,19	1,811447	121,70	141,70	19886846,37	14,6932	1353472,788	
Total de Válidos					15							Soma dos K0	16511714,36
Total de Censurados					0							Somatoria ^{1/3,5}	115,4054539
											anterior +20	135,4054539	
											Kjc Médio	125,2959361	
												95,29593614	
												1,361370516	
											Ln	0,308491925	
											T - T0	16,23593001	
											T0	-107,23593	
25	-60	261	53.766,000	231,8749663	Válido					138445474	56,6932	2442011,988	
25	-60	62,3	12.833,800	113,2863628	Válido					7840857,513	56,6932	138303,3153	
25	-60	81,3	16.747,800	129,4132914	Válido					13700779,92	56,6932	241665,313	
25	-60	54,2	11.165,200	105,66551	Válido					5818633,678	56,6932	102633,7141	
25	-60	123,4	25.420,400	159,4377622	Válido					32013371,5	56,6932	564677,4481	
25	-60	191,8	39.510,800	198,7732376	Válido					76393915,32	56,6932	1347496,972	
25	-60	74,6	15.367,600	123,9661244	Válido					11458334,39	56,6932	202111,2653	
25	-60	100,3	20.661,800	143,7421302	Válido					21077134,09	56,6932	371775,3468	
25	-60	40,2	8.281,200	91,00109889	Válido					3015975,064	56,6932	53198,18009	
25	-60	78,2	16.109,200	126,9220233	Válido					12639651,2	56,6932	222948,276	
25	-60	129	26.574,000	163,0153367	Válido					34981557,77	56,6932	617032,6911	
25	-60	140,9	29.025,400	170,3684243	Válido					41691572,02	56,6932	735389,2886	
25	-60	56,1	11.556,600	107,5016279	Válido					6266953,391	56,6932	110541,5357	
25	-60	67,4	13.884,400	117,8320839	Válido					9261568,982	56,6932	163362,9603	
25	-60	112,2	23.113,200	152,0302601	Válido					26445828,45	56,6932	466472,6714	
25	-60	120,3	24.781,800	157,4223618	Válido					30422922,35	56,6932	536623,8342	
25	-60	90	18.540,000	136,1616686	Válido					16893512,07	56,6932	297981,2759	
25	-60	68	14.008,000	118,355397	Válido					9436124,993	56,6932	166441,9188	
25	-60	81,4	16.768,400	129,4928569	Válido					13735682,93	56,6932	242280,9601	
25	-60	141,9	29.231,400	170,9719275	Válido					42280167,55	56,6932	745771,4073	
25	-60	34	7.004,000	83,68990381	Válido					2061802,564	56,6932	36367,72249	
25	-60	284,9	58.689,400	242,2589524	Válido					163684448,8	56,6932	2887197,209	
25	-60	69	14.214,000	119,2224811	Válido					9730502,957	56,6932	171634,3928	
25	-60	52	10.712,000	103,4987923	Válido					5319620,837	56,6932	93831,72649	
25	-60	127,4	26.244,400	162,0012346	Válido					34121052,63	56,6932	601854,4134	
25	-60	193,2	39.799,200	199,4973684	Válido					77482442,08	56,6932	1366697,277	
25	-60	90,4	18.622,400	136,4639146	Válido					17047858,94	56,6932	300703,7693	
25	-60	142,5	29.355,000	171,3330091	Válido					42635154,06	56,6932	752032,9432	
25	-60	46,9	9.661,400	98,29242087	Válido					4246381,676	56,6932	74901,07589	
25	-60	143,1	29.478,600	171,6933313	Válido					42991511,14	56,6932	758318,6544	
25	-60	82,3	16.953,800	130,2067587	Válido					14051697,85	56,6932	247855,084	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068
Total de Censurados					0						Somatoria ^{1/3,5}	157,0512462
											K0	177,0512462
											Kjc Médio	163,293557
												133,293557
												1,904193672
											Ln	0,64405865
											T-T0	33,89680672
											T0	-93,89680672
100	-60	415,3	85.551,800	292,4923931	Válido	272,49239	1,485994	404,9221399	424,9221399	1335981154	29,6932	44992831,81
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,485994	290,6978374	310,6978374	418838218,1	29,6932	14105526,45
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,485994	293,7357098	313,7357098	434358791,4	29,6932	14628224,35
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,485994	214,4837336	234,4837336	144504131,3	29,6932	4866573,197
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,485994	132,007912	152,007912	26430164,51	29,6932	890108,3248
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,485994	164,3534716	184,3534716	56914914,37	29,6932	1916765,939
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,485994	170,69552	190,69552	64979659,35	29,6932	2188368,359
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,485994	197,000187	217,000187	107308280,1	29,6932	3613900,831
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,485994	140,9043572	160,9043572	33207446,43	29,6932	1118351,893
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,485994	191,6194499	211,6194499	97395426,11	29,6932	3280058,266
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,485994	196,2968658	216,2968658	105973378,2	29,6932	3568944,343
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,485994	240,7343407	260,7343407	216462746,1	29,6932	7289977,035
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,485994	317,7372296	337,7372296	571792383,5	29,6932	19256677,74
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,485994	190,1761413	210,1761413	94851916,21	29,6932	3194398,59
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,485994	234,5239959	254,5239959	197540204,3	29,6932	6652708,508
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,485994	231,668157	251,668157	189248394,2	29,6932	6373459,048
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,485994	247,4624661	267,4624661	238387060,1	29,6932	8028338,479
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,485994	168,1830908	188,1830908	61693321,55	29,6932	2077691,914
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,485994	328,8194663	348,8194663	644690573,8	29,6932	21711724,36
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,485994	199,4944323	219,4944323	112139270,8	29,6932	3776597,7
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,485994	211,6734718	231,6734718	137985202,6	29,6932	4647030,383
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,485994	185,8937379	205,8937379	87584380,05	29,6932	2949644,365
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,485994	146,8009749	166,8009749	38331100,57	29,6932	1290905,008
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,485994	87,8747584	107,8747584	6360986,941	29,6932	214223,6923
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,485994	177,6122659	197,6122659	74671580,21	29,6932	2514770,392
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,485994	139,9686904	159,9686904	32442039,37	29,6932	1092574,71
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,485994	171,9399968	191,9399968	66652923,05	29,6932	2244720,106
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,485994	215,9693967	235,9693967	148037844,5	29,6932	4985580,688
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,485994	301,9978442	321,9978442	478644915,3	29,6932	16119681,11
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,485994	265,7330012	285,7330012	305885734,6	29,6932	10301541,58
Total de Válidos					30						Somatoria	219891899,2
Total de Censurados					0						Somatoria ^{1/3,5}	241,8178478
											K0	261,8178478
											Kjc Médio	240,6346043
												210,6346043
												3,009065776

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068
											Ln	1,101629657
											T-T0	57,97876885
											T0	-117,9787688
25	-60	128,7	26.512,200	162,8256737	Válido					34819456,18	56,6932	614173,4138
25	-60	176	36.256,000	190,4100838	Válido					64600148,27	56,6932	1139469,077
25	-60	131,7	27.130,200	164,7124768	Válido					36456159,69	56,6932	643042,8991
25	-60	150,4	30.982,400	176,0181809	Válido					47436565,15	56,6932	836724,0718
25	-60	133,7	27.542,200	165,9584285	Válido					37566620,36	56,6932	662630,0925
25	-60	78,7	16.212,200	127,3271377	Válido					12808061,85	56,6932	225918,8376
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	46,1	9.496,600	97,45050026	Válido					4088695,754	56,6932	72119,68551
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	275,9	56.835,400	238,4017617	Válido					153955950,9	56,6932	2715598,183
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
25	-60	140,7	28.984,200	170,2474669	Válido					41574310,57	56,6932	733320,9374
25	-60	89,1	18.354,600	135,4791497	Válido					16548648,09	56,6932	291898,2892
25	-60	87,8	18.086,800	134,4871741	Válido					16056427,6	56,6932	283216,1105
25	-60	219,5	45.217,000	212,6428931	Válido					99228281,88	56,6932	1750267,79
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	197,6	40.705,600	201,7562886	Válido					80949293,21	56,6932	1427848,37
25	-60	64,1	13.204,600	114,9112701	Válido					8329371,802	56,6932	146920,121
25	-60	234,5	48.307,000	219,7885347	Válido					112718958,2	56,6932	1988227,127
25	-60	133,7	27.542,200	165,9584285	Válido					37566620,36	56,6932	662630,0925
25	-60	38,4	7.910,400	88,9404295	Válido					2720563,998	56,6932	47987,48348
25	-60	116,3	23.957,800	154,783074	Válido					28426523,52	56,6932	501409,755
25	-60	166,1	34.216,600	184,9772959	Válido					57674605,59	56,6932	1017310,817
25	-60	217,1	44.722,600	211,4771855	Válido					97142577,72	56,6932	1713478,472
25	-60	129	26.574,000	163,0153367	Válido					34981557,77	56,6932	617032,6911
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	164,6	33.907,600	184,140164	Válido					56656797,24	56,6932	999357,899
25	-60	77,7	16.006,200	126,5156117	Válido					12472296,6	56,6932	219996,3417
25	-60	200,2	41.241,200	203,0792949	Válido					83030434,13	56,6932	1464557,198
25	-60	63,6	13.101,600	114,4622208	Válido					8192256,304	56,6932	144501,5682
25	-60	55	11.330,000	106,4424727	Válido					6005444,193	56,6932	105928,8273
				T. Válidos	26						Soma dos K0	38085691,7
				T. Censurados	5						Somatoria ^{1/3,5}	146,5318243
											anterior +20	166,5318243
											Kjc Médio	153,6956365
												123,6956365
												1,767080521
											LN	0,569328762
											T - T0	29,96377272
											T0	-89,96377272
25	-40	155,4	32.012,400	178,9200939	Válido					50597125,6	14,6932	3443574,279

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
25	-40	203,4	41.900,400	204,695872	Válido					85624916,52	14,6932	5827519,976	
25	-40	275,9	56.835,400	238,4017617	Válido					153955950,9	14,6932	10478040,92	
25	-40	349,2	71.935,200	268,2073824	Censurado					0	14,6932	17,90551673	
25	-40	165,5	34.093,000	184,6428986	Válido					57266482,99	14,6932	3897482,032	
25	-40	311,7	64.210,200	253,3973165	Válido					194238584,4	14,6932	13219624,34	
25	-40	254,5	52.427,000	228,9694303	Válido					131913625,1	14,6932	8977869,022	
25	-40	548,6	113.011,600	336,1719798	Censurado					0	14,6932	17,90551673	
25	-40	773,9	159.423,400	399,2785995	Censurado					0	14,6932	17,90551673	
25	-40	758,7	156.292,200	395,3380832	Censurado					0	14,6932	17,90551673	
25	-40	139,3	28.695,800	169,3983471	Válido					40757756,85	14,6932	2773919,694	
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	14,6932	17,90551673	
25	-40	136,6	28.139,600	167,7486215	Válido					39204149	14,6932	2668183,173	
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	14,6932	17,90551673	
25	-40	1337,1	275.442,600	524,826257	Censurado					0	14,6932	17,90551673	
25	-40	483,2	99.539,200	315,498336	Censurado					0	14,6932	17,90551673	
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	14,6932	17,90551673	
25	-40	619,9	127.699,400	357,3505282	Censurado					0	14,6932	17,90551673	
25	-40	562,8	115.936,800	340,4949339	Censurado					0	14,6932	17,90551673	
25	-40	264,8	54.548,800	233,5568453	Válido					142330258,7	14,6932	9686811,501	
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	14,6932	17,90551673	
25	-40	1174	241.844,000	491,7763719	Censurado					0	14,6932	17,90551673	
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	14,6932	17,90551673	
25	-40	61,6	12.689,600	112,6481247	Válido					7654700,731	14,6932	520968,9333	
25	-40	251	51.706,000	227,3895336	Válido					128455860,4	14,6932	8742538,071	
25	-40	113,2	23.319,200	152,706254	Válido					26922777,7	14,6932	1832329,084	
25	-40	233,2	48.039,200	219,1784661	Válido					111518865,4	14,6932	7589828,314	
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	14,6932	17,90551673	
25	-40	283	58.298,000	241,4497877	Válido					161608217,2	14,6932	10998844,17	
25	-40	195,2	40.211,200	200,5273049	Válido					79049685,22	14,6932	5380018,323	
Total de Válidos					15							Somatoria	96037820,42
Total de Censurados					15							Somatoria ^{1/3,5}	190,852476
												K0	210,852476
												Kjc Médio	194,1337991
													164,1337991
													2,344768559
												Ln	0,852186701
												T-T0	44,8505861
												T0	-84,8505861
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,219014	214,8758073	234,8758073	145430777,1	31,6932	4588706,004	
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,219014	157,0235404	177,0235404	48515071,71	31,6932	1530772,27	
50	-40	245	50.470,000	224,6552915	Válido	204,65529	1,219014	249,4775947	269,4775947	245250792,3	31,6932	7738277,999	
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,219014	166,4800528	186,4800528	59534363,86	31,6932	1878458,593	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,219014	285,2074387	305,2074387	391798680,8	31,6932	12362231,67	
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,219014	226,3095218	246,3095218	174365233	31,6932	5501660,704	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,219014	233,4133036	253,4133036	194285155,4	31,6932	6130184,249	
50	-40	308,7	63.592,200	252,1749393	Válido	232,17494	1,219014	283,0244211	303,0244211	381402633,9	31,6932	12034210,3	
50	-40	274,2	56.485,200	237,6661524	Válido	217,66615	1,219014	265,3380118	285,3380118	304297334	31,6932	9601344,577	
50	-40	455,2	93.771,200	306,2208353	Válido	286,22084	1,219014	348,9071064	368,9071064	793385671,3	31,6932	25033309,08	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,219014	201,7196507	221,7196507	116578570,6	31,6932	3678346,479	
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,219014	98,21759736	118,2175974	9389934,678	31,6932	296276,0049	
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,219014	145,0705176	165,0705176	36772830,64	31,6932	1160275,095	
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,219014	156,9391469	176,9391469	48423871,22	31,6932	1527894,666	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,219014	201,7196507	221,7196507	116578570,6	31,6932	3678346,479	
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,219014	230,8475359	250,8475359	186912501,9	31,6932	5897558,528	
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,219014	169,4244969	189,4244969	63301895,7	31,6932	1997333,677	
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,219014	234,716197	254,716197	198107405,2	31,6932	6250785,82	
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,219014	203,0022102	223,0022102	119193530,1	31,6932	3760855,012	
50	-40	272,7	56.176,200	237,0151894	Válido	217,01519	1,219014	264,544479	284,544479	301124060,7	31,6932	9501219,841	
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,219014	111,8201612	131,8201612	14784968,36	31,6932	466502,8574	
50	-40	271,9	56.011,400	236,667277	Válido	216,66728	1,219014	264,1203691	284,1203691	299437807,5	31,6932	9448014,321	
50	-40	386,6	79.639,600	282,2048901	Válido	262,20489	1,219014	319,6313412	339,6313412	583811640,6	31,6932	18420722,45	
50	-40	308,8	63.612,800	252,2157806	Válido	232,21578	1,219014	283,0742073	303,0742073	381637506,3	31,6932	12041621,12	
50	-40	349,4	71.976,400	268,2841777	Válido	248,28418	1,219014	302,6618027	322,6618027	482338191,6	31,6932	15218980,46	
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,219014	201,380924	221,380924	115894853,9	31,6932	3656773,501	
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,219014	181,0038127	201,0038127	79782387,86	31,6932	2517334,566	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,219014	285,2074387	305,2074387	391798680,8	31,6932	12362231,67	
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,219014	182,5628684	202,5628684	82213583,33	31,6932	2594044,884	
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,219014	100,0761855	120,0761855	10026690,31	31,6932	316367,2432	
50	-40	251,8	51.870,800	227,7516191	Válido	207,75162	1,219014	253,2520604	273,2520604	258485065,3	31,6932	8155852,526	
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,219014	229,1628454	249,1628454	182181687,8	31,6932	5748289,47	
Total de Válidos					32							Somatoria	215094782,1
Total de Censurados					0							Somatoria ^{1/3,5}	240,2986843
											K0	260,2986843	
											Kjc Médio	239,2485195	
												209,2485195	
												2,989264565	
											Ln	1,095027392	
											T-T0	57,63129165	
											T0	-97,63129165	
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,485994	155,6009398	175,6009398	46994037,11	29,6932	1582653,17	
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,485994	159,9677363	179,9677363	51774200,03	29,6932	1743638,275	
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,485994	262,4819142	282,4819142	292986659,3	29,6932	9867129,826	
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,485994	282,3551897	302,3551897	378255464,4	29,6932	12738790,85	
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,485994	174,2947374	194,2947374	69902862,54	29,6932	2354170,737	
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,485994	246,5583848	266,5583848	235352717,5	29,6932	7926148,663	
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,485994	224,8799872	244,8799872	170540616,2	29,6932	5743423,283	
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,485994	234,437909	254,437909	197286531,2	29,6932	6644165,373	
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,485994	194,8836163	214,8836163	103326960,6	29,6932	3479818,969	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,485994	196,3974742	216,3974742	106163601,6	29,6932	3575350,638	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,485994	183,1334299	203,1334299	83116395,91	29,6932	2799172,737	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,485994	192,1326418	212,1326418	98311435,99	29,6932	3310907,413	
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,485994	174,9625449	194,9625449	70844771,58	29,6932	2385892,109	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,485994	240,4819336	260,4819336	215669431,3	29,6932	7263259,98	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,485994	179,2512808	199,2512808	77111284,21	29,6932	2596934,12	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,485994	245,7339178	265,7339178	232609724,5	29,6932	7833770,846	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,485994	223,7159937	243,7159937	167471001,2	29,6932	5640045,574	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,485994	261,7025002	281,7025002	289952962,8	29,6932	9764961,769	
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,485994	162,2323876	182,2323876	54385291,32	29,6932	1831573,94	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,485994	178,8154697	198,8154697	76457097,56	29,6932	2574902,589	
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,485994	168,1830908	188,1830908	61693321,55	29,6932	2077691,914	
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,485994	140,2365494	160,2365494	32659855,58	29,6932	1099910,268	
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,485994	105,1704222	125,1704222	11929648,86	29,6932	401763,665	
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,485994	177,9411038	197,9411038	75156575,06	29,6932	2531103,925	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,485994	322,2249291	342,2249291	600560796,5	29,6932	20225533	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,485994	328,5656331	348,5656331	642950405,9	29,6932	21653119,43	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,485994	252,7457013	272,7457013	256680704,4	29,6932	8644427,156	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,485994	186,3152703	206,3152703	88281474,43	29,6932	2973120,931	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,485994	207,7790091	227,7790091	129302180,2	29,6932	4354605,776	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,485994	179,6861848	199,6861848	77768085,32	29,6932	2619053,7	
					Válidos	30						Somatoria	168237040,6
					Censurados	0						Somatoria ^{1/3,5}	224,0078925
											K0	244,0078925	
											Kjc Médio	224,3848011	
												194,3848011	
												2,77692573	
											Ln	1,021344463	
											T-T0	53,7533591	
											T0	-93,7533591	
25	-20	258,8	53.312,800	230,8956474	Válido					136218677,1	2,6932	50578745,39	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	78,9	16.253,400	127,488823	Válido					12875721,56	2,6932	4780826,363	
25	-20	102,7	21.156,200	145,4517102	Válido					22114038	2,6932	8211064,161	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
3											Somatoria	63573291,28
28											Somatoria ^{1/3,5}	169,6317162
											K0	189,6317162
											Kjc Médio	174,7719779
												144,7719779
												2,068171113
											Ln	0,726664696
											T-T0	38,24436296
											T0	-58,24436296
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,219014	220,0652496	240,0652496	158099370,4	14,6932	10760036,65
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,219014	210,7459422	230,7459422	135880543,3	14,6932	9247852,294
50	-20	328,8	67.732,800	260,2552593	Válido	240,25526	1,219014	292,8744416	312,8744416	429917533,5	14,6932	29259625,78
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,219014	202,463069	222,463069	118089247,4	14,6932	8036999,935
50	-20	362,3	74.633,800	273,191874	Válido	253,19187	1,219014	308,6443515	328,6443515	516540248	14,6932	35155054,58
50	-20	326,5	67.259,000	259,3434017	Válido	239,3434	1,219014	291,7628747	311,7628747	424233639,5	14,6932	28872787,38
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,219014	423,6028497	443,6028497	0	14,6932	24,58291591
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,219014	421,2735135	441,2735135	0	14,6932	24,58291591
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,219014	533,5792018	553,5792018	0	14,6932	24,58291591
50	-20	486,8	100.280,800	316,6714386	Censurado	296,67144	1,219014	361,6465344	381,6465344	0	14,6932	24,58291591
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,219014	679,6082917	699,6082917	0	14,6932	24,58291591
50	-20	256	52.736,000	229,6432015	Válido	209,6432	1,219014	255,5579252	275,5579252	266816533,3	14,6932	18159184,75
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,219014	436,8678189	456,8678189	0	14,6932	24,58291591
50	-20	417	85.902,000	293,0904297	Válido	273,09043	1,219014	332,9009627	352,9009627	673135784,5	14,6932	45812742,25
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,219014	671,5174571	691,5174571	0	14,6932	24,58291591
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,219014	472,6455438	492,6455438	0	14,6932	24,58291591
50	-20	447	92.082,000	303,4501607	Censurado	283,45016	1,219014	345,5296161	365,5296161	0	14,6932	0
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,219014	367,6269225	387,6269225	0	14,6932	24,58291591
50	-20	380	78.280,000	279,7856322	Válido	259,78563	1,219014	316,6822328	336,6822328	565175001,8	14,6932	38465072,4

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
50	-20	291	59.946,000	244,8387224	Válido	224,83872	1,219014	274,0814726	294,0814726	340862226,8	14,6932	23198637,92	
50	-20	259	53.354,000	230,984848	Válido	210,98485	1,219014	257,1934105	277,1934105	272840873,4	14,6932	18569193,47	
50	-20	480	98.880,000	314,4519041	Censurado	294,4519	1,219014	358,9408916	378,9408916	0	14,6932	24,58291591	
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,219014	598,1479324	618,1479324	0	14,6932	24,58291591	
50	-20	330	67.980,000	260,7297451	Válido	240,72975	1,219014	293,4528463	313,4528463	432896567,1	14,6932	29462374,91	
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,219014	198,3092	218,3092	109824698,3	14,6932	7474525,514	
50	-20	392	80.752,000	284,1689638	Válido	264,16896	1,219014	322,0255739	342,0255739	599261352,6	14,6932	40784944,91	
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,219014	387,8013945	407,8013945	0	14,6932	24,58291591	
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,219014	476,6328558	496,6328558	0	14,6932	24,58291591	
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,219014	371,5121235	391,5121235	0	14,6932	24,58291591	
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,219014	181,8961446	201,8961446	81167511,04	14,6932	5524154,782	
Total de Válidos					15							Somatoria	348783531,7
Total de Censurados					15							Somatoria ^{1/3,5}	275,8863906
											K0	295,8863906	
											Kjc Médio	271,7187428	
												241,7187428	
												3,453124897	
											Ln	1,239279588	
											T-T0	65,22328474	
											T0	-85,22328474	
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,485994	266,5785816	286,5785816	309306028,7	28,6932	10779767,64	
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,485994	133,547545	153,547545	27524895,61	28,6932	959282,8827	
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,485994	261,2338495	281,2338495	288139684,2	28,6932	10042089,56	
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,485994	263,0262693	283,0262693	295118841,8	28,6932	10285323,41	
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,485994	265,5789991	285,5789991	305265731,8	28,6932	10638957,38	
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,485994	214,2041644	234,2041644	143845965,1	28,6932	5013242,339	
100	-20	373,5	76.941,000	277,3824075	Válido	257,38241	1,485994	382,4687877	402,4687877	1094173009	28,6932	38133530,21	
100	-20	371,9	76.611,400	276,7876442	Válido	256,78764	1,485994	381,5849729	401,5849729	1085349029	28,6932	37826001,61	
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,485994	349,3554807	369,3554807	796959887,5	28,6932	27775218,08	
100	-20	334,9	68.989,400	262,6583332	Válido	242,65833	1,485994	360,5888973	380,5888973	890314049,6	28,6932	31028747,22	
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,485994	216,6165568	236,6165568	149596271,3	28,6932	5213648,925	
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,485994	196,1962126	216,1962126	105783313,8	28,6932	3686703,254	
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,485994	281,186912	301,186912	372805969,9	28,6932	12992833,49	
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,485994	294,5784093	314,5784093	438735922	28,6932	15290588,78	
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,485994	305,6799215	325,6799215	499383508,3	28,6932	17404245,9	
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,485994	281,0405685	301,0405685	372127318,5	28,6932	12969181,5	
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,485994	289,7737245	309,7737245	414196581,2	28,6932	14435356,85	
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,485994	184,199302	204,199302	84821887,11	28,6932	2956166,866	
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,485994	207,4915381	227,4915381	128677129,7	28,6932	4484586,235	
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,485994	164,3534716	184,3534716	56914914,37	28,6932	1983568,036	
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,485994	288,7755273	308,7755273	409224238,7	28,6932	14262063,44	
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,485994	154,2459671	174,2459671	45577275,75	28,6932	1588434,742	
100	-20	683,1	140.718,600	375,1247792	Censurado	355,12478	1,485994	527,7133939	547,7133939	0	28,6932	17,80269681	
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,485994	332,5428473	352,5428473	670604770,3	28,6932	23371557,38	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068	
100	-20	299,8	61.758,800	248,5131787	Válido	228,51318	1,485994	339,5692786	359,5692786	721521658	28,6932	25146085,41	
100	-20	301,3	62.067,800	249,1341004	Válido	229,1341	1,485994	340,4919647	360,4919647	728406874,6	28,6932	25386045,28	
100	-20	384,1	79.124,600	281,2909526	Válido	261,29095	1,485994	388,2768633	408,2768633	1153440759	28,6932	40199098	
100	-20	324,6	66.867,600	258,5877027	Válido	238,5877	1,485994	354,5399637	374,5399637	839127947,5	28,6932	29244836,67	
100	-20	588,7	121.272,200	348,2415828	Válido	328,24158	1,485994	487,7651175	507,7651175	2562934959	28,6932	89322033,05	
100	-20	318,2	65.549,200	256,02578	Válido	236,02578	1,485994	350,7329611	370,7329611	808012420	28,6932	28160415,01	
Total de Válidos					29							Somatoria	550579627
Total de Censurados					1							Somatoria ^{1/3,5}	314,3237391
												K0	334,3237391
												Kjc Médio	306,7889795
													276,7889795
													3,954128279
												Ln	1,374760167
												T-T0	72,3536276
												T0	-92,3536276
200	-20	117	24.102,000	155,2481884	Válido	135,24819	1,811447	244,9949696	264,9949696	230170724,7	14,6932	15665118,88	
200	-20	234	48.204,000	219,5540936	Válido	199,55409	1,811447	361,4817297	381,4817297	898053543,8	14,6932	61120351,17	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,811447	311,6161104	331,6161104	534157903,2	14,6932	36354089,19	
200	-20	175	36.050,000	189,8683755	Válido	169,86838	1,811447	307,7076149	327,7076149	511074078,2	14,6932	34783034,2	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,811447	294,6863387	314,6863387	439298793,1	14,6932	29898102,06	
200	-20	166	34.196,000	184,921605	Válido	164,92161	1,811447	298,7468008	318,7468008	460851941,5	14,6932	31364981,18	
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,811447	294,6863387	314,6863387	439298793,1	14,6932	29898102,06	
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,811447	311,6161104	331,6161104	534157903,2	14,6932	36354089,19	
200	-20	199	40.994,000	202,4697508	Válido	182,46975	1,811447	330,5343427	350,5343427	656535272,3	14,6932	44682933,08	
200	-20	239	49.234,000	221,8873588	Válido	201,88736	1,811447	365,7083168	385,7083168	935345216,3	14,6932	63658373,69	
200	-20	112	23.072,000	151,8947004	Válido	131,8947	1,811447	238,9203026	258,9203026	210807324,6	14,6932	14347271,16	
200	-20	236	48.616,000	220,4903626	Válido	200,49036	1,811447	363,1777317	383,1777317	912887460,3	14,6932	62129928,15	
200	-20	125	25.750,000	160,4680654	Válido	140,46807	1,811447	254,4505017	274,4505017	262791667,4	14,6932	17885257,63	
200	-20	168	34.608,000	186,0322553	Válido	166,03226	1,811447	300,7586853	320,7586853	471806176,3	14,6932	32110512,09	
200	-20	187	38.522,000	196,2702219	Válido	176,27022	1,811447	319,3042225	339,3042225	581723108,5	14,6932	39591314,93	
Válidos					15							Somatoria	549843458,6
Censurados					0							Somatoria ^{1/3,5}	314,203603
												K0	334,203603
												Kjc Médio	306,6793673
													276,6793673
													3,952562391
												Ln	1,374364075
												T-T0	72,33278127
												T0	-92,33278127
Resumo do Kmin 20 com 1/3,5													

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{1/3,5}	r-0,3068	Kjc-20 ^{3,5} / r - 0,3068
							-91°C	Esp	T-T0	T0	Válidos	Censurados
								25	4,836675272	-95,83667527	31	0
								50	13,85782746	-104,8578275	31	0
								100	13,84184991	-104,8418499	30	0
								200	16,23593001	-107,23593	15	0
							-60°C	Esp	T-T0	T0	Válidos	Censurados
								25	29,96377272	-89,96377272	57	5
								50	33,89680672	-93,89680672	34	0
								100	57,97876885	-117,9787688	30	0
							-40°C	Esp	T-T0	T0	Válidos	Censurados
								25	44,8505861	-84,8505861	15	15
								50	57,63129165	-97,63129165	32	0
								100	53,7533591	-93,7533591	30	0
							-20°C	Esp	T-T0	T0	Válidos	Censurados
								25	38,24436296	-58,24436296	3	28
								50	65,22328474	-85,22328474	15	15
								100	72,3536276	-92,3536276	29	1
								200	72,33278127	-92,33278127	15	0

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-91	76,8	0,077	15.820,800	125,78	Válido					125206466,4	30,6932	4079290,083
25	-91	70,6	0,071	14.543,600	120,60	Válido					102408855,1	30,6932	3336532,362
25	-91	23,7	0,024	4.882,200	69,87	Válido					6186613,242	30,6932	201562,9925
25	-91	42,3	0,042	8.713,800	93,35	Válido					28943222,01	30,6932	942984,831
25	-91	77,2	0,077	15.903,200	126,11	Válido					126762477,6	30,6932	4129985,718
25	-91	68,5	0,069	14.111,000	118,79	Válido					95246099,01	30,6932	3103166,141
25	-91	52	0,052	10.712,000	103,50	Válido					48609457,63	30,6932	1583720,747
25	-91	29,4	0,029	6.056,400	77,82	Válido					11178891,73	30,6932	364213,9538
25	-91	46,3	0,046	9.537,800	97,66	Válido					36376984,58	30,6932	1185180,58
25	-91	124,3	0,124	25.605,800	160,02	Válido					384358967,4	30,6932	12522609,81
25	-91	39,7	0,040	8.178,200	90,43	Válido					24610171,27	30,6932	801811,8432
25	-91	63,3	0,063	13.039,800	114,19	Válido					78714553,27	30,6932	2564560,009
25	-91	71,4	0,071	14.708,400	121,28	Válido					105211635	30,6932	3427848,349
25	-91	76	0,076	15.656,000	125,12	Válido					122125539,4	30,6932	3978911,922
25	-91	55,9	0,056	11.515,400	107,31	Válido					58110231,58	30,6932	1893260,774
25	-91	21,3	0,021	4.387,800	66,24	Válido					4571818,671	30,6932	148952,1676
25	-91	76,5	0,077	15.759,000	125,53	Válido					124046262,3	30,6932	4041490,047
25	-91	23,1	0,023	4.758,600	68,98	Válido					5756620,047	30,6932	187553,5965
25	-91	70,2	0,070	14.461,200	120,25	Válido					101022818,4	30,6932	3291374,584
25	-91	38,6	0,039	7.951,600	89,17	Válido					22893643,32	30,6932	745886,4933
25	-91	112,8	0,113	23.236,800	152,44	Válido					307628845,9	30,6932	10022703,59
25	-91	19,9	0,020	4.099,400	64,03	Válido					3757153,118	30,6932	122409,9513
25	-91	77	0,077	15.862,000	125,94	Válido					125983175,5	30,6932	4104595,66
25	-91	47,3	0,473	9.743,800	98,71	Válido					38382639,98	30,6932	1250525,849
25	-91	48,9	0,489	10.073,400	100,37	Válido					41715410,74	30,6932	1359109,208
25	-91	93,9	0,939	19.343,400	139,08	Válido					201077445,6	30,6932	6551205,01
25	-91	29,1	0,291	5.994,600	77,42	Válido					10874217,93	30,6932	354287,5273
25	-91	56,6	0,566	11.659,600	107,98	Válido					59914022,7	30,6932	1952029,202
25	-91	51,4	0,514	10.588,400	102,90	Válido					47229908,47	30,6932	1538774,337
25	-91	76,6	0,766	15.779,600	125,62	Válido					124432349,2	30,6932	4054068,954
25	-91	59,4	0,594	12.236,400	110,62	Válido					67431515,97	30,6932	2196952,94
Total de Válidos						31						Somatoria	86037559,23
Total de Censurados						0						Somatoria ^{1/4}	96,31014138
												K0	116,3101414
												Kjc Médio	107,873373
													77,87337299
													1,112476757
												Ln	0,106588842
												T-T0	5,609770771
												T0	-96,60977077
50	-91	22,4	0,224	4.614,400	67,93	Válido	47,93	1,189207	57,00	77,00	10554485,37	33,6932	313252,6851
50	-91	31,7	0,317	6.530,200	80,81	Válido	60,81	1,189207	72,32	92,32	27347655,05	33,6932	811666,8956
50	-91	14,9	0,149	3.069,400	55,40	Válido	35,40	1,189207	42,10	62,10	3141588,752	33,6932	93241,03238
50	-91	46,5	0,465	9.579,000	97,87	Válido	77,87	1,189207	92,61	112,61	73546747,77	33,6932	2182836,53

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-91	24,6	0,246	5.067,600	71,19	Válido	51,19	1,189207	60,87	80,87	13730025,15	33,6932	407501,3697
50	-91	58,7	0,587	12.092,200	109,96	Válido	89,96	1,189207	106,99	126,99	131013317,9	33,6932	3888420,154
50	-91	41,6	0,416	8.569,600	92,57	Válido	72,57	1,189207	86,30	106,30	55476566,17	33,6932	1646521,143
50	-91	30,4	0,304	6.262,400	79,14	Válido	59,14	1,189207	70,32	90,32	24457834,96	33,6932	725898,2514
50	-91	46,1	0,461	9.496,600	97,45	Válido	77,45	1,189207	92,10	112,10	71965923,79	33,6932	2135918,339
50	-91	48,7	0,487	10.032,200	100,16	Válido	80,16	1,189207	95,33	115,33	82580916,19	33,6932	2450966,848
50	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,189207	70,01	90,01	24029315,59	33,6932	713179,9768
50	-91	47,3	0,473	9.743,800	98,71	Válido	78,71	1,189207	93,60	113,60	76765279,96	33,6932	2278361,211
50	-91	55,6	0,556	11.453,600	107,02	Válido	87,02	1,189207	103,49	123,49	114692790,5	33,6932	3404033,766
50	-91	41,5	0,415	8.549,000	92,46	Válido	72,46	1,189207	86,17	106,17	55136926,54	33,6932	1636440,782
50	-91	18,3	0,183	3.769,800	61,40	Válido	41,40	1,189207	49,23	69,23	5874578,163	33,6932	174355,0082
50	-91	54,6	0,546	11.247,600	106,05	Válido	86,05	1,189207	102,34	122,34	109680250,4	33,6932	3255263,685
50	-91	100,5	1,005	20.703,000	143,89	Válido	123,89	1,189207	147,33	167,33	471096740,4	33,6932	13981953,05
50	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,189207	66,05	86,05	19029813,55	33,6932	564796,8597
50	-91	76,2	0,762	15.697,200	125,29	Válido	105,29	1,189207	125,21	145,21	245783773,5	33,6932	7294758,988
50	-91	75,7	0,757	15.594,200	124,88	Válido	104,88	1,189207	124,72	144,72	241961740,5	33,6932	7181322,655
50	-91	78,6	0,786	16.191,600	127,25	Válido	107,25	1,189207	127,54	147,54	264580565	33,6932	7852639,85
50	-91	59,1	0,591	12.174,600	110,34	Válido	90,34	1,189207	107,43	127,43	133205709,4	33,6932	3953489,411
50	-91	81	0,810	16.686,000	129,17	Válido	109,17	1,189207	129,83	149,83	284126455,3	33,6932	8432753,651
50	-91	86,5	0,865	17.819,000	133,49	Válido	113,49	1,189207	134,96	154,96	331762366,3	33,6932	9846567,447
50	-91	117,8	1,178	24.266,800	155,78	Válido	135,78	1,189207	161,47	181,47	679748454,8	33,6932	20174648,14
50	-91	52,7	0,527	10.856,200	104,19	Válido	84,19	1,189207	100,12	120,12	100492995,4	33,6932	2982589,821
50	-91	57,4	0,574	11.824,400	108,74	Válido	88,74	1,189207	105,53	125,53	124024878,2	33,6932	3681006,204
50	-91	34,3	0,343	7.065,800	84,06	Válido	64,06	1,189207	76,18	96,18	33676890,66	33,6932	999515,9456
50	-91	18,8	0,188	3.872,800	62,23	Válido	42,23	1,189207	50,22	70,22	6361937,218	33,6932	188819,6199
50	-91	45,3	0,453	9.331,800	96,60	Válido	76,60	1,189207	91,09	111,09	68860987,42	33,6932	2043765,134
50	-91	30,6	0,306	6.303,600	79,40	Válido	59,40	1,189207	70,63	90,63	24890624,91	33,6932	738743,2749
50	-91	86	0,860	17.716,000	133,10	Válido	113,10	1,189207	134,50	154,50	327267529,4	33,6932	9713162,58
50	-91	20,2	0,202	4.161,200	64,51	Válido	44,51	1,189207	52,93	72,93	7847972,75	33,6932	232924,5293
50	-91	67	0,670	13.802,000	117,48	Válido	97,48	1,189207	115,93	135,93	180603506,3	33,6932	5360236,081
Total de Válidos 34												Somatoria	131341550,9
												Somatoria ^{1/4}	107,0534173
												K0	127,0534173
												Kjc Médio	117,6755379
													87,67553792
													1,252507685
												Ln	0,225147689
												T-T0	11,84952289
												T0	-102,8495229
100	-91	19,6	0,196	4.037,600	63,54	Válido	43,54	1,414214	61,58	81,58	14377982,62	29,6932	484218,0238
100	-91	19,7	0,197	4.058,200	63,70	Válido	43,70	1,414214	61,81	81,81	14593009,36	29,6932	491459,6394
100	-91	21,6	0,216	4.449,600	66,71	Válido	46,71	1,414214	66,05	86,05	19033798,98	29,6932	641015,417
100	-91	23,3	0,233	4.799,800	69,28	Válido	49,28	1,414214	69,69	89,69	23591934,17	29,6932	794523,1288
100	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,414214	74,01	94,01	30008194,56	29,6932	1010608,306

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
100	-91	25,9	0,259	5.335,400	73,04	Válido	53,04	1,414214	75,02	95,02	31666440,05	29,6932	1066454,274
100	-91	27,7	0,277	5.706,200	75,54	Válido	55,54	1,414214	78,54	98,54	38059627,11	29,6932	1281762,394
100	-91	29,5	0,295	6.077,000	77,96	Válido	57,96	1,414214	81,96	101,96	45126025,84	29,6932	1519742,764
100	-91	32	0,320	6.592,000	81,19	Válido	61,19	1,414214	86,54	106,54	56080768,45	29,6932	1888673,786
100	-91	32,1	0,321	6.612,600	81,32	Válido	61,32	1,414214	86,72	106,72	56546917,14	29,6932	1904372,622
100	-91	32,9	0,329	6.777,400	82,32	Válido	62,32	1,414214	88,14	108,14	60354295,91	29,6932	2032596,551
100	-91	33	0,330	6.798,000	82,45	Válido	62,45	1,414214	88,32	108,32	60840018,92	29,6932	2048954,606
100	-91	33,4	0,334	6.880,400	82,95	Válido	62,95	1,414214	89,02	109,02	62804767,08	29,6932	2115122,893
100	-91	35,8	0,358	7.374,800	85,88	Válido	65,88	1,414214	93,16	113,16	75333156,8	29,6932	2537050,8
100	-91	35,9	0,359	7.395,400	86,00	Válido	66,00	1,414214	93,33	113,33	75882898,66	29,6932	2555564,865
100	-91	37,6	0,376	7.745,600	88,01	Válido	68,01	1,414214	96,18	116,18	85571246,37	29,6932	2881846,563
100	-91	39,6	0,396	8.157,600	90,32	Válido	70,32	1,414214	99,45	119,45	97805085,15	29,6932	3293854,659
100	-91	40,1	0,401	8.260,600	90,89	Válido	70,89	1,414214	100,25	120,25	101005968,5	29,6932	3401653,191
100	-91	40,6	0,406	8.363,600	91,45	Válido	71,45	1,414214	101,05	121,05	104264161,5	29,6932	3511381,782
100	-91	41,1	0,411	8.466,600	92,01	Válido	72,01	1,414214	101,84	121,84	107579828,9	29,6932	3623045,979
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	41,3	0,413	8.507,800	92,24	Válido	72,24	1,414214	102,16	122,16	108922225	29,6932	3668254,851
100	-91	42,3	0,423	8.713,800	93,35	Válido	73,35	1,414214	103,73	123,73	115772888,1	29,6932	3898969,732
100	-91	42,7	0,427	8.796,200	93,79	Válido	73,79	1,414214	104,35	124,35	118578058,5	29,6932	3993441,546
100	-91	45,6	0,456	9.393,600	96,92	Válido	76,92	1,414214	108,78	128,78	140032979,4	29,6932	4715994,886
100	-91	46,6	0,466	9.599,600	97,98	Válido	77,98	1,414214	110,28	130,28	147889826,7	29,6932	4980595,784
100	-91	47,6	0,476	9.805,600	99,02	Válido	79,02	1,414214	111,76	131,76	155983654,4	29,6932	5253177,644
100	-91	49,2	0,492	10.135,200	100,67	Válido	80,67	1,414214	114,09	134,09	169429313	29,6932	5705997,097
100	-91	53,7	0,537	11.062,200	105,18	Válido	85,18	1,414214	120,46	140,46	210547079,5	29,6932	7090750,728
100	-91	126,4	1,264	26.038,400	161,36	Válido	141,36	1,414214	199,92	219,92	1597414266	29,6932	53797309,33
Total de Válidos 30												Somatoria	135856648,7
												Somatoria ^{1/4}	107,9618267
												K0	127,9618267
												Kjc Médio	118,5043707
													88,50437072
													1,264348153
												Ln	0,234556695
												T-T0	12,34471888
												T0	-103,3447189
200	-91	13,8	0,138	2.842,800	53,32	Válido	33,32	1,681793	56,03	76,03	9858281,639	14,6932	670941,7716
200	-91	20,4	0,204	4.202,400	64,83	Válido	44,83	1,681793	75,39	95,39	32300322,8	14,6932	2198317,78
200	-91	23	0,230	4.738,000	68,83	Válido	48,83	1,681793	82,13	102,13	45493388,84	14,6932	3096220,622
200	-91	23,2	0,232	4.779,200	69,13	Válido	49,13	1,681793	82,63	102,63	46616451,6	14,6932	3172654,806
200	-91	25,4	0,254	5.232,400	72,34	Válido	52,34	1,681793	88,02	108,02	60016389,12	14,6932	4084637,051
200	-91	25,6	0,256	5.273,600	72,62	Válido	52,62	1,681793	88,50	108,50	61330813,25	14,6932	4174095,041
200	-91	25,8	0,258	5.314,800	72,90	Válido	52,90	1,681793	88,97	108,97	62661460,34	14,6932	4264657,143
200	-91	30,2	0,302	6.221,200	78,87	Válido	58,87	1,681793	99,01	119,01	96117262,38	14,6932	6541615,331
200	-91	33,9	0,339	6.983,400	83,57	Válido	63,57	1,681793	106,91	126,91	130620017,9	14,6932	8889827,802
200	-91	36,9	0,369	7.601,400	87,19	Válido	67,19	1,681793	112,99	132,99	163006655,8	14,6932	11094020,08

specimen width W, mm	test W, mm temperature centigrade	fracture resistencia Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
200	-91	38,8	0,388	7.992,800	89,40	Válido	69,40	1,681793	116,72	136,72	185604911,9	14,6932	12632027,87	
200	-91	40,9	0,409	8.425,400	91,79	Válido	71,79	1,681793	120,74	140,74	212493309,2	14,6932	14462017,07	
200	-91	44,6	0,446	9.187,600	95,85	Válido	75,85	1,681793	127,57	147,57	264824052,5	14,6932	18023579,11	
200	-91	44,8	0,448	9.228,800	96,07	Válido	76,07	1,681793	127,93	147,93	267834797,3	14,6932	18228486,46	
200	-91	50,7	0,507	10.444,200	102,20	Válido	82,20	1,681793	138,24	158,24	365183446,7	14,6932	24853908,39	
Total de Válidos						15							<i>Soma dos K0</i>	136387006,3
												<i>Somatoria^{1/4}</i>	108,0670383	
												anterior +20	128,0670383	
												Kjc Médio	118,6003657	
													88,60036572	
													1,26571951	
												Ln	0,235640743	
												T - T0	12,40177232	
												T0	-103,4017723	
25	-60	34	34.000,000	7.004,000	83,68990381	Válido					16454412,17	56,6932	290236,0808	
25	-60	40,2	40.200,000	8.281,200	91,00109889	Válido					25413254,26	56,6932	448259,302	
25	-60	46,9	46.900,000	9.661,400	98,29242087	Válido					37573260,89	56,6932	662747,2236	
25	-60	52	52.000,000	10.712,000	103,4987923	Válido					48609457,63	56,6932	857412,4874	
25	-60	54,2	54.200,000	11.165,200	105,66551	Válido					53854750,56	56,6932	949933,1587	
25	-60	56,1	56.100,000	11.556,600	107,5016279	Válido					58622526,43	56,6932	1034031,003	
25	-60	62,3	62.300,000	12.833,800	113,2863628	Válido					75730816,98	56,6932	1335800,713	
25	-60	67,4	67.400,000	13.884,400	117,8320839	Válido					91606273,8	56,6932	1615824,716	
25	-60	68	68.000,000	14.008,000	118,355397	Válido					93582099,2	56,6932	1650675,905	
25	-60	69	69.000,000	14.214,000	119,2224811	Válido					96926008,89	56,6932	1709658,458	
25	-60	74,6	74.600,000	15.367,600	123,9661244	Válido					116833508,7	56,6932	2060802,86	
25	-60	78,2	78.200,000	16.109,200	126,9220233	Válido					130697919,3	56,6932	2305354,421	
25	-60	81,3	81.300,000	16.747,800	129,4132914	Válido					143311265,7	56,6932	2527838,713	
25	-60	81,4	81.400,000	16.768,400	129,4928569	Válido					143728585,3	56,6932	2535199,73	
25	-60	82,3	82.300,000	16.953,800	130,2067587	Válido					147513890,6	56,6932	2601967,971	
25	-60	90	90.000,000	18.540,000	136,1616686	Válido					182075439,7	56,6932	3211592,214	
25	-60	90,4	90.400,000	18.622,400	136,4639146	Válido					183977848,2	56,6932	3245148,416	
25	-60	100,3	100.300,000	20.661,800	143,7421302	Válido					234460859,4	56,6932	4135608,14	
25	-60	112,2	112.200,000	23.113,200	152,0302601	Válido					303874261,2	56,6932	5359977,232	
25	-60	120,3	120.300,000	24.781,800	157,4223618	Válido					356639656,8	56,6932	6290695,476	
25	-60	123,4	123.400,000	25.420,400	159,4377622	Válido					378025952,7	56,6932	6667924,066	
25	-60	127,4	127.400,000	26.244,400	162,0012346	Válido					406601035,8	56,6932	7171954,235	
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475	
25	-60	140,9	140.900,000	29.025,400	170,3684243	Válido					511242082,6	56,6932	9017696,7	
25	-60	141,9	141.900,000	29.231,400	170,9719275	Válido					519499100,1	56,6932	9163340,579	
25	-60	142,5	142.500,000	29.355,000	171,3330091	Válido					524486930,2	56,6932	9251319,915	
25	-60	143,1	143.100,000	29.478,600	171,6933313	Válido					529499988,6	56,6932	9339744,247	
25	-60	191,8	191.800,000	39.510,800	198,7732376	Válido					1021433322	56,6932	18016857,79	
25	-60	193,2	193.200,000	39.799,200	199,4973684	Válido					1038083632	56,6932	18310549,27	
25	-60	261	261.000,000	53.766,000	231,8749663	Válido					2015202002	56,6932	35545744,5	
25	-60	284,9	284.900,000	58.689,400	242,2589524	Válido					2440265341	56,6932	43043351,6	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
						31							
50	-60	46,7	46.700,000	9.620,200	98,08261824	Válido	78,082618	1,189207	92,85640516	112,8564052	74344263,88	33,6932	2206506,473
50	-60	48	48.000,000	9.888,000	99,43842316	Válido	79,438423	1,189207	94,46873802	114,468738	79643888,41	33,6932	2363797,099
50	-60	49,9	49.900,000	10.279,400	101,3873759	Válido	81,387376	1,189207	96,78644654	116,7864465	87752233,9	33,6932	2604449,382
50	-60	52,9	52.900,000	10.897,400	104,3906126	Válido	84,390613	1,189207	100,3579169	120,3579169	101439372,4	33,6932	3010677,894
50	-60	59,4	59.400,000	12.236,400	110,6182625	Válido	90,618263	1,189207	107,7638825	127,7638825	134863031,9	33,6932	4002678,046
50	-60	63,1	63.100,000	12.998,600	114,0114029	Válido	94,011403	1,189207	111,7990293	131,7990293	156225574,6	33,6932	4636709,323
50	-60	68,1	68.100,000	14.028,600	118,4423911	Válido	98,442391	1,189207	117,0683919	137,0683919	187827254,5	33,6932	5574633,889
50	-60	68,2	68.200,000	14.049,200	118,5293213	Válido	98,529321	1,189207	117,1717699	137,1717699	188491582,3	33,6932	5594350,856
50	-60	69,2	69.200,000	14.255,200	119,3951423	Válido	99,395142	1,189207	118,2014104	138,2014104	195204863,8	33,6932	5793598,228
50	-60	75,1	75.100,000	15.470,600	124,3808667	Válido	104,38087	1,189207	124,1304693	144,1304693	237417971,4	33,6932	7046465,502
50	-60	76,2	76.200,000	15.697,200	125,2884671	Válido	105,28847	1,189207	125,2097943	145,2097943	245783773,5	33,6932	7294758,988
50	-60	76,5	76.500,000	15.759,000	125,5348557	Válido	105,53486	1,189207	125,5028013	145,5028013	248092524,6	33,6932	7363281,749
50	-60	80,6	80.600,000	16.603,600	128,8549572	Válido	108,85496	1,189207	129,4510896	149,4510896	280816641,8	33,6932	8334519,779
50	-60	81,9	81.900,000	16.871,400	129,8899534	Válido	109,88995	1,189207	130,6819145	150,6819145	291649981,3	33,6932	8656048,736
50	-60	82,9	82.900,000	17.077,400	130,6805265	Válido	110,68053	1,189207	131,6220696	151,6220696	300133768,2	33,6932	8907843,962
50	-60	86,1	86.100,000	17.736,600	133,1788271	Válido	113,17883	1,189207	134,5930665	154,5930665	328163860,5	33,6932	9739765,309
50	-60	86,2	86.200,000	17.757,200	133,2561443	Válido	113,25614	1,189207	134,6850126	154,6850126	329061509,5	33,6932	9766407,153
50	-60	94,4	94.400,000	19.446,400	139,4503496	Válido	119,45035	1,189207	142,0512056	162,0512056	407173679	33,6932	12084743,48
50	-60	95,1	95.100,000	19.590,600	139,9664245	Válido	119,96642	1,189207	142,6649256	162,6649256	414256047,7	33,6932	12294945,2
50	-60	96,8	96.800,000	19.940,800	141,2118975	Válido	121,2119	1,189207	144,1460509	164,1460509	431728774,9	33,6932	12813528,39
50	-60	97	97.000,000	19.982,000	141,3577023	Válido	121,3577	1,189207	144,319443	164,319443	433809817,9	33,6932	12875292,87
50	-60	98,6	98.600,000	20.311,600	142,5187707	Válido	122,51877	1,189207	145,7001938	165,7001938	450651185,7	33,6932	13375137,59
50	-60	109,7	109.700,000	22.598,200	150,326977	Válido	130,32698	1,189207	154,9857683	174,9857683	576988665,5	33,6932	17124780,83
50	-60	112,9	112.900,000	23.257,400	152,5037704	Válido	132,50377	1,189207	157,5744266	177,5744266	616513997,7	33,6932	18297876,06
50	-60	127,4	127.400,000	26.244,400	162,0012346	Válido	142,00123	1,189207	168,8688785	188,8688785	813202071,6	33,6932	24135495,34
50	-60	129,1	129.100,000	26.594,600	163,0785087	Válido	143,07851	1,189207	170,1499806	190,1499806	838161320,6	33,6932	24876275,35
50	-60	129,9	129.900,000	26.759,400	163,5830065	Válido	143,58301	1,189207	170,7499329	190,7499329	850045487,8	33,6932	25228992,43
50	-60	142,3	142.300,000	29.313,800	171,2127332	Válido	151,21273	1,189207	179,8232582	199,8232582	1045643035	33,6932	31034245,34
50	-60	147,4	147.400,000	30.364,400	174,2538378	Válido	154,25384	1,189207	183,4397615	203,4397615	1132332332	33,6932	33607147,19
50	-60	147,8	147.800,000	30.446,800	174,4901143	Válido	154,49011	1,189207	183,7207432	203,7207432	1139286035	33,6932	33813530,18
50	-60	163,2	163.200,000	33.619,200	183,3553926	Válido	163,35539	1,189207	194,2633952	214,2633952	1424176774	33,6932	42268967,44
50	-60	164,7	164.700,000	33.928,200	184,1960912	Válido	164,19609	1,189207	195,2631599	215,2631599	1453721629	33,6932	43145846,33
50	-60	176,8	176.800,000	36.420,800	190,8423433	Válido	170,84234	1,189207	203,1669302	223,1669302	1703774345	33,6932	50567305,7
50	-60	198	198.000,000	40.788,000	201,9603922	Válido	181,96039	1,189207	216,388593	236,388593	2192489147	33,6932	65072155,42
Total de Válidos						34						Somatoria	575512757,5

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
												Ln	1,071311124
												T-T0	56,38310443
												T0	-116,3831044
25	-60	38,4	38.400,000	7.910,400	88,9404295	Válido					22588944,53	56,6932	398441,8684
25	-60	46,1	46.100,000	9.496,600	97,45050026	Válido					35982961,89	56,6932	634696,258
25	-60	55	55.000,000	11.330,000	106,4424727	Válido					55835283,59	56,6932	984867,3843
25	-60	63,6	63.600,000	13.101,600	114,4622208	Válido					79621912,89	56,6932	1404434,974
25	-60	64,1	64.100,000	13.204,600	114,9112701	Válido					81146751,92	56,6932	1431331,305
25	-60	77,7	77.700,000	16.006,200	126,5156117	Válido					128722084,2	56,6932	2270503,061
25	-60	78,7	78.700,000	16.212,200	127,3271377	Válido					132689998,7	56,6932	2340492,311
25	-60	87,8	87.800,000	18.086,800	134,4871741	Válido					171801655	56,6932	3030374,983
25	-60	89,1	89.100,000	18.354,600	135,4791497	Válido					177833800,3	56,6932	3136774,786
25	-60	116,3	116.300,000	23.957,800	154,783074	Válido					330020888	56,6932	5821172,346
25	-60	128,7	128.700,000	26.512,200	162,8256737	Válido					416126261,3	56,6932	7339967,779
25	-60	129	129.000,000	26.574,000	163,0153367	Válido					418341020,6	56,6932	7379033,475
25	-60	131,7	131.700,000	27.130,200	164,7124768	Válido					438554837,8	56,6932	7735580,948
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	133,7	133.700,000	27.542,200	165,9584285	Válido					453854572,7	56,6932	8005449,908
25	-60	140,7	140.700,000	28.984,200	170,2474669	Válido					509599080,2	56,6932	8988716,11
25	-60	150,4	150.400,000	30.982,400	176,0181809	Válido					592517033	56,6932	10451289,27
25	-60	164,6	164.600,000	33.907,600	184,140164	Válido					725871010,5	56,6932	12803493,37
25	-60	166,1	166.100,000	34.216,600	184,9772959	Válido					740792750,6	56,6932	13066694,96
25	-60	176	176.000,000	36.256,000	190,4100838	Válido					843298173,6	56,6932	14874767,58
25	-60	197,6	197.600,000	40.705,600	201,7562886	Válido					1091334248	56,6932	19249826,21
25	-60	200,2	200.200,000	41.241,200	203,0792949	Válido					1123458215	56,6932	19816454,44
25	-60	217,1	217.100,000	44.722,600	211,4771855	Válido					1344213155	56,6932	23710306,61
25	-60	219,5	219.500,000	45.217,000	212,6428931	Válido					1377247421	56,6932	24292991,41
25	-60	234,5	234.500,000	48.307,000	219,7885347	Válido					1593243836	56,6932	28102908,92
25	-60	275,9	275.900,000	56.835,400	238,4017617	Válido					2275226038	56,6932	40132256,38
25	-60	369,1	369.100,000	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	373,6	373.600,000	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	427,1	427.100,000	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	678,2	678.200,000	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	687,7	687.700,000	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
					T. Válidos	26						Soma dos K0	493144568,1
					T. Censurados	5						Somatoria ^{1/4}	149,0196584
												anterior +20	169,0196584
												Kjc Médio	155,9655363
													125,9655363
													1,799507661
												LN	0,587513106
												T - T0	30,92081477
												T0	-90,92081477
25	-40	155,4		32.012,400	178,9200939	Válido					637845141,6	14,6932	43410907,2

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-40	203,4		41.900,400	204,695872	Válido					1163667099	14,6932	79197662,81
25	-40	275,9		56.835,400	238,4017617	Válido					2275226038	14,6932	154848912,3
25	-40	349,2		71.935,200	268,2073824	Censurado					0	14,6932	17,90551673
25	-40	165,5		34.093,000	184,6428986	Válido					734804848,9	14,6932	50009858,23
25	-40	311,7		64.210,200	253,3973165	Válido					2967450160	14,6932	201960781,9
25	-40	254,5		52.427,000	228,9694303	Válido					1906913682	14,6932	129782054,4
25	-40	548,6		113.011,600	336,1719798	Censurado					0	14,6932	17,90551673
25	-40	773,9		159.423,400	399,2785995	Censurado					0	14,6932	17,90551673
25	-40	758,7		156.292,200	395,3380832	Censurado					0	14,6932	17,90551673
25	-40	139,3		28.695,800	169,3983471	Válido					498176423,4	14,6932	33905236,67
25	-40	1544,1		318.084,600	563,9898935	Censurado					0	14,6932	17,90551673
25	-40	136,6		28.139,600	167,7486215	Válido					476533843,6	14,6932	32432270,96
25	-40	1433,6		295.321,600	543,4350007	Censurado					0	14,6932	17,90551673
25	-40	1337,1		275.442,600	524,826257	Censurado					0	14,6932	17,90551673
25	-40	483,2		99.539,200	315,498336	Censurado					0	14,6932	17,90551673
25	-40	1573,3		324.099,800	569,2976374	Censurado					0	14,6932	17,90551673
25	-40	619,9		127.699,400	357,3505282	Censurado					0	14,6932	17,90551673
25	-40	562,8		115.936,800	340,4949339	Censurado					0	14,6932	17,90551673
25	-40	264,8		54.548,800	233,5568453	Válido					2079955231	14,6932	141559036,2
25	-40	1337,2		275.463,200	524,8458821	Censurado					0	14,6932	17,90551673
25	-40	1174		241.844,000	491,7763719	Censurado					0	14,6932	17,90551673
25	-40	1714,3		353.145,800	594,2607172	Censurado					0	14,6932	17,90551673
25	-40	61,6		12.689,600	112,6481247	Válido					73679476,71	14,6932	5014528,946
25	-40	251		51.706,000	227,3895336	Válido					1849896113	14,6932	125901513,1
25	-40	113,2		23.319,200	152,706254	Válido					310145554,3	14,6932	21108101,32
25	-40	233,2		48.039,200	219,1784661	Válido					1573872452	14,6932	107115703,3
25	-40	1127,9		232.347,400	482,0242732	Censurado					0	14,6932	17,90551673
25	-40	283		58.298,000	241,4497877	Válido					2404922433	14,6932	163675879,5
25	-40	195,2		40.211,200	200,5273049	Válido					1062115127	14,6932	72286168,21
Total de Válidos						15						Somatoria	1362208884
												Somatoria ^{1/4}	192,114846
												K0	212,114846
												Kjc Médio	195,2855855
													165,2855855
													2,36122265
												Ln	0,859179557
												T-T0	45,21862008
												T0	-85,21862008
50	-40	49,1		10.114,600	100,5713677	Válido	80,571368	1,189207	95,81604373	115,8160437	84285513,88	31,6932	2659419,493
50	-40	50,6		10.423,600	102,0960332	Válido	82,096033	1,189207	97,62918682	117,6291868	90848693,89	31,6932	2866504,294
50	-40	60,6		12.483,600	111,7300318	Válido	91,730032	1,189207	109,0860064	129,0860064	141604211,9	31,6932	4467968,269
50	-40	93,8		19.322,800	139,0064747	Válido	119,00647	1,189207	141,5233464	161,5233464	401155135,9	31,6932	12657451,31
50	-40	107,4		22.124,400	148,7427309	Válido	128,74273	1,189207	153,1017716	173,1017716	549440747,8	31,6932	17336234,52
50	-40	107,5		22.145,000	148,8119619	Válido	128,81196	1,189207	153,1841016	173,1841016	550623541,1	31,6932	17373554,61

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-40	119		24.514,000	156,5694734	Válido	136,56947	1,189207	162,4093895	182,4093895	695736094,4	31,6932	21952219,86
50	-40	122,7		25.276,200	158,9849049	Válido	138,9849	1,189207	165,2818378	185,2818378	746277818,3	31,6932	23546938,09
50	-40	137,8		28.386,800	168,4838271	Válido	148,48383	1,189207	176,5780237	196,5780237	972179831	31,6932	30674713,53
50	-40	139,9		28.819,400	169,7627757	Válido	149,76278	1,189207	178,0989584	198,0989584	1006110121	31,6932	31745299,34
50	-40	166,5		34.299,000	185,199892	Válido	165,19989	1,189207	196,456887	216,456887	1489597834	31,6932	47000550,07
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	167		34.402,000	185,4777615	Válido	165,47776	1,189207	196,7873313	216,7873313	1499645279	31,6932	47317572,2
50	-40	168,9		34.793,400	186,5298904	Válido	166,52989	1,189207	198,0385305	218,0385305	1538150320	31,6932	48532502,88
50	-40	187		38.522,000	196,2702219	Válido	176,27022	1,189207	209,621802	229,621802	1930837836	31,6932	60922779,52
50	-40	205,3		42.291,800	205,6497022	Válido	185,6497	1,189207	220,7759467	240,7759467	2375784382	31,6932	74961959,72
50	-40	210		43.260,000	207,9903844	Válido	187,99038	1,189207	223,5595027	243,5595027	2497885571	31,6932	78814558,67
50	-40	212,8		43.836,800	209,3723955	Válido	189,3724	1,189207	225,2030001	245,2030001	2572152343	31,6932	81157861,71
50	-40	217,1		44.722,600	211,4771855	Válido	191,47719	1,189207	227,7060314	247,7060314	2688426309	31,6932	84826597,16
50	-40	219,3		45.175,800	212,545995	Válido	192,546	1,189207	228,9770672	248,9770672	2748957050	31,6932	86736493,94
50	-40	245		50.470,000	224,6552915	Válido	204,65529	1,189207	243,3775288	263,3775288	3508503451	31,6932	110702089,1
50	-40	251,8		51.870,800	227,7516191	Válido	207,75162	1,189207	247,0597036	267,0597036	3725698132	31,6932	117555126,4
50	-40	271,9		56.011,400	236,667277	Válido	216,66728	1,189207	257,6622674	277,6622674	4407611391	31,6932	139071201,1
50	-40	272,7		56.176,200	237,0151894	Válido	217,01519	1,189207	258,0760073	278,0760073	4435989652	31,6932	139966606,5
50	-40	274,2		56.485,200	237,6661524	Válido	217,66615	1,189207	258,8501371	278,8501371	4489454740	31,6932	141653564,2
50	-40	308,7		63.592,200	252,1749393	Válido	232,17494	1,189207	276,1040897	296,1040897	5811541698	31,6932	183368725,7
50	-40	308,8		63.612,800	252,2157806	Válido	232,21578	1,189207	276,1526585	296,1526585	5815631956	31,6932	183497783,6
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	313,1		64.498,600	253,9657457	Válido	233,96575	1,189207	278,2337295	298,2337295	5992928669	31,6932	189091939,9
50	-40	349,4		71.976,400	268,2841777	Válido	248,28418	1,189207	295,2613107	315,2613107	7600220161	31,6932	239806020,2
50	-40	386,6		79.639,600	282,2048901	Válido	262,20489	1,189207	311,8159209	331,8159209	9453511213	31,6932	298282004,1
50	-40	455,2		93.771,200	306,2208353	Válido	286,22084	1,189207	340,3758539	360,3758539	13422548294	31,6932	423515085,1
Total de Válidos 32												Somatoria	3178470837
												Somatoria ^{1/4}	237,4403686
												K0	257,4403686
												Kjc Médio	236,6405923
													206,6405923
													2,952008461
												Ln	1,082485773
												T-T0	56,97122624
												T0	-96,97122624
100	-40	75,5		15.553,000	124,7116675	Válido	104,71167	1,414214	148,0846603	168,0846603	480883962,1	29,6932	16195087,16
100	-40	79,1		16.294,600	127,6503036	Válido	107,6503	1,414214	152,2405193	172,2405193	537181474,1	29,6932	18091060,38
100	-40	187,7		38.686,200	196,6372294	Válido	176,63723	1,414214	249,8027655	269,8027655	3893937423	29,6932	131139029,3
100	-40	214,1		44.104,600	210,0109521	Válido	190,01095	1,414214	268,7160655	288,7160655	5214042031	29,6932	175597174,8
100	-40	91,5		18.849,000	137,2916603	Válido	117,29166	1,414214	165,8754568	185,8754568	757056909,6	29,6932	25495969,1
100	-40	167,8		34.566,800	185,9214888	Válido	165,92149	1,414214	234,6484198	254,6484198	3031590484	29,6932	102097129,5
100	-40	142,5		29.355,000	171,3330091	Válido	151,33301	1,414214	214,0171939	234,0171939	2097947721	29,6932	70654147,1
100	-40	153,4		31.600,400	177,7650134	Válido	157,76501	1,414214	223,1134217	243,1134217	2478008469	29,6932	83453735,84
100	-40	110,9		22.845,400	151,1469484	Válido	131,14695	1,414214	185,469793	205,469793	1183294237	29,6932	39850680,87

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068	
100	-40	112,4		23.154,400	152,1656992	Válido	132,1657	1,414214	186,9105242	206,9105242	1220492239	29,6932	41103425,68	
100	-40	99,6		20.517,600	143,2396593	Válido	123,23966	1,414214	174,2871976	194,2871976	922703031,8	29,6932	31074556,86	
100	-40	108,2		22.289,200	149,2956798	Válido	129,29568	1,414214	182,8517039	202,8517039	1117882215	29,6932	37647751,49	
100	-40	92,1		18.972,600	137,7410614	Válido	117,74106	1,414214	166,5110059	186,5110059	768726367,4	29,6932	25888970,11	
100	-40	160,5		33.063,000	181,8323404	Válido	161,83234	1,414214	228,8654906	248,8654906	2743602882	29,6932	92398356,6	
100	-40	96		19.776,000	140,6271666	Válido	120,62717	1,414214	170,5925751	190,5925751	846916315,4	29,6932	28522231,2	
100	-40	166,8		34.360,800	185,3666637	Válido	165,36666	1,414214	233,8637785	253,8637785	2991244059	29,6932	100738352,9	
100	-40	141,2		29.087,200	170,5496995	Válido	150,5497	1,414214	212,9094268	232,9094268	2054847344	29,6932	69202623,62	
100	-40	186,7		38.460,200	196,1127227	Válido	176,11272	1,414214	249,0610009	269,0610009	3847892376	29,6932	129588335,9	
100	-40	81		16.686,000	129,1743008	Válido	109,1743	1,414214	154,3957769	174,3957769	568252910,6	29,6932	19137476,28	
100	-40	95,6		19.693,600	140,3338876	Válido	120,33389	1,414214	170,1778158	190,1778158	838709922,8	29,6932	28245858,41	
100	-40	86,1		17.736,600	133,1788271	Válido	113,17883	1,414214	160,0590323	180,0590323	656327721	29,6932	22103637,23	
100	-40	63,5		13.081,000	114,3721994	Válido	94,372199	1,414214	133,4624443	153,4624443	317275325,5	29,6932	10685117,32	
100	-40	40		8.240,000	90,77444574	Válido	70,774446	1,414214	100,090181	120,090181	100361212,4	29,6932	3379939,259	
100	-40	94,8		19.528,800	139,7454829	Válido	119,74548	1,414214	169,345686	189,345686	822425468,1	29,6932	27697434,7	
100	-40	272,3		56.093,800	236,8412971	Válido	216,8413	1,414214	306,6599032	326,6599032	8843577316	29,6932	297831736,4	
100	-40	282,2		58.133,200	241,1082744	Válido	221,10827	1,414214	312,6943205	332,6943205	9560486057	29,6932	321975605,8	
100	-40	175,4		36.132,400	190,085244	Válido	170,08524	1,414214	240,5368589	260,5368589	3347545905	29,6932	112737795,4	
100	-40	102,6		21.135,600	145,3808791	Válido	125,38088	1,414214	177,3153396	197,3153396	988519482,4	29,6932	33291106,46	
100	-40	124		25.544,000	159,8249042	Válido	139,8249	1,414214	197,7422759	217,7422759	1528967003	29,6932	51492159,94	
100	-40	96,4		19.858,400	140,9198354	Válido	120,91984	1,414214	171,0064711	191,0064711	855165516,5	29,6932	28800045,69	
						Válidos	30						Somatoria	2176116531
						Censurados	15						Somatoria ^{1/4}	215,9834813
											K0	235,9834813		
											Kjc Médio	217,0633283		
												187,0633283		
												2,672333262		
											Ln	0,982951972		
											T-T0	51,73276227		
											T0	-91,73276227		
25	-20	258,8		53.312,800	230,8956474	Válido					1978201225	2,6932	734517015,2	
25	-20	723,7		149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	1133,7		233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	914,9		188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1554,5		320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1497,2		308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499		308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1575		324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
25	-20	1480,1		304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1560,5		321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	78,9		16.253,400	127,488823	Válido					133491382,3	2,6932	49566085,81	
25	-20	102,7		21.156,200	145,4517102	Válido					247688786	2,6932	91968211,05	
25	-20	772,5		159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3		164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	1340		276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
25	-20	1348,6		277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1		280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5		281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6		281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1		282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3		284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391		286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2		290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3		295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7		300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5		303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7		303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1496,6		308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1524,5		314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8		318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3		319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
Total de Válidos 3													
												Somatoria	876053967,4
												Somatoria ^{1/4}	172,0412999
												K0	192,0412999
												Kjc Médio	176,970482
													146,970482
													2,099578314
												Ln	0,741736522
												T-T0	39,03759314
												T0	-59,03759314
50	-20	139		28.634,000	169,2158385	Válido	149,21584	1,189207	177,4485368	197,4485368	991493087,2	15,6932	63179790,43
50	-20	162		33.372,000	182,6800482	Válido	162,68005	1,189207	193,4602708	213,4602708	1400771074	15,6932	89259747,8
50	-20	168,1		34.628,600	186,0876138	Válido	166,08761	1,189207	197,512572	217,512572	1521874982	15,6932	96976714,87
50	-20	180,6		37.203,600	192,8823476	Válido	172,88235	1,189207	205,5929178	225,5929178	1786621683	15,6932	113846868,9
50	-20	195,2		40.211,200	200,5273049	Válido	180,5273	1,189207	214,6843554	234,6843554	2124230253	15,6932	135359917,3
50	-20	256		52.736,000	229,6432015	Válido	209,6432	1,189207	249,3091868	269,3091868	3863252807	15,6932	246173680,8
50	-20	259		53.354,000	230,984848	Válido	210,98485	1,189207	250,9046824	270,9046824	3963100309	15,6932	252536150
50	-20	291		59.946,000	244,8387224	Válido	224,83872	1,189207	267,3798084	287,3798084	5111100625	15,6932	325688873,2
50	-20	326,5		67.259,000	259,3434017	Válido	239,3434	1,189207	284,6288762	304,6288762	6563202928	15,6932	418219542,7
50	-20	328,8		67.732,800	260,2552593	Válido	240,25526	1,189207	285,7132638	305,7132638	6663794707	15,6932	424629438,6
50	-20	330		67.980,000	260,7297451	Válido	240,72975	1,189207	286,2775257	306,2775257	6716592804	15,6932	427993832
50	-20	362,3		74.633,800	273,191874	Válido	253,19187	1,189207	301,097578	321,097578	8219190536	15,6932	523742164,5
50	-20	380		78.280,000	279,7856322	Válido	259,78563	1,189207	308,9389222	328,9389222	9109415433	15,6932	580468956,8
50	-20	392		80.752,000	284,1689638	Válido	264,16896	1,189207	314,1516113	334,1516113	9739959848	15,6932	620648424
50	-20	417		85.902,000	293,0904297	Válido	273,09043	1,189207	324,7610821	344,7610821	11123870365	15,6932	708833785,7
50	-20	447		92.082,000	303,4501607	Válido	283,45016	1,189207	337,0809478	357,0809478	12910314607	15,6932	822669347,7
50	-20	480		98.880,000	314,4519041	Censurado	294,4519	1,189207	350,1642994	370,1642994	0	15,6932	23,01644661
50	-20	486,8		100.280,800	316,6714386	Censurado	296,67144	1,189207	352,8037856	372,8037856	0	15,6932	23,01644661
50	-20	502		103.412,000	321,5773624	Censurado	301,57736	1,189207	358,6379451	378,6379451	0	15,6932	23,01644661

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
50	-20	512		105.472,000	324,7645301	Censurado	304,76453	1,189207	362,4281476	382,4281476	0	15,6932	23,01644661
50	-20	555		114.330,000	338,127195	Censurado	318,1272	1,189207	378,3191238	398,3191238	0	15,6932	23,01644661
50	-20	648,8		133.652,800	365,5855577	Censurado	345,58556	1,189207	410,9728041	430,9728041	0	15,6932	23,01644661
50	-20	655,6		135.053,600	367,4963945	Censurado	347,49639	1,189207	413,2451848	433,2451848	0	15,6932	23,01644661
50	-20	695		143.170,000	378,3781178	Censurado	358,37812	1,189207	426,1858075	446,1858075	0	15,6932	23,01644661
50	-20	807		166.242,000	407,7278504	Censurado	387,72785	1,189207	461,0887184	481,0887184	0	15,6932	23,01644661
50	-20	820		168.920,000	410,9987835	Censurado	390,99878	1,189207	464,9785352	484,9785352	0	15,6932	23,01644661
50	-20	1017		209.502,000	457,7138844	Censurado	437,71388	1,189207	520,5324657	540,5324657	0	15,6932	23,01644661
50	-20	1266		260.796,000	510,6818971	Censurado	490,6819	1,189207	583,5224032	603,5224032	0	15,6932	23,01644661
50	-20	1582		325.892,000	570,8695122	Censurado	550,86951	1,189207	655,0979434	675,0979434	0	15,6932	23,01644661
50	-20	1619		333.514,000	577,5067099	Censurado	557,50671	1,189207	662,9909461	682,9909461	0	15,6932	23,01644661
Total de Válidos 16													
Somatoria													5850227557
Somatoria ^{1/4}													276,5624347
K0													296,5624347
Kjc Médio													272,3355654
													242,3355654
													3,461936649
Ln													1,241828158
T-T0													65,35741593
T0													-85,35741593
100	-20	193		39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	4142785440	28,6932	144382133,7
100	-20	58,6		12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	260936639,4	28,6932	9094023,649
100	-20	186,1		38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	3820403469	28,6932	133146650,4
100	-20	188,4		38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	3926340233	28,6932	136838701,6
100	-20	191,7		39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	4080997693	28,6932	142228740,4
100	-20	130,8		26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	1727042675	28,6932	60189963,99
100	-20	373,5		76.941,000	277,3824075	Válido	257,38241	1,414214	363,9936914	383,9936914	17553973034	28,6932	611781642,8
100	-20	371,9		76.611,400	276,7876442	Válido	256,78764	1,414214	363,1525691	383,1525691	17392278605	28,6932	606146355,4
100	-20	315,9		65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	12219731778	28,6932	425875530,7
100	-20	334,9		68.989,400	262,6583332	Válido	242,65833	1,414214	343,1707058	363,1707058	13868862163	28,6932	483350137,4
100	-20	133,4		27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	1806167498	28,6932	62947579,85
100	-20	112,2		23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	1215497045	28,6932	42361850,36
100	-20	212,5		43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	5128281299	28,6932	178728106,3
100	-20	231,2		47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	6177248610	28,6932	215286151,8
100	-20	247,3		50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	7162408427	28,6932	249620412,8
100	-20	212,3		43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	5117613590	28,6932	178356321
100	-20	224,4		46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	5783988770	28,6932	201580471
100	-20	100,6		20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	944372539,6	28,6932	32912764,68
100	-20	123,7		25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	1520522986	28,6932	52992450,69
100	-20	82,8		17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	598558989,3	28,6932	20860656,51
100	-20	223		45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	5704702120	28,6932	198817215,2
100	-20	74,4		15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	464351338,4	28,6932	16183323,52
100	-20	683,1		140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	28,6932	17,80269681
100	-20	288,5		59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	10031869493	28,6932	349625329,1

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	Jc p/ Mt	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,0}	r-0,3068	Kjc-20 ⁴ / r - 0,3068
Resumo do Kmin 20 com 1/4,0													
										-91°C	Esp	T-T0	T0
											25	5,60977077	-96,60977077
											50	11,8495229	-102,8495229
											100	12,3447189	-103,3447189
											200	12,4017723	-103,4017723
										-60°C	Esp	T0	T0
											25	30,9208148	-90,92081477
											50	33,111134	-93,11113395
											100	56,3831044	-116,3831044
										-40°C	Esp	T0	T0
											25	45,2186201	-85,21862008
											50	56,9712262	-96,97122624
											100	51,7327623	-91,73276227
										-20°C	Esp	T0	T0
											25	39,0375931	-59,03759314
											50	65,3574159	-85,35741593
											100	70,4181362	-90,41813624
											200	68,4283223	-88,42832231

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
25	-91	76,8	15.820,800	125,78	Válido					1287745686	30,6932	41955406,61
25	-91	70,6	14.543,600	120,60	Válido					1027140136	30,6932	33464745,8
25	-91	23,7	4.882,200	69,87	Válido					43690255,82	30,6932	1423450,661
25	-91	42,3	8.713,800	93,35	Válido					247879285,4	30,6932	8076032,652
25	-91	77,2	15.903,200	126,11	Válido					1305763604	30,6932	42542439,48
25	-91	68,5	14.111,000	118,79	Válido					946679770,9	30,6932	30843306,36
25	-91	52	10.712,000	103,50	Válido					444181915,1	30,6932	14471671,74
25	-91	29,4	6.056,400	77,82	Válido					85005806,78	30,6932	2769532,235
25	-91	46,3	9.537,800	97,66	Válido					320575282	30,6932	10444505,04
25	-91	124,3	25.605,800	160,02	Válido					4548090995	30,6932	148179107,9
25	-91	39,7	8.178,200	90,43	Válido					206539901,5	30,6932	6729174,589
25	-91	63,3	13.039,800	114,19	Válido					763944686,3	30,6932	24889704,76
25	-91	71,4	14.708,400	121,28	Válido					1058819036	30,6932	34496860,41
25	-91	76	15.656,000	125,12	Válido					1252152736	30,6932	40795770,27
25	-91	55,9	11.515,400	107,31	Válido					542980436	30,6932	17690577,59
25	-91	21,3	4.387,800	66,24	Válido					31088525,3	30,6932	1012879,898
25	-91	76,5	15.759,000	125,53	Válido					1274329225	30,6932	41518291,52
25	-91	23,1	4.758,600	68,98	Válido					40289187,71	30,6932	1312642,139
25	-91	70,2	14.461,200	120,25	Válido					1011514041	30,6932	32955639,71
25	-91	38,6	7.951,600	89,17	Válido					190405406,6	30,6932	6203504,576
25	-91	112,8	23.236,800	152,44	Válido					3540221524	30,6932	115342210,1
25	-91	19,9	4.099,400	64,03	Válido					24929654,31	30,6932	812220,7627
25	-91	77	15.862,000	125,94	Válido					1296736155	30,6932	42248320,63
25	-91	47,3	9.743,800	98,71	Válido					340527114	30,6932	11094545,83
25	-91	48,9	10.073,400	100,37	Válido					373967266,2	30,6932	12184042,92
25	-91	93,9	19.343,400	139,08	Válido					2194238240	30,6932	71489393,1
25	-91	29,1	5.994,600	77,42	Válido					82403903,84	30,6932	2684760,919
25	-91	56,6	11.659,600	107,98	Válido					561978291,4	30,6932	18309537,34
25	-91	51,4	10.588,400	102,90	Válido					430025532,2	30,6932	14010449,62
25	-91	76,6	15.779,600	125,62	Válido					1278792154	30,6932	41663696
25	-91	59,4	12.236,400	110,62	Válido					641905044,8	30,6932	20913591,44
Total de Válidos					31						Somatoria	892528012,6
Total de Censurados					0						Somatoria ^{1/4,5}	97,50504319
											K0	117,5050432
											Kjc Médio	108,9636014
												78,96360141
												1,128051449
											Ln	0,120491763
											T-T0	6,341481466
											T0	-97,34148147
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,166529	55,91	75,91	73069804,52	33,6932	2168681,055
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,166529	70,94	90,94	213258502,6	33,6932	6329422,631
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,166529	41,30	61,30	18692364,91	33,6932	554781,5258
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,166529	90,84	110,84	649015632,7	33,6932	19262510,91

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,166529	59,71	79,71	98231663,77	33,6932	2915474,451	
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,166529	104,95	124,95	1242656588	33,6932	36881524,7	
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,166529	84,66	104,66	472600872,1	33,6932	14026595,04	
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,166529	68,98	88,98	188079521,8	33,6932	5582121,076	
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,166529	90,35	110,35	633343063,1	33,6932	18797355,64	
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,166529	93,51	113,51	739368441,3	33,6932	21944144,26	
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,166529	68,68	88,68	184376398,3	33,6932	5472213,928	
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,166529	91,82	111,82	681054228	33,6932	20213402,94	
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,166529	101,51	121,51	1069915267	33,6932	31754634,98	
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,166529	84,53	104,53	469347083,6	33,6932	13930023,97	
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,166529	48,29	68,29	37798104,64	33,6932	1121831,843	
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,166529	100,39	120,39	1017456236	33,6932	30197673	
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,166529	144,52	164,52	5243485993	33,6932	155624458,1	
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,166529	64,79	84,79	141819222,6	33,6932	4209134,859	
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,166529	122,82	142,82	2521991446	33,6932	74851645,02	
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,166529	122,34	142,34	2477914333	33,6932	73543454,86	
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,166529	125,11	145,11	2739989714	33,6932	81321741,9	
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,166529	105,38	125,38	1266075035	33,6932	37576574,36	
50	-91	81	16.686,000	129,17	Válido	109,17	1,166529	127,35	147,35	2968738078	33,6932	88110897,09	
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,166529	132,39	152,39	3534286571	33,6932	104896138,4	
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,166529	158,39	178,39	7920689854	33,6932	235082742,3	
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,166529	98,21	118,21	922091493,9	33,6932	27367287,58	
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,166529	103,52	123,52	1168338427	33,6932	34675792,95	
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,166529	74,73	94,73	269537835	33,6932	7999769,539	
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,166529	49,26	69,26	41343696,31	33,6932	1227063,512	
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,166529	89,36	109,36	602686068	33,6932	17887468,92	
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,166529	69,29	89,29	191827791,1	33,6932	5693368,129	
50	-91	86	17.716,000	133,10	Válido	113,10	1,166529	131,94	151,94	3480463096	33,6932	103298680,3	
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,166529	51,92	71,92	52356839,51	33,6932	1553928,968	
50	-91	67	13.802,000	117,48	Válido	97,48	1,166529	113,72	133,72	1783151324	33,6932	52923181,06	
Total de Válidos					34							Somatoria	1338995720
Total de Censurados					0							Somatoria ^{1/4,5}	106,7021458
												K0	126,7021458
												Kjc Médio	117,3550378
													87,35503779
													1,247929111
												Ln	0,221485466
												T-T0	11,6567801
												T0	-102,6567801
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,36079	63,56	83,56	130079441,7	29,6932	4380782,189	
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,36079	192,37	212,37	18992723880	29,6932	639632100,3	
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,36079	107,53	127,53	1386616866	29,6932	46698128,38	
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,36079	95,69	115,69	820161003,8	29,6932	27621172,65	
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,36079	115,91	135,91	1943168115	29,6932	65441519,09	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
100	-91	33	6.798,000	82,45	Válido	62,45	1,36079	84,98	104,98	480790091,8	29,6932	16191925,82	
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,36079	96,46	116,46	850418928,6	29,6932	28640191,31	
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,36079	100,41	120,41	1018585239	29,6932	34303653,34	
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,36079	98,00	118,00	912934682,5	29,6932	30745580,89	
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,36079	67,06	87,06	165615695,3	29,6932	5577563,055	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,36079	98,30	118,30	925760333	29,6932	31177519,87	
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,36079	104,67	124,67	1228150590	29,6932	41361341,65	
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,36079	72,18	92,18	230630451,4	29,6932	7767113,392	
100	-91	32	6.592,000	81,19	Válido	61,19	1,36079	83,27	103,27	438690471,6	29,6932	14774105,57	
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,36079	75,58	95,58	283638445,2	29,6932	9552303,061	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,36079	98,30	118,30	925760333	29,6932	31177519,87	
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,36079	85,66	105,66	498292312	29,6932	16781361,12	
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,36079	83,44	103,44	442794839,1	29,6932	14912331,41	
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,36079	89,81	109,81	616459290,8	29,6932	20760958,43	
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,36079	89,64	109,64	611437313,8	29,6932	20591829,57	
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,36079	97,23	117,23	881341941,8	29,6932	29681608,64	
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,36079	84,81	104,81	476474005,6	29,6932	16046569,77	
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,36079	92,55	112,55	705685739	29,6932	23765903,94	
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,36079	59,47	79,47	96472930,25	29,6932	3248990,686	
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,36079	109,78	129,78	1521789628	29,6932	51250442,11	
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,36079	99,81	119,81	991517141,6	29,6932	33392060,86	
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,36079	78,86	98,86	343536569,7	29,6932	11569536,79	
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,36079	71,22	91,22	217088766,7	29,6932	7311059,996	
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,36079	59,25	79,25	94875198,99	29,6932	3195182,701	
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,36079	106,11	126,11	1305939593	29,6932	43981099,8	
Total de Válidos					30							Somatoria	1331531456
Total de Censurados					0							Somatoria ^{1/4,5}	106,5696774
												K0	126,5696774
												Kjc Médio	117,2341737
													87,23417369
													1,246202481
												Ln	0,220100912
												T-T0	11,58391101
												T0	-102,583911
200	-91	50,7	10.444,200	102,20	Válido	82,20	1,587401	130,48	150,48	3310844016	14,6932	225331719,2	
200	-91	33,9	6.983,400	83,57	Válido	63,57	1,587401	100,91	120,91	1041417108	14,6932	70877488,08	
200	-91	44,8	9.228,800	96,07	Válido	76,07	1,587401	120,75	140,75	2335953142	14,6932	158981919,7	
200	-91	40,9	8.425,400	91,79	Válido	71,79	1,587401	113,96	133,96	1800433848	14,6932	122535176	
200	-91	44,6	9.187,600	95,85	Válido	75,85	1,587401	120,41	140,41	2306433074	14,6932	156972822,4	
200	-91	25,8	5.314,800	72,90	Válido	52,90	1,587401	83,98	103,98	455763275,4	14,6932	31018653,22	
200	-91	25,4	5.232,400	72,34	Válido	52,34	1,587401	83,08	103,08	434177533,4	14,6932	29549555,8	
200	-91	25,6	5.273,600	72,62	Válido	52,62	1,587401	83,53	103,53	444889663,5	14,6932	30278609,39	
200	-91	13,8	2.842,800	53,32	Válido	33,32	1,587401	52,89	72,89	56903650,14	14,6932	3872788,102	
200	-91	23	4.738,000	68,83	Válido	48,83	1,587401	77,52	97,52	317911015,8	14,6932	21636608,48	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
200	-91	20,4	4.202,400	64,83	Válido	44,83	1,587401	71,16	91,16	216257646,4	14,6932	14718212,94	
200	-91	30,2	6.221,200	78,87	Válido	58,87	1,587401	93,46	113,46	737505593,3	14,6932	50193667,37	
200	-91	23,2	4.779,200	69,13	Válido	49,13	1,587401	77,99	97,99	326753588,3	14,6932	22238422,42	
200	-91	38,8	7.992,800	89,40	Válido	69,40	1,587401	110,17	130,17	1546239987	14,6932	105235073,8	
200	-91	36,9	7.601,400	87,19	Válido	67,19	1,587401	106,65	126,65	1336117821	14,6932	90934433,65	
Total de Válidos					15							Soma dos K0	1134375151
Total de Censurados					0							Somatoria ^{1/4,5}	102,8414418
											anterior +20	122,8414418	
											Kjc Médio	113,8325315	
											Ln	0,180325894	
											T - T0	9,490551789	
											T0	-100,4905518	
25	-60	261	53.766,000	231,8749663	Válido					29333130149	56,6932	517401207,7	
25	-60	62,3	12.833,800	113,2863628	Válido					731445078,7	56,6932	12901813,25	
25	-60	81,3	16.747,800	129,4132914	Válido					1499047427	56,6932	26441397,32	
25	-60	54,2	11.165,200	105,66551	Válido					498456221,5	56,6932	8792169,457	
25	-60	123,4	25.420,400	159,4377622	Válido					4463872881	56,6932	78737359,7	
25	-60	191,8	39.510,800	198,7732376	Válido					13657187578	56,6932	240896396,4	
25	-60	74,6	15.367,600	123,9661244	Válido					1191278618	56,6932	21012724,95	
25	-60	100,3	20.661,800	143,7421302	Válido					2608129471	56,6932	46004273,37	
25	-60	40,2	8.281,200	91,00109889	Válido					214137543,8	56,6932	3777129,246	
25	-60	78,2	16.109,200	126,9220233	Válido					1351457080	56,6932	23838080,76	
25	-60	129	26.574,000	163,0153367	Válido					5002899262	56,6932	88245138,08	
25	-60	140,9	29.025,400	170,3684243	Válido					6269095991	56,6932	110579328,6	
25	-60	56,1	11.556,600	107,5016279	Válido					548368623,6	56,6932	9672564,322	
25	-60	67,4	13.884,400	117,8320839	Válido					906078593,8	56,6932	15982138,84	
25	-60	112,2	23.113,200	152,0302601	Válido					3491649611	56,6932	61588508,16	
25	-60	120,3	24.781,800	157,4223618	Válido					4180789843	56,6932	73744114,7	
25	-60	90	18.540,000	136,1616686	Válido					1962378551	56,6932	34614002,23	
25	-60	68	14.008,000	118,355397	Válido					928093819,9	56,6932	16370461,01	
25	-60	81,4	16.768,400	129,4928569	Válido					1503959166	56,6932	26528034,51	
25	-60	141,9	29.231,400	170,9719275	Válido					6383118390	56,6932	112590546,8	
25	-60	34	7.004,000	83,68990381	Válido					131316007	56,6932	2316256,747	
25	-60	284,9	58.689,400	242,2589524	Válido					36380334107	56,6932	641705426,9	
25	-60	69	14.214,000	119,2224811	Válido					965484645,7	56,6932	17029990,29	
25	-60	52	10.712,000	103,4987923	Válido					444181915,1	56,6932	7834835,838	
25	-60	127,4	26.244,400	162,0012346	Válido					4845231598	56,6932	85464069,72	
25	-60	193,2	39.799,200	199,4973684	Válido					13907894452	56,6932	245318564,7	
25	-60	90,4	18.622,400	136,4639146	Válido					1985460388	56,6932	35021138,12	
25	-60	142,5	29.355,000	171,3330091	Válido					6452106156	56,6932	113807408,2	
25	-60	46,9	9.661,400	98,29242087	Válido					332459501,3	56,6932	5864186,557	
25	-60	143,1	29.478,600	171,6933313	Válido					6521525540	56,6932	115031882,8	
25	-60	82,3	16.953,800	130,2067587	Válido					1548592074	56,6932	27315305,43	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
			Total de Válidos		31							
			Total de Censurados		0							
50	-60	164,7	33.928,200	184,1960912	Válido	164,19609	1,166529	191,5395085	211,5395085	18627846874	33,6932	552866657,8
50	-60	109,7	22.598,200	150,326977	Válido	130,32698	1,166529	152,0302033	172,0302033	6586951149	33,6932	195497938,7
50	-60	59,4	12.236,400	110,6182625	Válido	90,618263	1,166529	105,7088347	125,7088347	1283810090	33,6932	38102943,31
50	-60	98,6	20.311,600	142,5187707	Válido	122,51877	1,166529	142,9217039	162,9217039	4988176746	33,6932	148046987,1
50	-60	52,9	10.897,400	104,3906126	Válido	84,390613	1,166529	98,44410027	118,4441003	931866337	33,6932	27657400,81
50	-60	112,9	23.257,400	152,5037704	Válido	132,50377	1,166529	154,5694961	174,5694961	7096710019	33,6932	210627367,5
50	-60	147,8	30.446,800	174,4901143	Válido	154,49011	1,166529	180,2172047	200,2172047	14160647801	33,6932	420282068,8
50	-60	82,9	17.077,400	130,6805265	Válido	110,68053	1,166529	129,1120482	149,1120482	3157551691	33,6932	93714805,69
50	-60	198	40.788,000	201,9603922	Válido	181,96039	1,166529	212,2620815	232,2620815	29575077019	33,6932	877775842,6
50	-60	97	19.982,000	141,3577023	Válido	121,3577	1,166529	141,5672839	161,5672839	4778956190	33,6932	141837409
50	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,166529	132,0263885	152,0263885	3491188888	33,6932	103617017,3
50	-60	80,6	16.603,600	128,8549572	Válido	108,85496	1,166529	126,9824687	146,9824687	2929860530	33,6932	86957027,84
50	-60	96,8	19.940,800	141,2118975	Válido	121,2119	1,166529	141,3971984	161,3971984	4753172989	33,6932	141072174,5
50	-60	68,2	14.049,200	118,5293213	Válido	98,529321	1,166529	114,9373145	134,9373145	1871003955	33,6932	55530610,19
50	-60	95,1	19.590,600	139,9664245	Válido	119,96642	1,166529	139,944318	159,944318	4537312745	33,6932	134665533,3
50	-60	147,4	30.364,400	174,2538378	Válido	154,25384	1,166529	179,9415813	199,9415813	14063450763	33,6932	417397301,6
50	-60	68,1	14.028,600	118,4423911	Válido	98,442391	1,166529	114,8359079	134,8359079	1863587065	33,6932	55310480
50	-60	49,9	10.279,400	101,3873759	Válido	81,387376	1,166529	94,94073749	114,9407375	791656358,4	33,6932	23496027,64
50	-60	46,7	9.620,200	98,08261824	Válido	78,082618	1,166529	91,08564166	111,0856417	656938401,5	33,6932	19497655,36
50	-60	63,1	12.998,600	114,0114029	Válido	94,011403	1,166529	109,6670316	129,6670316	1514755010	33,6932	44957291,37
50	-60	142,3	29.313,800	171,2127332	Válido	151,21273	1,166529	176,3940444	196,3940444	12858124623	33,6932	381623728,9
50	-60	69,2	14.255,200	119,3951423	Válido	99,395142	1,166529	115,9473199	135,9473199	1946136126	33,6932	57760501,39
50	-60	129,9	26.759,400	163,5830065	Válido	143,58301	1,166529	167,4937466	187,4937466	10185765835	33,6932	302309244,4
50	-60	75,1	15.470,600	124,3808667	Válido	104,38087	1,166529	121,7633122	141,7633122	2425627118	33,6932	71991592,3
50	-60	76,5	15.759,000	125,5348557	Válido	105,53486	1,166529	123,1094739	143,1094739	2548658451	33,6932	75643110,5
50	-60	48	9.888,000	99,43842316	Válido	79,438423	1,166529	92,66722747	112,6672275	709851922,1	33,6932	21068106,39
50	-60	81,9	16.871,400	129,8899534	Válido	109,88995	1,166529	128,1898218	148,1898218	3057320353	33,6932	90739981,76
50	-60	163,2	33.619,200	183,3553926	Válido	163,35539	1,166529	190,5588093	210,5588093	18202483106	33,6932	540242040,1
50	-60	127,4	26.244,400	162,0012346	Válido	142,00123	1,166529	165,6485638	185,6485638	9690463195	33,6932	287608870,5
50	-60	76,2	15.697,200	125,2884671	Válido	105,28847	1,166529	122,8220545	142,8220545	2521991446	33,6932	74851645,02
50	-60	129,1	26.594,600	163,0785087	Válido	143,07851	1,166529	166,9052353	186,9052353	10025702598	33,6932	297558634,9
50	-60	176,8	36.420,800	190,8423433	Válido	170,84234	1,166529	199,2925547	219,2925547	22269467589	33,6932	660948428,4
50	-60	86,2	17.757,200	133,2561443	Válido	113,25614	1,166529	132,1165813	152,1165813	3501934121	33,6932	103935931,3
50	-60	94,4	19.446,400	139,4503496	Válido	119,45035	1,166529	139,3423016	159,3423016	4450137281	33,6932	132078202,2
			Total de Válidos		34						Somatoria	6887270559

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
Total de Censurados					0						Somatoria ^{1/4,5}	153,5439464
											K0	173,5439464
											Kjc Médio	160,0934967
												130,0934967
												1,858478524
											Ln	0,619758155
											T-T0	32,61787171
											T0	-92,61787171
100	-60	415,3	85.551,800	292,4923931	Válido	272,49239	1,36079	370,8049236	390,8049236	3,64045E+11	29,6932	12260204411
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,36079	266,2047311	286,2047311	81935284078	29,6932	2759395554
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,36079	268,9866438	288,9866438	85859473908	29,6932	2891553417
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,36079	196,412141	216,412141	20857271000	29,6932	702425841,6
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,36079	120,8854219	140,8854219	2347916716	29,6932	79072539,02
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,36079	150,5056663	170,5056663	6294885404	29,6932	211997541,6
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,36079	156,3133576	176,3133576	7464185309	29,6932	251376925
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,36079	180,4016923	200,4016923	14225997642	29,6932	479099512,4
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,36079	129,0322861	149,0322861	3148783228	29,6932	106043916,7
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,36079	175,4743159	195,4743159	12559172074	29,6932	422964587
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,36079	179,7576303	199,7576303	13998870751	29,6932	471450391
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,36079	220,4509708	240,4509708	35067440609	29,6932	1180992302
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,36079	290,9658859	310,9658859	1,22261E+11	29,6932	4117487854
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,36079	174,152615	194,152615	12139058372	29,6932	408816105,1
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,36079	214,7638862	234,7638862	31176376923	29,6932	1049950053
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,36079	212,1486696	232,1486696	29504034454	29,6932	993629331,1
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,36079	226,6122095	246,6122095	39698570989	29,6932	1336958327
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,36079	154,0126162	174,0126162	6982377776	29,6932	235150734
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,36079	301,114375	321,114375	1,42657E+11	29,6932	4804350642
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,36079	182,6857818	202,6857818	15054674389	29,6932	507007476,1
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,36079	193,8386613	213,8386613	19655396457	29,6932	661949417,9
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,36079	170,2310308	190,2310308	10956561479	29,6932	368992277
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,36079	134,432077	154,432077	3786719084	29,6932	127528157,4
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,36079	80,47076182	100,4707618	376159043,7	29,6932	12668188,13
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,36079	162,6473245	182,6473245	8925060249	29,6932	300575897,8
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,36079	128,175455	148,175455	3055778745	29,6932	102911735,5
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,36079	157,4529794	177,4529794	7712212260	29,6932	259729913,2
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,36079	197,7726277	217,7726277	21515320883	29,6932	724587477,4
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,36079	276,5526419	296,5526419	97274756443	29,6932	3275994384
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,36079	243,3433381	263,3433381	54700031388	29,6932	1842173676
Total de Válidos					30						Somatoria	42947038585
Total de Censurados					0						Somatoria ^{1/4,5}	230,6078302
											K0	250,6078302
											Kjc Médio	230,4065842
												200,4065842
												2,862951203

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
											Ln	1,051852982
											T-T0	55,35902245
											T0	-115,3590224
25	-60	128,7	26.512,200	162,8256737	Válido					4973112286	56,6932	87719731,57
25	-60	176	36.256,000	190,4100838	Válido					11008516677	56,6932	194177020,8
25	-60	131,7	27.130,200	164,7124768	Válido					5275661162	56,6932	93056330,6
25	-60	150,4	30.982,400	176,0181809	Válido					7400966602	56,6932	130544167,6
25	-60	133,7	27.542,200	165,9584285	Válido					5483164873	56,6932	96716447
25	-60	78,7	16.212,200	127,3271377	Válido					1374652618	56,6932	24247222,2
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	46,1	9.496,600	97,45050026	Válido					316671531,6	56,6932	5585705,721
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	275,9	56.835,400	238,4017617	Válido					33624250909	56,6932	593091427,4
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
25	-60	140,7	28.984,200	170,2474669	Válido					6246434853	56,6932	110179613,3
25	-60	89,1	18.354,600	135,4791497	Válido					1911023810	56,6932	33708166,24
25	-60	87,8	18.086,800	134,4871741	Válido					1838255022	56,6932	32424612,16
25	-60	219,5	45.217,000	212,6428931	Válido					19115623302	56,6932	337176650,8
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	197,6	40.705,600	201,7562886	Válido					14713043100	56,6932	259520420,4
25	-60	64,1	13.204,600	114,9112701	Válido					790551257	56,6932	13944375,29
25	-60	234,5	48.307,000	219,7885347	Válido					22519955492	56,6932	397224984,5
25	-60	133,7	27.542,200	165,9584285	Válido					5483164873	56,6932	96716447
25	-60	38,4	7.910,400	88,9404295	Válido					187556850,5	56,6932	3308277,721
25	-60	116,3	23.957,800	154,783074	Válido					3831414223	56,6932	67581548,11
25	-60	166,1	34.216,600	184,9772959	Válido					9515000472	56,6932	167833187,6
25	-60	217,1	44.722,600	211,4771855	Válido					18600587378	56,6932	328092035,3
25	-60	129	26.574,000	163,0153367	Válido					5002899262	56,6932	88245138,08
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	164,6	33.907,600	184,140164	Válido					9299655991	56,6932	164034769,4
25	-60	77,7	16.006,200	126,5156117	Válido					1328494301	56,6932	23433044,9
25	-60	200,2	41.241,200	203,0792949	Válido					15201153332	56,6932	268130099,1
25	-60	63,6	13.101,600	114,4622208	Válido					773858724,2	56,6932	13649939,04
25	-60	55	11.330,000	106,4424727	Válido					519125445,8	56,6932	9156749,766
				T. Válidos	26						Soma dos K0	6465924577
				T. Censurados	5						Somatoria ^{1/4,5}	151,4049733
											anterior + 20	171,4049733
											Kjc Médio	158,1418976
												128,1418976
												1,830598538
											LN	0,604642983
											T - T0	31,82236021
											T0	-91,82236021
25	-40	155,4	32.012,400	178,9200939	Válido					8040899951	14,6932	547253147,8

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
25	-40	203,4	41.900,400	204,695872	Válido					15814568618	14,6932	1076318883	
25	-40	275,9	56.835,400	238,4017617	Válido					33624250909	14,6932	2288422597	
25	-40	349,2	71.935,200	268,2073824	Censurado					0	14,6932	17,90551673	
25	-40	165,5	34.093,000	184,6428986	Válido					9428519752	14,6932	641692738,9	
25	-40	311,7	64.210,200	253,3973165	Válido					45334764359	14,6932	3085424847	
25	-40	254,5	52.427,000	228,9694303	Válido					27565915087	14,6932	1876100175	
25	-40	548,6	113.011,600	336,1719798	Censurado					0	14,6932	17,90551673	
25	-40	773,9	159.423,400	399,2785995	Censurado					0	14,6932	17,90551673	
25	-40	758,7	156.292,200	395,3380832	Censurado					0	14,6932	17,90551673	
25	-40	139,3	28.695,800	169,3983471	Válido					6089141505	14,6932	414419017,3	
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	14,6932	17,90551673	
25	-40	136,6	28.139,600	167,7486215	Válido					5792358970	14,6932	394220385,6	
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	14,6932	17,90551673	
25	-40	1337,1	275.442,600	524,826257	Censurado					0	14,6932	17,90551673	
25	-40	483,2	99.539,200	315,498336	Censurado					0	14,6932	17,90551673	
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	14,6932	17,90551673	
25	-40	619,9	127.699,400	357,3505282	Censurado					0	14,6932	17,90551673	
25	-40	562,8	115.936,800	340,4949339	Censurado					0	14,6932	17,90551673	
25	-40	264,8	54.548,800	233,5568453	Válido					30395601052	14,6932	2068684905	
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	14,6932	17,90551673	
25	-40	1174	241.844,000	491,7763719	Censurado					0	14,6932	17,90551673	
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	14,6932	17,90551673	
25	-40	61,6	12.689,600	112,6481247	Válido					709193667,9	14,6932	48266794,7	
25	-40	251	51.706,000	227,3895336	Válido					26640400977	14,6932	1813110893	
25	-40	113,2	23.319,200	152,706254	Válido					3572820975	14,6932	243161528,8	
25	-40	233,2	48.039,200	219,1784661	Válido					22212156548	14,6932	1511730362	
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	14,6932	17,90551673	
25	-40	283	58.298,000	241,4497877	Válido					35788105388	14,6932	2435691707	
25	-40	195,2	40.211,200	200,5273049	Válido					14270626624	14,6932	971240208	
Total de Válidos					15							Somatoria	19415738459
Total de Censurados					15							Somatoria ^{1/4,5}	193,3109367
												K0	213,3109367
												Kjc Médio	196,3768986
													166,3768986
													2,376812837
												Ln	0,865760446
												T-T0	45,56497229
												T0	-85,56497229
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,166529	205,6243326	225,6243326	25635115355	31,6932	808852225,6	
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,166529	150,2628942	170,2628942	6249321568	31,6932	197181779,3	
50	-40	245	50.470,000	224,6552915	Válido	204,65529	1,166529	238,7363406	258,7363406	50191872385	31,6932	1583679540	
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,166529	159,3122566	179,3122566	8130576722	31,6932	256540100,8	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,166529	272,9278367	292,9278367	91667470530	31,6932	2892338752	
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,166529	216,5657688	236,5657688	32370853581	31,6932	1021381671	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,166529	223,3636973	243,3636973	37201174755	31,6932	1173790427	
50	-40	308,7	63.592,200	252,1749393	Válido	232,17494	1,166529	270,8388089	290,8388089	88552133369	31,6932	2794042046	
50	-40	274,2	56.485,200	237,6661524	Válido	217,66615	1,166529	253,9138877	273,9138877	66235229869	31,6932	2089887732	
50	-40	455,2	93.771,200	306,2208353	Válido	286,22084	1,166529	333,8849162	353,8849162	2,27084E+11	31,6932	7165054636	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,166529	193,0346142	213,0346142	19291160902	31,6932	608684541,2	
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,166529	93,98884017	113,9888402	756559879,6	31,6932	23871362,93	
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,166529	138,8245086	158,8245086	4376204938	31,6932	138080248,7	
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,166529	150,1821342	170,1821342	6234221423	31,6932	196705331,8	
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,166529	193,0346142	213,0346142	19291160902	31,6932	608684541,2	
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,166529	220,9083987	240,9083987	35396068244	31,6932	1116834786	
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,166529	162,1299277	182,1299277	8798007957	31,6932	277599231,3	
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,166529	224,6104946	244,6104946	38144787446	31,6932	1203563775	
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,166529	194,2619531	214,2619531	19849285494	31,6932	626294772,8	
50	-40	272,7	56.176,200	237,0151894	Válido	217,01519	1,166529	253,1545204	273,1545204	65348495055	31,6932	2061909023	
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,166529	107,0057459	127,0057459	1356225617	31,6932	42792321,93	
50	-40	271,9	56.011,400	236,667277	Válido	216,66728	1,166529	252,7486705	272,7486705	64878374376	31,6932	2047075536	
50	-40	386,6	79.639,600	282,2048901	Válido	262,20489	1,166529	305,8696186	325,8696186	1,53078E+11	31,6932	4830003505	
50	-40	308,8	63.612,800	252,2157806	Válido	232,21578	1,166529	270,8864516	290,8864516	88622251450	31,6932	2796254447	
50	-40	349,4	71.976,400	268,2841777	Válido	248,28418	1,166529	289,6307033	309,6307033	1,19757E+11	31,6932	3778632050	
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,166529	192,7104714	212,7104714	19145817354	31,6932	604098587,5	
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,166529	173,2106962	193,2106962	11846394286	31,6932	373783470,5	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,166529	272,9278367	292,9278367	91667470530	31,6932	2892338752	
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,166529	174,7026269	194,7026269	12312534437	31,6932	388491362,1	
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,166529	95,76740679	115,7674068	823151501	31,6932	25972495,71	
50	-40	251,8	51.870,800	227,7516191	Válido	207,75162	1,166529	242,3482967	262,3482967	53700690823	31,6932	1694391567	
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,166529	219,2962426	239,2962426	34248405527	31,6932	1080623147	
Total de Válidos					32							Somatoria	47399433766
Total de Censurados					0							Somatoria ^{1/4,5}	235,7186983
											K0	255,7186983	
											Kjc Médio	235,0697403	
												205,0697403	
												2,929567719	
											Ln	1,074854876	
											T-T0	56,56961212	
											T0	-96,56961212	
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,36079	142,49059	162,49059	4920823986	29,6932	165722252,4	
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,36079	146,4894566	166,4894566	5573508350	29,6932	187703189,6	
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,36079	240,3661755	260,3661755	51752351767	29,6932	1742902475	
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,36079	258,5650035	278,5650035	71872680921	29,6932	2420509777	
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,36079	159,6093185	179,6093185	8199022810	29,6932	276124594,5	
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,36079	225,7843028	245,7843028	39050073279	29,6932	1315118387	
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,36079	205,9324455	225,9324455	25808424623	29,6932	869169527,8	
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,36079	214,6850527	234,6850527	31124912251	29,6932	1048216839	
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,36079	178,4634559	198,4634559	13551015567	29,6932	456367638,6	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,36079	179,8497618	199,8497618	14031186625	29,6932	472538716,8	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,36079	167,703296	187,703296	10243236315	29,6932	344969094,4	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,36079	175,9442681	195,9442681	12711243946	29,6932	428086024,6	
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,36079	160,220859	180,220859	8341338602	29,6932	280917469,4	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,36079	220,2198305	240,2198305	34902288803	29,6932	1175430361	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,36079	164,1482421	184,1482421	9301715731	29,6932	313260804,9	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,36079	225,0293023	245,0293023	38465894075	29,6932	1295444549	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,36079	204,8665256	224,8665256	25212708912	29,6932	849107166,4	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,36079	239,6524319	259,6524319	51064405731	29,6932	1719734004	
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,36079	148,5632969	168,5632969	5937476156	29,6932	199960804,4	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,36079	163,7491509	183,7491509	9200379782	29,6932	309848038,7	
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,36079	154,0126162	174,0126162	6982377776	29,6932	235150734	
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,36079	128,4207453	148,4207453	3082182403	29,6932	103800951,2	
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,36079	96,30915804	116,309158	844314285,9	29,6932	28434600,71	
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,36079	162,9484557	182,9484557	8999660376	29,6932	303088261,8	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,36079	295,0754687	315,0754687	1,30226E+11	29,6932	4385730810	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,36079	300,8819288	320,8819288	1,42162E+11	29,6932	4787683874	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,36079	231,4502993	251,4502993	43657600250	29,6932	1470289502	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,36079	170,6170465	190,6170465	11068808870	29,6932	372772515,9	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,36079	190,2723314	210,2723314	18079664963	29,6932	608882335,4	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,36079	164,5465028	184,5465028	9403704073	29,6932	316695542,2	
					Válidos	30						Somatoria	28483660841
					Censurados	0						Somatoria ^{1/4,5}	210,4958376
											K0	230,4958376	
											Kjc Médio	212,0564022	
												182,0564022	
												2,600805746	
											Ln	0,955821299	
											T-T0	50,30487499	
											T0	-90,30487499	
25	-20	258,8	53.312,800	230,8956474	Válido					28727926095	2,6932	10666837255	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	78,9	16.253,400	127,488823	Válido					1383996156	2,6932	513885398,9	
25	-20	102,7	21.156,200	145,4517102	Válido					2774243886	2,6932	1030092042	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
Total de Válidos					3						Somatoria	12210817351
Total de Censurados					28						Somatoria ^{1/4,5}	174,380866
											K0	194,380866
											Kjc Médio	179,1051021
												149,1051021
												2,130072887
											Ln	0,756156199
											T-T0	39,79650073
											T0	-59,79650073
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,166529	210,5903436	230,5903436	28541253247	15,6932	1818701938
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,166529	201,6722789	221,6722789	23491347319	15,6932	1496912505
50	-20	328,8	67.732,800	260,2552593	Válido	240,25526	1,166529	280,2647369	300,2647369	1,0329E+11	15,6932	6581828339
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,166529	193,7460246	213,7460246	19613161321	15,6932	1249787253
50	-20	362,3	74.633,800	273,191874	Válido	253,19187	1,166529	295,3556736	315,3556736	1,30784E+11	15,6932	8333787460
50	-20	326,5	67.259,000	259,3434017	Válido	239,3434	1,166529	279,2010285	299,2010285	1,01538E+11	15,6932	6470160476
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,166529	405,3646354	425,3646354	0	15,6932	23,01644661
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,166529	403,1355887	423,1355887	0	15,6932	23,01644661
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,166529	510,6059572	530,6059572	0	15,6932	23,01644661
50	-20	486,8	100.280,800	316,6714386	Censurado	296,67144	1,166529	346,0758483	366,0758483	0	15,6932	23,01644661
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,166529	650,3477669	670,3477669	0	15,6932	23,01644661
50	-20	256	52.736,000	229,6432015	Válido	209,6432	1,166529	244,5548825	264,5548825	55936272262	15,6932	3564363690
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,166529	418,0584815	438,0584815	0	15,6932	23,01644661
50	-20	417	85.902,000	293,0904297	Válido	273,09043	1,166529	318,5679167	338,5679167	1,83827E+11	15,6932	11713795826
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,166529	642,605283	662,605283	0	15,6932	23,01644661
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,166529	452,295797	472,295797	0	15,6932	23,01644661
50	-20	447	92.082,000	303,4501607	Válido	283,45016	1,166529	330,6528437	350,6528437	2,17358E+11	15,6932	13850443171
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,166529	351,7987509	371,7987509	0	15,6932	23,01644661
50	-20	380	78.280,000	279,7856322	Válido	259,78563	1,166529	303,0474841	323,0474841	1,46824E+11	15,6932	9355921364

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068	
50	-20	291	59.946,000	244,8387224	Válido	224,83872	1,166529	262,2808989	282,2808989	76639027586	15,6932	4883581907	
50	-20	259	53.354,000	230,984848	Válido	210,98485	1,166529	246,1199521	266,1199521	57565290206	15,6932	3668167755	
50	-20	480	98.880,000	314,4519041	Censurado	294,4519	1,166529	343,4866969	363,4866969	0	15,6932	23,01644661	
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,166529	572,3946821	592,3946821	0	15,6932	23,01644661	
50	-20	330	67.980,000	260,7297451	Válido	240,72975	1,166529	280,8182384	300,8182384	1,04211E+11	15,6932	6640524575	
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,166529	189,7710004	209,7710004	17866287208	15,6932	1138473174	
50	-20	392	80.752,000	284,1689638	Válido	264,16896	1,166529	308,1607677	328,1607677	1,58306E+11	15,6932	10087569812	
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,166529	371,1046112	391,1046112	0	15,6932	23,01644661	
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,166529	456,1114353	476,1114353	0	15,6932	23,01644661	
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,166529	355,5166746	375,5166746	0	15,6932	23,01644661	
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,166529	174,0646088	194,0646088	12111478218	15,6932	771766001,7	
Total de Válidos					16							Somatoria	91625785569
Total de Censurados					14							Somatoria ^{1/4,5}	272,9002514
												K0	292,9002514
												Kjc Médio	268,9941894
													238,9941894
													3,414202706
												Ln	1,227943998
												T-T0	64,62669259
												T0	-84,62669259
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,414214	253,701544	273,701544	65986333298	28,6932	2299720258	
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,414214	127,0965513	147,0965513	2941724163	28,6932	102523391	
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,414214	248,6149884	268,6149884	60238324628	28,6932	2099393746	
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,414214	250,3208256	270,3208256	62120711528	28,6932	2164997683	
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,414214	252,7502462	272,7502462	64880194464	28,6932	2261169701	
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,414214	203,857065	223,857065	24658460150	28,6932	859383413,1	
100	-20	373,5	76.941,000	277,3824075	Válido	257,38241	1,414214	363,9936914	383,9936914	3,34906E+11	28,6932	11671948690	
100	-20	371,9	76.611,400	276,7876442	Válido	256,78764	1,414214	363,1525691	383,1525691	3,31437E+11	28,6932	11551065823	
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,414214	332,4799177	352,4799177	2,22815E+11	28,6932	7765427993	
100	-20	334,9	68.989,400	262,6583332	Válido	242,65833	1,414214	343,1707058	363,1707058	2,56919E+11	28,6932	8953997120	
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,414214	206,1529272	226,1529272	25933000940	28,6932	903803024,4	
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,414214	186,7189845	206,7189845	16609178240	28,6932	578854162	
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,414214	267,6042213	287,6042213	83891569441	28,6932	2923743934	
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,414214	280,3488443	300,3488443	1,0343E+11	28,6932	3604669732	
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,414214	290,9140997	310,9140997	1,22164E+11	28,6932	4257576718	
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,414214	267,4649468	287,4649468	83695272433	28,6932	2916902696	
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,414214	275,776249	295,776249	96051880352	28,6932	3347548560	
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,414214	175,3015829	195,3015829	12503634468	28,6932	435769954,8	
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,414214	197,4686911	217,4686911	21366929329	28,6932	744668748,3	
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,414214	156,4144023	176,4144023	7485922510	28,6932	260895351,9	
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,414214	274,8262696	294,8262696	94571895467	28,6932	3295968922	
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,414214	146,7951393	166,7951393	5626036422	28,6932	196075600,6	
100	-20	683,1	140.718,600	375,1247792	Censurado	355,12478	1,414214	502,2222791	522,2222791	0	28,6932	17,80269681	
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,414214	316,4794159	336,4794159	1,78466E+11	28,6932	6219788577	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{4,5}	r-0,3068	Kjc-20 ^{4,5} / r - 0,3068
Resumo do Kmin 20 com 1/4,5												
-91°C												
		Esp		T-T0		T0		Válidos		Censurados		
		25		6,341481466		-97,34148147		31		0		
		50		11,6567801		-102,6567801		34		0		
		100		11,58391101		-102,583911		30		0		
		200		9,490551789		-100,4905518		15		0		
-60°C												
		Esp		T-T0		T0		Válidos		Censurados		
		25		31,82236021		-91,82236021		57		5		
		50		32,61787171		-92,61787171		34		0		
		100		55,35902245		-115,3590224		30		0		
-40°C												
		Esp		T-T0		T0		Válidos		Censurados		
		25		45,56497229		-85,56497229		15		15		
		50		56,56961212		-96,56961212		32		0		
		100		50,30487499		-90,30487499		30		0		
-20°C												
		Esp		T-T0		T0		Válidos		Censurados		
		25		39,79650073		-59,79650073		3		3		
		50		64,62669259		-84,62669259		16		14		
		100		71,15176118		-91,15176118		29		1		
		200		65,42211104		-85,42211104		15		0		

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
25	-91	76,8	15.820,800	125,78	Válido					13244435375	30,6932	431510411,9
25	-91	70,6	14.543,600	120,60	Válido					10302008136	30,6932	335644642,3
25	-91	23,7	4.882,200	69,87	Válido					308543362,8	30,6932	10052499,02
25	-91	42,3	8.713,800	93,35	Válido					2122919836	30,6932	69165803,36
25	-91	77,2	15.903,200	126,11	Válido					13450499074	30,6932	438224071,6
25	-91	68,5	14.111,000	118,79	Válido					9409336423	30,6932	306560945,9
25	-91	52	10.712,000	103,50	Válido					4058831005	30,6932	132238769,7
25	-91	29,4	6.056,400	77,82	Válido					646395668,1	30,6932	21059898,22
25	-91	46,3	9.537,800	97,66	Válido					2825097040	30,6932	92043092,27
25	-91	124,3	25.605,800	160,02	Válido					53817221543	30,6932	1753392333
25	-91	39,7	8.178,200	90,43	Válido					1733378059	30,6932	56474335,01
25	-91	63,3	13.039,800	114,19	Válido					7414276768	30,6932	241560891,9
25	-91	71,4	14.708,400	121,28	Válido					10655644229	30,6932	347166285,3
25	-91	76	15.656,000	125,12	Válido					12838317700	30,6932	418278892,4
25	-91	55,9	11.515,400	107,31	Válido					5073594545	30,6932	165300279,7
25	-91	21,3	4.387,800	66,24	Válido					211403048,7	30,6932	6887618,389
25	-91	76,5	15.759,000	125,53	Válido					13091204396	30,6932	426518069
25	-91	23,1	4.758,600	68,98	Válido					281974254,6	30,6932	9186864,014
25	-91	70,2	14.461,200	120,25	Válido					10128015345	30,6932	329975869,1
25	-91	38,6	7.951,600	89,17	Válido					1583593244	30,6932	51594269,87
25	-91	112,8	23.236,800	152,44	Válido					40741200334	30,6932	1327368940
25	-91	19,9	4.099,400	64,03	Válido					165414515,9	30,6932	5389288,699
25	-91	77	15.862,000	125,94	Válido					13347215994	30,6932	434859056,5
25	-91	47,3	9.743,800	98,71	Válido					3021124014	30,6932	98429750,38
25	-91	48,9	10.073,400	100,37	Válido					3352514424	30,6932	109226617,8
25	-91	93,9	19.343,400	139,08	Válido					23944413259	30,6932	780121110,2
25	-91	29,1	5.994,600	77,42	Válido					624449814,2	30,6932	20344891,19
25	-91	56,6	11.659,600	107,98	Válido					5271213411	30,6932	171738802,4
25	-91	51,4	10.588,400	102,90	Válido					3915357118	30,6932	127564317,8
25	-91	76,6	15.779,600	125,62	Válido					13142156227	30,6932	428178105,5
25	-91	59,4	12.236,400	110,62	Válido					6110526816	30,6932	199084058,2
Total de Válidos					31						Somatoria	9345140780
Total de Censurados					0						Somatoria ^{1/5}	98,65456129
											K0	118,6545613
											Kjc Médio	110,0124217
												80,01242172
												1,143034596
											Ln	0,133686652
											T-T0	7,035928499
											T0	-98,0359285
50	-91	22,4	4.614,400	67,93	Válido	47,93	1,148698	55,06	75,06	505869888,1	33,6932	15014005,44
50	-91	31,7	6.530,200	80,81	Válido	60,81	1,148698	69,85	89,85	1663001411	33,6932	49357182,18
50	-91	14,9	3.069,400	55,40	Válido	35,40	1,148698	40,67	60,67	111219046,6	33,6932	3300934,508
50	-91	46,5	9.579,000	97,87	Válido	77,87	1,148698	89,45	109,45	5727259250	33,6932	169982644,9

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
50	-91	24,6	5.067,600	71,19	Válido	51,19	1,148698	58,80	78,80	702799861	33,6932	20858804,18	
50	-91	58,7	12.092,200	109,96	Válido	89,96	1,148698	103,34	123,34	11786552849	33,6932	349819929,5	
50	-91	41,6	8.569,600	92,57	Válido	72,57	1,148698	83,36	103,36	4026052796	33,6932	119491553,1	
50	-91	30,4	6.262,400	79,14	Válido	59,14	1,148698	67,93	87,93	1446322072	33,6932	42926230,56	
50	-91	46,1	9.496,600	97,45	Válido	77,45	1,148698	88,97	108,97	5573796799	33,6932	165427943,9	
50	-91	48,7	10.032,200	100,16	Válido	80,16	1,148698	92,08	112,08	6619758137	33,6932	196471636,3	
50	-91	30,2	6.221,200	78,87	Válido	58,87	1,148698	67,63	87,63	1414715959	33,6932	41988174,45	
50	-91	47,3	9.743,800	98,71	Válido	78,71	1,148698	90,41	110,41	6042248029	33,6932	179331379,3	
50	-91	55,6	11.453,600	107,02	Válido	87,02	1,148698	99,96	119,96	9980737884	33,6932	296224101,1	
50	-91	41,5	8.549,000	92,46	Válido	72,46	1,148698	83,24	103,24	3995265945	33,6932	118577812,3	
50	-91	18,3	3.769,800	61,40	Válido	41,40	1,148698	47,55	67,55	243199881,7	33,6932	7218070,166	
50	-91	54,6	11.247,600	106,05	Válido	86,05	1,148698	98,85	118,85	9438501357	33,6932	280130749,1	
50	-91	100,5	20.703,000	143,89	Válido	123,89	1,148698	142,31	162,31	58361994479	33,6932	1732159441	
50	-91	27,7	5.706,200	75,54	Válido	55,54	1,148698	63,80	83,80	1056904307	33,6932	31368475,15	
50	-91	76,2	15.697,200	125,29	Válido	105,29	1,148698	120,94	140,94	25878196766	33,6932	768053992,1	
50	-91	75,7	15.594,200	124,88	Válido	104,88	1,148698	120,47	140,47	25376158358	33,6932	753153703,4	
50	-91	78,6	16.191,600	127,25	Válido	107,25	1,148698	123,19	143,19	28375264955	33,6932	842165925,3	
50	-91	59,1	12.174,600	110,34	Válido	90,34	1,148698	103,77	123,77	12033613287	33,6932	357152579,4	
50	-91	81	16.686,000	129,17	Válido	109,17	1,148698	125,41	145,41	31019307111	33,6932	920639984,1	
50	-91	86,5	17.819,000	133,49	Válido	113,49	1,148698	130,36	150,36	37650990087	33,6932	1117465545	
50	-91	117,8	24.266,800	155,78	Válido	135,78	1,148698	155,97	175,97	92294917803	33,6932	2739274328	
50	-91	52,7	10.856,200	104,19	Válido	84,19	1,148698	96,71	116,71	8460815802	33,6932	251113453,2	
50	-91	57,4	11.824,400	108,74	Válido	88,74	1,148698	101,94	121,94	11005974767	33,6932	326652700,4	
50	-91	34,3	7.065,800	84,06	Válido	64,06	1,148698	73,58	93,58	2157284806	33,6932	64027305,38	
50	-91	18,8	3.872,800	62,23	Válido	42,23	1,148698	48,51	68,51	268676217	33,6932	7974197,08	
50	-91	45,3	9.331,800	96,60	Válido	76,60	1,148698	87,99	107,99	5274837178	33,6932	156554948,1	
50	-91	30,6	6.303,600	79,40	Válido	59,40	1,148698	68,23	88,23	1478383992	33,6932	43877814,88	
50	-91	86	17.716,000	133,10	Válido	113,10	1,148698	129,92	149,92	37014437046	33,6932	1098572918	
50	-91	20,2	4.161,200	64,51	Válido	44,51	1,148698	51,13	71,13	349292579,2	33,6932	10366856,79	
50	-91	67	13.802,000	117,48	Válido	97,48	1,148698	111,98	131,98	17605575380	33,6932	522526070	
Total de Válidos					34							Somatoria	13799221388
Total de Censurados					0							Somatoria ^{1/5}	106,6524697
												K0	126,6524697
												Kjc Médio	117,3097133
													87,30971331
													1,247281619
												Ln	0,220966478
												T-T0	11,62946575
												T0	-102,6294657
100	-91	21,6	4.449,600	66,71	Válido	46,71	1,319508	61,63	81,63	888979712,7	29,6932	29938831,54	
100	-91	126,4	26.038,400	161,36	Válido	141,36	1,319508	186,53	206,53	2,25817E+11	29,6932	7605012756	
100	-91	47,6	9.805,600	99,02	Válido	79,02	1,319508	104,27	124,27	12326332136	29,6932	415123063	
100	-91	39,6	8.157,600	90,32	Válido	70,32	1,319508	92,79	112,79	6877598144	29,6932	231621992,4	
100	-91	53,7	11.062,200	105,18	Válido	85,18	1,319508	112,39	132,39	17933767263	29,6932	603968830	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
100	-91	33	6.798,000	82,45	Válido	62,45	1,319508	82,40	102,40	3799458259	29,6932	127957184,1	
100	-91	40,1	8.260,600	90,89	Válido	70,89	1,319508	93,54	113,54	7160095236	29,6932	241135857,2	
100	-91	42,7	8.796,200	93,79	Válido	73,79	1,319508	97,36	117,36	8749644771	29,6932	294668300,2	
100	-91	41,1	8.466,600	92,01	Válido	72,01	1,319508	95,02	115,02	7747267711	29,6932	260910501,8	
100	-91	23,3	4.799,800	69,28	Válido	49,28	1,319508	65,03	85,03	1162624409	29,6932	39154567,69	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,319508	95,32	115,32	7868294965	29,6932	264986426,7	
100	-91	45,6	9.393,600	96,92	Válido	76,92	1,319508	101,50	121,50	10771418838	29,6932	362757090,4	
100	-91	25,9	5.335,400	73,04	Válido	53,04	1,319508	69,99	89,99	1679709024	29,6932	56568811,17	
100	-91	32	6.592,000	81,19	Válido	61,19	1,319508	80,74	100,74	3431645734	29,6932	115570087,9	
100	-91	27,7	5.706,200	75,54	Válido	55,54	1,319508	73,28	93,28	2113808614	29,6932	71188306,21	
100	-91	41,3	8.507,800	92,24	Válido	72,24	1,319508	95,32	115,32	7868294965	29,6932	264986426,7	
100	-91	33,4	6.880,400	82,95	Válido	62,95	1,319508	83,06	103,06	3953445569	29,6932	133143129,4	
100	-91	32,1	6.612,600	81,32	Válido	61,32	1,319508	80,91	100,91	3467337911	29,6932	116772119,9	
100	-91	35,9	7.395,400	86,00	Válido	66,00	1,319508	87,08	107,08	5008006598	29,6932	168658366,2	
100	-91	35,8	7.374,800	85,88	Válido	65,88	1,319508	86,92	106,92	4962696436	29,6932	167132422,1	
100	-91	40,6	8.363,600	91,45	Válido	71,45	1,319508	94,28	114,28	7449957943	29,6932	250897779,4	
100	-91	32,9	6.777,400	82,32	Válido	62,32	1,319508	82,24	102,24	3761579430	29,6932	126681510,6	
100	-91	37,6	7.745,600	88,01	Válido	68,01	1,319508	89,74	109,74	5819622634	29,6932	195991763,6	
100	-91	19,7	4.058,200	63,70	Válido	43,70	1,319508	57,67	77,67	637772925,2	29,6932	21478753,56	
100	-91	49,2	10.135,200	100,67	Válido	80,67	1,319508	106,45	126,45	13668494724	29,6932	460324071,7	
100	-91	42,3	8.713,800	93,35	Válido	73,35	1,319508	96,78	116,78	8491679343	29,6932	285980606,4	
100	-91	29,5	6.077,000	77,96	Válido	57,96	1,319508	76,47	96,47	2615284030	29,6932	88076867,11	
100	-91	25,4	5.232,400	72,34	Válido	52,34	1,319508	69,06	89,06	1570488772	29,6932	52890519,44	
100	-91	19,6	4.037,600	63,54	Válido	43,54	1,319508	57,45	77,45	626047730	29,6932	21083875,43	
100	-91	46,6	9.599,600	97,98	Válido	77,98	1,319508	102,89	122,89	11532086129	29,6932	388374649	
Total de Válidos					30							Somatoria	13463035467
Total de Censurados					0							Somatoria ^{1/5}	106,1276623
												K0	126,1276623
												Kjc Médio	116,8308791
													86,83087907
													1,24044113
												Ln	0,215467066
												T-T0	11,34003169
												T0	-102,3400317
200	-91	50,7	10.444,200	102,20	Válido	82,20	1,515717	124,59	144,59	30016935869	14,6932	2042913448	
200	-91	33,9	6.983,400	83,57	Válido	63,57	1,515717	96,35	116,35	8303088687	14,6932	565097370,7	
200	-91	44,8	9.228,800	96,07	Válido	76,07	1,515717	115,30	135,30	20373294050	14,6932	1386579782	
200	-91	40,9	8.425,400	91,79	Válido	71,79	1,515717	108,81	128,81	15254889921	14,6932	1038227882	
200	-91	44,6	9.187,600	95,85	Válido	75,85	1,515717	114,97	134,97	20087425876	14,6932	1367123967	
200	-91	25,8	5.314,800	72,90	Válido	52,90	1,515717	80,19	100,19	3314958862	14,6932	225611770,2	
200	-91	25,4	5.232,400	72,34	Válido	52,34	1,515717	79,33	99,33	3140977544	14,6932	213770828,9	
200	-91	25,6	5.273,600	72,62	Válido	52,62	1,515717	79,76	99,76	3227200199	14,6932	219639030,2	
200	-91	13,8	2.842,800	53,32	Válido	33,32	1,515717	50,50	70,50	328457384,2	14,6932	22354380,54	
200	-91	23	4.738,000	68,83	Válido	48,83	1,515717	74,02	94,02	2221584642	14,6932	151198148,9	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
200	-91	20,4	4.202,400	64,83	Válido	44,83	1,515717	67,94	87,94	1447891710	14,6932	98541618,56	
200	-91	30,2	6.221,200	78,87	Válido	58,87	1,515717	89,24	109,24	5658863837	14,6932	385134881,2	
200	-91	23,2	4.779,200	69,13	Válido	49,13	1,515717	74,47	94,47	2290348231	14,6932	155878109	
200	-91	38,8	7.992,800	89,40	Válido	69,40	1,515717	105,19	125,19	12881437626	14,6932	876693819,3	
200	-91	36,9	7.601,400	87,19	Válido	67,19	1,515717	101,83	121,83	10951766489	14,6932	745362922,2	
Total de Válidos					15							<i>Soma dos K0</i>	9494127959
Total de Censurados					0							<i>Somatoria</i> ^{1/5}	98,96713912
												anterior +20	118,9671391
												Kjc Médio	110,2976177
													80,29761773
													1,147108825
												Ln	0,137244711
												T - T0	7,223189161
												T0	-98,22318916
25	-60	261	53.766,000	231,8749663	Válido					4,26971E+11	56,6932	7531253418	
25	-60	62,3	12.833,800	113,2863628	Válido					7064652469	56,6932	124611990	
25	-60	81,3	16.747,800	129,4132914	Válido					15680157283	56,6932	276579153,8	
25	-60	54,2	11.165,200	105,66551	Válido					4613494671	56,6932	81376508,49	
25	-60	123,4	25.420,400	159,4377622	Válido					52711092873	56,6932	929760409,9	
25	-60	191,8	39.510,800	198,7732376	Válido					1,82605E+11	56,6932	3220931999	
25	-60	74,6	15.367,600	123,9661244	Válido					12146727101	56,6932	214253686,5	
25	-60	100,3	20.661,800	143,7421302	Válido					29012686193	56,6932	511748960,9	
25	-60	40,2	8.281,200	91,00109889	Válido					1804368979	56,6932	31826903,03	
25	-60	78,2	16.109,200	126,9220233	Válido					13974485970	56,6932	246493159,1	
25	-60	129	26.574,000	163,0153367	Válido					59829181921	56,6932	1055314957	
25	-60	140,9	29.025,400	170,3684243	Válido					76874666392	56,6932	1355976844	
25	-60	56,1	11.556,600	107,5016279	Válido					5129566494	56,6932	90479396,02	
25	-60	67,4	13.884,400	117,8320839	Válido					8962032666	56,6932	158079499,2	
25	-60	112,2	23.113,200	152,0302601	Válido					40120597759	56,6932	707679188,3	
25	-60	120,3	24.781,800	157,4223618	Válido					49010263952	56,6932	864482229,8	
25	-60	90	18.540,000	136,1616686	Válido					21150186891	56,6932	373063910,5	
25	-60	68	14.008,000	118,355397	Válido					9204304519	56,6932	162352883,9	
25	-60	81,4	16.768,400	129,4928569	Válido					15737253434	56,6932	277586261,4	
25	-60	141,9	29.231,400	170,9719275	Válido					78429780489	56,6932	1383407190	
25	-60	34	7.004,000	83,68990381	Válido					1047979929	56,6932	18485108,07	
25	-60	284,9	58.689,400	242,2589524	Válido					5,42371E+11	56,6932	9566770234	
25	-60	69	14.214,000	119,2224811	Válido					9617239086	56,6932	169636554	
25	-60	52	10.712,000	103,4987923	Válido					4058831005	56,6932	71592907,17	
25	-60	127,4	26.244,400	162,0012346	Válido					57737849062	56,6932	1018426356	
25	-60	193,2	39.799,200	199,4973684	Válido					1,86333E+11	56,6932	3286695407	
25	-60	90,4	18.622,400	136,4639146	Válido					21426780405	56,6932	377942688,1	
25	-60	142,5	29.355,000	171,3330091	Válido					79372185368	56,6932	1400030081	
25	-60	46,9	9.661,400	98,29242087	Válido					2941701555	56,6932	51888084,56	
25	-60	143,1	29.478,600	171,6933313	Válido					80321617169	56,6932	1416776918	
25	-60	82,3	16.953,800	130,2067587	Válido					16257027737	56,6932	286754456,2	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
Total de Censurados					0						Somatoria ^{1/5}	152,7438946
											K0	172,7438946
											Kjc Médio	159,3635295
												129,3635295
												1,848050421
											Ln	0,614131257
											T-T0	32,32172805
											T0	-92,32172805
100	-60	415,3	85.551,800	292,4923931	Válido	272,49239	1,319508	359,5558683	379,5558683	6,00941E+12	29,6932	2,02383E+11
100	-60	225,7	46.494,200	215,6251377	Válido	195,62514	1,319508	258,1289167	278,1289167	1,146E+12	29,6932	38594577460
100	-60	230	47.380,000	217,6694742	Válido	197,66947	1,319508	260,8264349	280,8264349	1,20714E+12	29,6932	40653788468
100	-60	131,1	27.006,600	164,3368492	Válido	144,33685	1,319508	190,4536143	210,4536143	2,5058E+11	29,6932	8438963156
100	-60	57,5	11.845,000	108,8347371	Válido	88,834737	1,319508	117,2181384	137,2181384	22129627235	29,6932	745275929,7
100	-60	82,8	17.056,800	130,6016845	Válido	110,60168	1,319508	145,9397977	165,9397977	66201632505	29,6932	2229521658
100	-60	88,3	18.189,800	134,8695666	Válido	114,86957	1,319508	151,5713019	171,5713019	79999063707	29,6932	2694188020
100	-60	113	23.278,000	152,5712948	Válido	132,57129	1,319508	174,9288722	194,9288722	1,63798E+11	29,6932	5516333037
100	-60	64	13.184,000	114,8216008	Válido	94,821601	1,319508	125,1178523	145,1178523	30661712335	29,6932	1032617311
100	-60	107,7	22.186,200	148,9503273	Válido	128,95033	1,319508	170,150977	190,150977	1,42617E+11	29,6932	4803029252
100	-60	112,3	23.133,800	152,0979947	Válido	132,09799	1,319508	174,304349	194,304349	1,60894E+11	29,6932	5418562821
100	-60	160,8	33.124,800	182,0021978	Válido	162,0022	1,319508	213,7631815	233,7631815	4,46339E+11	29,6932	15031679933
100	-60	265,4	54.672,400	233,8212993	Válido	213,8213	1,319508	282,1388959	302,1388959	1,78778E+12	29,6932	60208500180
100	-60	106,3	21.897,800	147,9790526	Válido	127,97905	1,319508	168,8693723	188,8693723	1,37327E+11	29,6932	4624847764
100	-60	153,5	31.621,000	177,8229457	Válido	157,82295	1,319508	208,2486253	228,2486253	3,91661E+11	29,6932	13190270817
100	-60	150,2	30.941,200	175,9011086	Válido	155,90111	1,319508	205,7127461	225,7127461	3,68388E+11	29,6932	12406492139
100	-60	168,9	34.793,400	186,5298904	Válido	166,52989	1,319508	219,7375077	239,7375077	5,12296E+11	29,6932	17252974026
100	-60	86,1	17.736,600	133,1788271	Válido	113,17883	1,319508	149,3403578	169,3403578	74282401685	29,6932	2501663737
100	-60	282,6	58.215,600	241,2790915	Válido	221,27909	1,319508	291,9795117	311,9795117	2,12208E+12	29,6932	71466890484
100	-60	115,5	23.793,000	154,2497974	Válido	134,2498	1,319508	177,1436697	197,1436697	1,74433E+11	29,6932	5874503715
100	-60	128,1	26.388,600	162,4456832	Válido	142,44568	1,319508	187,9582059	207,9582059	2,34588E+11	29,6932	7900406742
100	-60	102,2	21.053,200	145,0972088	Válido	125,09721	1,319508	165,0667566	185,0667566	1,22546E+11	29,6932	4127062884
100	-60	68,5	14.111,000	118,7897302	Válido	98,78973	1,319508	130,3538305	150,3538305	37637345694	29,6932	1267540908
100	-60	30,4	6.262,400	79,13532713	Válido	59,135327	1,319508	78,02953195	98,02953195	2892644143	29,6932	97417730,09
100	-60	94,5	19.467,000	139,5241915	Válido	119,52419	1,319508	157,7131161	177,7131161	97575113199	29,6932	3286109722
100	-60	63,3	13.039,800	114,1919437	Válido	94,191944	1,319508	124,2870148	144,2870148	29657107073	29,6932	998784471,6
100	-60	89,4	18.416,400	135,7070374	Válido	115,70704	1,319508	152,6763512	172,6763512	82958112246	29,6932	2793842100
100	-60	132,7	27.336,200	165,3366263	Válido	145,33663	1,319508	191,7728281	211,7728281	2,59379E+11	29,6932	8735310796
100	-60	241,9	49.831,400	223,2294783	Válido	203,22948	1,319508	268,1629044	288,1629044	1,38674E+12	29,6932	46702109716
100	-60	191,9	39.531,400	198,8250487	Válido	178,82505	1,319508	235,9610664	255,9610664	7,31479E+11	29,6932	24634556503
Total de Válidos					30						Somatoria	6,15611E+11
Total de Censurados					0						Somatoria ^{1/5}	227,9613953
											K0	247,9613953
											Kjc Médio	227,9919771
												197,9919771
												2,828456815

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
											Ln	1,039731268
											T-T0	54,72105663
											TO	-114,7210566
25	-60	128,7	26.512,200	162,8256737	Válido					59433513592	56,6932	1048335843
25	-60	176	36.256,000	190,4100838	Válido					1,43707E+11	56,6932	2534810390
25	-60	131,7	27.130,200	164,7124768	Válido					63464356776	56,6932	1119435078
25	-60	150,4	30.982,400	176,0181809	Válido					92443429627	56,6932	1630591140
25	-60	133,7	27.542,200	165,9584285	Válido					66243900213	56,6932	1168462888
25	-60	78,7	16.212,200	127,3271377	Válido					14241237760	56,6932	251198340,5
25	-60	678,2	139.709,200	373,7769388	Censurado					0	56,6932	2,184139821
25	-60	46,1	9.496,600	97,45050026	Válido					2786898399	56,6932	49157542,69
25	-60	369,1	76.034,600	275,7437216	Censurado					0	56,6932	2,184139821
25	-60	275,9	56.835,400	238,4017617	Válido					4,96913E+11	56,6932	8764955497
25	-60	687,7	141.666,200	376,3857064	Censurado					0	56,6932	2,184139821
25	-60	140,7	28.984,200	170,2474669	Válido					76565970955	56,6932	1350531827
25	-60	89,1	18.354,600	135,4791497	Válido					20536096045	56,6932	362232085,1
25	-60	87,8	18.086,800	134,4871741	Válido					19669085990	56,6932	346939068,4
25	-60	219,5	45.217,000	212,6428931	Válido					2,65317E+11	56,6932	4679872148
25	-60	427,1	87.982,600	296,6186103	Censurado					0	56,6932	2,184139821
25	-60	197,6	40.705,600	201,7562886	Válido					1,98357E+11	56,6932	3498776969
25	-60	64,1	13.204,600	114,9112701	Válido					7701741291	56,6932	135849472,1
25	-60	234,5	48.307,000	219,7885347	Válido					3,18312E+11	56,6932	5614638995
25	-60	133,7	27.542,200	165,9584285	Válido					66243900213	56,6932	1168462888
25	-60	38,4	7.910,400	88,9404295	Válido					1557291538	56,6932	27468753,54
25	-60	116,3	23.957,800	154,783074	Válido					44481229776	56,6932	784595503,1
25	-60	166,1	34.216,600	184,9772959	Válido					1,22214E+11	56,6932	2155708001
25	-60	217,1	44.722,600	211,4771855	Válido					2,57386E+11	56,6932	4539982777
25	-60	129	26.574,000	163,0153367	Válido					59829181921	56,6932	1055314957
25	-60	373,6	76.961,600	277,4195379	Censurado					0	56,6932	2,184139821
25	-60	164,6	33.907,600	184,140164	Válido					1,19145E+11	56,6932	2101567502
25	-60	77,7	16.006,200	126,5156117	Válido					13710911532	56,6932	241844022,4
25	-60	200,2	41.241,200	203,0792949	Válido					2,05682E+11	56,6932	3627982505
25	-60	63,6	13.101,600	114,4622208	Válido					7521262719	56,6932	132666046,7
25	-60	55	11.330,000	106,4424727	Válido					4826539979	56,6932	85134372,01
				T. Válidos	26						Soma dos K0	85738771965
				T. Censurados	5						Somatoria ^{1/5}	153,686405
											anterior +20	173,686405
											Kjc Médio	160,2234759
												130,2234759
												1,86033537
											LN	0,620756778
											T - TO	32,67042923
											TO	-92,67042923
25	-40	155,4	32.012,400	178,9200939	Válido					1,01366E+11	14,6932	6898865448

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5.0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
25	-40	203,4	41.900,400	204,695872	Válido					2,14925E+11	14,6932	14627481390	
25	-40	275,9	56.835,400	238,4017617	Válido					4,96913E+11	14,6932	33819275241	
25	-40	349,2	71.935,200	268,2073824	Censurado					0	14,6932	17,90551673	
25	-40	165,5	34.093,000	184,6428986	Válido					1,2098E+11	14,6932	8233768017	
25	-40	311,7	64.210,200	253,3973165	Válido					6,92595E+11	14,6932	47137104524	
25	-40	254,5	52.427,000	228,9694303	Válido					3,98487E+11	14,6932	27120481966	
25	-40	548,6	113.011,600	336,1719798	Censurado					0	14,6932	17,90551673	
25	-40	773,9	159.423,400	399,2785995	Censurado					0	14,6932	17,90551673	
25	-40	758,7	156.292,200	395,3380832	Censurado					0	14,6932	17,90551673	
25	-40	139,3	28.695,800	169,3983471	Válido					74426734225	14,6932	5065386316	
25	-40	1544,1	318.084,600	563,9898935	Censurado					0	14,6932	17,90551673	
25	-40	136,6	28.139,600	167,7486215	Válido					70407218470	14,6932	4791823324	
25	-40	1433,6	295.321,600	543,4350007	Censurado					0	14,6932	17,90551673	
25	-40	1337,1	275.442,600	524,826257	Censurado					0	14,6932	17,90551673	
25	-40	483,2	99.539,200	315,498336	Censurado					0	14,6932	17,90551673	
25	-40	1573,3	324.099,800	569,2976374	Censurado					0	14,6932	17,90551673	
25	-40	619,9	127.699,400	357,3505282	Censurado					0	14,6932	17,90551673	
25	-40	562,8	115.936,800	340,4949339	Censurado					0	14,6932	17,90551673	
25	-40	264,8	54.548,800	233,5568453	Válido					4,44189E+11	14,6932	30230901201	
25	-40	1337,2	275.463,200	524,8458821	Censurado					0	14,6932	17,90551673	
25	-40	1174	241.844,000	491,7763719	Censurado					0	14,6932	17,90551673	
25	-40	1714,3	353.145,800	594,2607172	Censurado					0	14,6932	17,90551673	
25	-40	61,6	12.689,600	112,6481247	Válido					6826265346	14,6932	464586703,1	
25	-40	251	51.706,000	227,3895336	Válido					3,83649E+11	14,6932	26110656093	
25	-40	113,2	23.319,200	152,706254	Válido					41158254697	14,6932	2801177055	
25	-40	233,2	48.039,200	219,1784661	Válido					3,13482E+11	14,6932	21335141485	
25	-40	1127,9	232.347,400	482,0242732	Censurado					0	14,6932	17,90551673	
25	-40	283	58.298,000	241,4497877	Válido					5,3257E+11	14,6932	36245988775	
25	-40	195,2	40.211,200	200,5273049	Válido					1,91741E+11	14,6932	13049627127	
Total de Válidos					15							Somatoria	2,77932E+11
Total de Censurados					15							Somatoria ^{1/5}	194,4409764
												K0	214,4409764
												Kjc Médio	197,4079469
													167,4079469
													2,391542099
												Ln	0,871938387
												T-T0	45,89011733
												T0	-85,89011733
50	-40	187	38.522,000	196,2702219	Válido	176,27022	1,148698	202,4813139	222,4813139	3,40349E+11	31,6932	10738871863	
50	-40	107,5	22.145,000	148,8119619	Válido	128,81196	1,148698	147,9660887	167,9660887	70926898588	31,6932	2237921655	
50	-40	245	50.470,000	224,6552915	Válido	204,65529	1,148698	235,0871967	255,0871967	7,18034E+11	31,6932	22655768322	
50	-40	119	24.514,000	156,5694734	Válido	136,56947	1,148698	156,8771294	176,8771294	95016312031	31,6932	2998003106	
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,148698	268,7560672	288,7560672	1,40214E+12	31,6932	44241036722	
50	-40	205,3	42.291,800	205,6497022	Válido	185,6497	1,148698	213,2555075	233,2555075	4,41064E+11	31,6932	13916665495	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
50	-40	217,1	44.722,600	211,4771855	Válido	191,47719	1,148698	219,949528	239,949528	5,14772E+11	31,6932	16242358083
50	-40	308,7	63.592,200	252,1749393	Válido	232,17494	1,148698	266,6989708	286,6989708	1,34929E+12	31,6932	42573622758
50	-40	274,2	56.485,200	237,6661524	Válido	217,66615	1,148698	250,0327512	270,0327512	9,77202E+11	31,6932	30833186288
50	-40	455,2	93.771,200	306,2208353	Válido	286,22084	1,148698	328,7814027	348,7814027	3,84181E+12	31,6932	1,21219E+11
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,148698	190,0840324	210,0840324	2,48158E+11	31,6932	7830005926
50	-40	49,1	10.114,600	100,5713677	Válido	80,571368	1,148698	92,55219753	112,5521975	6790999130	31,6932	214273065,8
50	-40	93,8	19.322,800	139,0064747	Válido	119,00647	1,148698	136,7025417	156,7025417	47740058519	31,6932	1506318659
50	-40	107,4	22.124,400	148,7427309	Válido	128,74273	1,148698	147,8865632	167,8865632	70736502348	31,6932	2231914176
50	-40	167	34.402,000	185,4777615	Válido	165,47776	1,148698	190,0840324	210,0840324	2,48158E+11	31,6932	7830005926
50	-40	212,8	43.836,800	209,3723955	Válido	189,3724	1,148698	217,5317592	237,5317592	4,87095E+11	31,6932	15369058686
50	-40	122,7	25.276,200	158,9849049	Válido	138,9849	1,148698	159,6517317	179,6517317	1,03721E+11	31,6932	3272668952
50	-40	219,3	45.175,800	212,545995	Válido	192,546	1,148698	221,1772677	241,1772677	5,29301E+11	31,6932	16700764530
50	-40	168,9	34.793,400	186,5298904	Válido	166,52989	1,148698	191,2926111	211,2926111	2,56148E+11	31,6932	8082112383
50	-40	272,7	56.176,200	237,0151894	Válido	217,01519	1,148698	249,2849911	269,2849911	9,62677E+11	31,6932	30374879607
50	-40	60,6	12.483,600	111,7300318	Válido	91,730032	1,148698	105,3701366	125,3701366	12989358861	31,6932	409846871,3
50	-40	271,9	56.011,400	236,667277	Válido	216,66728	1,148698	248,8853447	268,8853447	9,54985E+11	31,6932	30132178454
50	-40	386,6	79.639,600	282,2048901	Válido	262,20489	1,148698	301,1943259	321,1943259	2,47876E+12	31,6932	78211000109
50	-40	308,8	63.612,800	252,2157806	Válido	232,21578	1,148698	266,7458852	286,7458852	1,35048E+12	31,6932	42611081070
50	-40	349,4	71.976,400	268,2841777	Válido	248,28418	1,148698	285,2036265	305,2036265	1,88701E+12	31,6932	59540040540
50	-40	166,5	34.299,000	185,199892	Válido	165,19989	1,148698	189,7648442	209,7648442	2,46081E+11	31,6932	7764485796
50	-40	137,8	28.386,800	168,4838271	Válido	148,48383	1,148698	170,563128	190,563128	1,44353E+11	31,6932	4554698861
50	-40	313,1	64.498,600	253,9657457	Válido	233,96575	1,148698	268,7560672	288,7560672	1,40214E+12	31,6932	44241036722
50	-40	139,9	28.819,400	169,7627757	Válido	149,76278	1,148698	172,032254	192,032254	1,50678E+11	31,6932	4754264144
50	-40	50,6	10.423,600	102,0960332	Válido	82,096033	1,148698	94,30357832	114,3035783	7458317392	31,6932	235328631,7
50	-40	251,8	51.870,800	227,7516191	Válido	207,75162	1,148698	238,6439431	258,6439431	7,7402E+11	31,6932	24422267844
50	-40	210	43.260,000	207,9903844	Válido	187,99038	1,148698	215,9442453	235,9442453	4,69578E+11	31,6932	14816379180
Total de Válidos					32						Somatoria	7,12761E+11
Total de Censurados					0						Somatoria ^{1/5}	234,7409035
											K0	254,7409035
											Kjc Médio	234,1776003
												204,1776003
												2,916822862
											Ln	1,070494963
											T-T0	56,3401499
											T0	-96,3401499
100	-40	75,5	15.553,000	124,7116675	Válido	104,71167	1,319508	138,1678736	158,1678736	50354161525	29,6932	1695814581
100	-40	79,1	16.294,600	127,6503036	Válido	107,6503	1,319508	142,0454271	162,0454271	57827748758	29,6932	1947508142
100	-40	187,7	38.666,200	196,6372294	Válido	176,63723	1,319508	233,0742216	253,0742216	6,87814E+11	29,6932	23164034798
100	-40	214,1	44.104,600	210,0109521	Válido	190,01095	1,319508	250,7209544	270,7209544	9,90725E+11	29,6932	33365386368
100	-40	91,5	18.849,000	137,2916603	Válido	117,29166	1,319508	154,7672737	174,7672737	88796461903	29,6932	2990464548
100	-40	167,8	34.566,800	185,9214888	Válido	165,92149	1,319508	218,934717	238,934717	5,03006E+11	29,6932	16940107721
100	-40	142,5	29.355,000	171,3330091	Válido	151,33301	1,319508	199,6851026	219,6851026	3,17489E+11	29,6932	10692304685
100	-40	153,4	31.600,400	177,7650134	Válido	157,76501	1,319508	208,1721833	228,1721833	3,90943E+11	29,6932	13166079756
100	-40	110,9	22.845,400	151,1469484	Válido	131,14695	1,319508	173,0494358	193,0494358	1,55185E+11	29,6932	5226295186

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
100	-40	112,4	23.154,400	152,1656992	Válido	132,1657	1,319508	174,3936856	194,3936856	1,61307E+11	29,6932	5432462992	
100	-40	99,6	20.517,600	143,2396593	Válido	123,23966	1,319508	162,6157054	182,6157054	1,13714E+11	29,6932	3829617801	
100	-40	108,2	22.289,200	149,2956798	Válido	129,29568	1,319508	170,6066723	190,6066723	1,44537E+11	29,6932	4867691621	
100	-40	92,1	18.972,600	137,7410614	Válido	117,74106	1,319508	155,360262	175,360262	90510658436	29,6932	3048194820	
100	-40	160,5	33.063,000	181,8323404	Válido	161,83234	1,319508	213,5390533	233,5390533	4,44004E+11	29,6932	14953042294	
100	-40	96	19.776,000	140,6271666	Válido	120,62717	1,319508	159,1685006	179,1685006	1,02161E+11	29,6932	3440555936	
100	-40	166,8	34.360,800	185,3666637	Válido	165,36666	1,319508	218,2026209	238,2026209	4,94652E+11	29,6932	16658765317	
100	-40	141,2	29.087,200	170,5496995	Válido	150,5497	1,319508	198,6515195	218,6515195	3,09357E+11	29,6932	10418434191	
100	-40	186,7	38.460,200	196,1127227	Válido	176,11272	1,319508	232,3821308	252,3821308	6,77663E+11	29,6932	22822154665	
100	-40	81	16.686,000	129,1743008	Válido	109,1743	1,319508	144,0563536	164,0563536	62038614223	29,6932	2089320593	
100	-40	95,6	19.693,600	140,3338876	Válido	120,33389	1,319508	158,7815166	178,7815166	1,00925E+11	29,6932	3398933950	
100	-40	86,1	17.736,600	133,1788271	Válido	113,17883	1,319508	149,3403578	169,3403578	74282401685	29,6932	2501663737	
100	-40	63,5	13.081,000	114,3721994	Válido	94,372199	1,319508	124,5248637	144,5248637	29941970287	29,6932	1008378022	
100	-40	40	8.240,000	90,77444574	Válido	70,774446	1,319508	93,38744104	113,387441	7103009182	29,6932	239213327,7	
100	-40	94,8	19.528,800	139,7454829	Válido	119,74548	1,319508	158,005112	178,005112	98481734851	29,6932	3316642694	
100	-40	272,3	56.093,800	236,8412971	Válido	216,8413	1,319508	286,1238069	306,1238069	1,91765E+12	29,6932	64582220035	
100	-40	282,2	58.133,200	241,1082744	Válido	221,10827	1,319508	291,7541173	311,7541173	2,1139E+12	29,6932	71191470601	
100	-40	175,4	36.132,400	190,085244	Válido	170,08524	1,319508	224,428825	244,428825	5,69368E+11	29,6932	19175035434	
100	-40	102,6	21.135,600	145,3808791	Válido	125,38088	1,319508	165,4410618	185,4410618	1,23941E+11	29,6932	4174068194	
100	-40	124	25.544,000	159,8249042	Válido	139,8249	1,319508	184,5000672	204,5000672	2,13788E+11	29,6932	7199886330	
100	-40	96,4	19.858,400	140,9198354	Válido	120,91984	1,319508	159,5546793	179,5546793	1,03406E+11	29,6932	3482496783	
					Válidos	30						Somatoria	3,77018E+11
					Censurados	0						Somatoria ^{1/5}	206,6676368
											K0	226,6676368	
											Kjc Médio	208,5635519	
											Ln	178,5635519	
											T-T0	2,550907884	
											T0	0,936449329	
											T-T0	49,28532816	
											T0	-89,28532816	
25	-20	258,8	53.312,800	230,8956474	Válido					4,17194E+11	2,6932	1,54906E+11	
25	-20	723,7	149.082,200	386,1116419	Censurado					0	2,6932	94,8344609	
25	-20	1133,7	233.542,200	483,2620407	Censurado					0	2,6932	94,8344609	
25	-20	914,9	188.469,400	434,1306255	Censurado					0	2,6932	94,8344609	
25	-20	1554,5	320.227,000	565,8860309	Censurado					0	2,6932	94,8344609	
25	-20	1497,2	308.423,200	555,3586229	Censurado					0	2,6932	94,8344609	
25	-20	1499	308.794,000	555,6923609	Censurado					0	2,6932	94,8344609	
25	-20	1575	324.450,000	569,6051264	Censurado					0	2,6932	94,8344609	
25	-20	1480,1	304.900,600	552,178051	Censurado					0	2,6932	94,8344609	
25	-20	1560,5	321.463,000	566,9770718	Censurado					0	2,6932	94,8344609	
25	-20	78,9	16.253,400	127,488823	Válido					14348831571	2,6932	5327800227	
25	-20	102,7	21.156,200	145,4517102	Válido					31072981802	2,6932	11537569361	
25	-20	772,5	159.135,000	398,9172847	Censurado					0	2,6932	94,8344609	
25	-20	798,3	164.449,800	405,5241053	Censurado					0	2,6932	94,8344609	
25	-20	1340	276.040,000	525,3950894	Censurado					0	2,6932	94,8344609	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
25	-20	1348,6	277.811,600	527,0783623	Censurado					0	2,6932	94,8344609
25	-20	1361,1	280.386,600	529,5154389	Censurado					0	2,6932	94,8344609
25	-20	1368,5	281.911,000	530,9529169	Censurado					0	2,6932	94,8344609
25	-20	1368,6	281.931,600	530,9723157	Censurado					0	2,6932	94,8344609
25	-20	1371,1	282.446,600	531,4570538	Censurado					0	2,6932	94,8344609
25	-20	1381,3	284.547,800	533,4302204	Censurado					0	2,6932	94,8344609
25	-20	1391	286.546,000	535,2999159	Censurado					0	2,6932	94,8344609
25	-20	1408,2	290.089,200	538,5992945	Censurado					0	2,6932	94,8344609
25	-20	1436,3	295.877,800	543,9465047	Censurado					0	2,6932	94,8344609
25	-20	1459,7	300.698,200	548,3595536	Censurado					0	2,6932	94,8344609
25	-20	1472,5	303.335,000	550,7585678	Censurado					0	2,6932	94,8344609
25	-20	1473,7	303.582,200	550,9829398	Censurado					0	2,6932	94,8344609
25	-20	1496,6	308.299,600	555,2473323	Censurado					0	2,6932	94,8344609
25	-20	1524,5	314.047,000	560,398965	Censurado					0	2,6932	94,8344609
25	-20	1547,8	318.846,800	564,6652105	Censurado					0	2,6932	94,8344609
25	-20	1553,3	319.979,800	565,6675702	Censurado					0	2,6932	94,8344609
Total de Válidos					3						Somatoria	1,71772E+11
Total de Censurados					28						Somatoria ^{1/5}	176,5998703
											K0	196,5998703
											Kjc Médio	181,1297217
												151,1297217
												2,158996024
											Ln	0,76964331
											T-T0	40,50632739
											T0	-60,50632739
50	-20	195,2	40.211,200	200,5273049	Válido	180,5273	1,148698	207,3714181	227,3714181	3,83482E+11	17,6932	21673951721
50	-20	180,6	37.203,600	192,8823476	Válido	172,88235	1,148698	198,5896682	218,5896682	3,08875E+11	17,6932	17457291542
50	-20	328,8	67.732,800	260,2552593	Válido	240,25526	1,148698	275,9808212	295,9808212	1,60101E+12	17,6932	90487403366
50	-20	168,1	34.628,600	186,0876138	Válido	166,08761	1,148698	190,7845687	210,7845687	2,52765E+11	17,6932	14285973380
50	-20	362,3	74.633,800	273,191874	Válido	253,19187	1,148698	290,8410891	310,8410891	2,08103E+12	17,6932	1,17618E+11
50	-20	326,5	67.259,000	259,3434017	Válido	239,3434	1,148698	274,9333718	294,9333718	1,57086E+12	17,6932	88783222632
50	-20	655,6	135.053,600	367,4963945	Censurado	347,49639	1,148698	399,1685368	419,1685368	0	17,6932	20,41471865
50	-20	648,8	133.652,800	365,5855577	Censurado	345,58556	1,148698	396,9735616	416,9735616	0	17,6932	20,41471865
50	-20	1017	209.502,000	457,7138844	Censurado	437,71388	1,148698	502,801219	522,801219	0	17,6932	20,41471865
50	-20	486,8	100.280,800	316,6714386	Válido	296,67144	1,148698	340,7859934	360,7859934	4,5963E+12	17,6932	20,41471865
50	-20	1619	333.514,000	577,5067099	Censurado	557,50671	1,148698	640,4070406	660,4070406	0	17,6932	20,41471865
50	-20	256	52.736,000	229,6432015	Válido	209,6432	1,148698	240,8168007	260,8168007	8,09905E+11	17,6932	45774912776
50	-20	695	143.170,000	378,3781178	Censurado	358,37812	1,148698	411,6683543	431,6683543	0	17,6932	20,41471865
50	-20	417	85.902,000	293,0904297	Válido	273,09043	1,148698	313,6985274	333,6985274	3,03782E+12	17,6932	1,71694E+11
50	-20	1582	325.892,000	570,8695122	Censurado	550,86951	1,148698	632,7829025	652,7829025	0	17,6932	20,41471865
50	-20	807	166.242,000	407,7278504	Censurado	387,72785	1,148698	445,382344	465,382344	0	17,6932	20,41471865
50	-20	447	92.082,000	303,4501607	Válido	283,45016	1,148698	325,5987333	345,5987333	3,65943E+12	17,6932	2,06827E+11
50	-20	502	103.412,000	321,5773624	Censurado	301,57736	1,148698	346,4214201	366,4214201	0	17,6932	20,41471865
50	-20	380	78.280,000	279,7856322	Válido	259,78563	1,148698	298,4153284	318,4153284	2,3665E+12	17,6932	1,33752E+11

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5.0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068	
50	-20	291	59.946,000	244,8387224	Válido	224,83872	1,148698	258,2718706	278,2718706	1,14917E+12	17,6932	64949999702	
50	-20	259	53.354,000	230,984848	Válido	210,98485	1,148698	242,3579478	262,3579478	8,36154E+11	17,6932	47258501360	
50	-20	480	98.880,000	314,4519041	Válido	294,4519	1,148698	338,2364179	358,2364179	4,42692E+12	17,6932	20,41471865	
50	-20	1266	260.796,000	510,6818971	Censurado	490,6819	1,148698	563,645488	583,645488	0	17,6932	20,41471865	
50	-20	330	67.980,000	260,7297451	Válido	240,72975	1,148698	276,5258622	296,5258622	1,61688E+12	17,6932	91384468270	
50	-20	162	33.372,000	182,6800482	Válido	162,68005	1,148698	186,8703037	206,8703037	2,27878E+11	17,6932	12879383368	
50	-20	392	80.752,000	284,1689638	Válido	264,16896	1,148698	303,4504542	323,4504542	2,573E+12	17,6932	1,45423E+11	
50	-20	555	114.330,000	338,127195	Censurado	318,1272	1,148698	365,4321856	385,4321856	0	17,6932	20,41471865	
50	-20	820	168.920,000	410,9987835	Censurado	390,99878	1,148698	449,1396594	469,1396594	0	17,6932	20,41471865	
50	-20	512	105.472,000	324,7645301	Censurado	304,76453	1,148698	350,0825144	370,0825144	0	17,6932	20,41471865	
50	-20	139	28.634,000	169,2158385	Válido	149,21584	1,148698	171,4039882	191,4039882	1,47946E+11	17,6932	8361770193	
Total de Válidos					18							Somatoria	1,27861E+12
Total de Censurados					12							Somatoria ^{1/5}	263,8442546
												K0	283,8442546
												Kjc Médio	260,7314979
													230,7314979
													3,296164255
												Ln	1,192759446
												T-T0	62,77492962
												T0	-82,77492962
100	-20	193	39.758,000	199,3940822	Válido	179,39408	1,319508	236,7119106	256,7119106	7,43191E+11	29,6932	25029002988	
100	-20	58,6	12.071,600	109,8708333	Válido	89,870833	1,319508	118,5852754	138,5852754	23450593205	29,6932	789763084	
100	-20	186,1	38.336,600	195,7973442	Válido	175,79734	1,319508	231,9659864	251,9659864	6,71617E+11	29,6932	22618538375	
100	-20	188,4	38.810,400	197,0035533	Válido	177,00355	1,319508	233,5575888	253,5575888	6,94976E+11	29,6932	23405229902	
100	-20	191,7	39.490,200	198,721413	Válido	178,72141	1,319508	235,8243183	255,8243183	7,29362E+11	29,6932	24563256041	
100	-20	130,8	26.944,800	164,1487131	Válido	144,14871	1,319508	190,2053672	210,2053672	2,48951E+11	29,6932	8384107438	
100	-20	373,5	76.941,000	277,3824075	Válido	257,38241	1,319508	339,6181228	359,6181228	4,51808E+12	29,6932	1,52159E+11	
100	-20	371,9	76.611,400	276,7876442	Válido	256,78764	1,319508	338,833328	358,833328	4,46612E+12	29,6932	1,50409E+11	
100	-20	315,9	65.075,400	255,0988044	Válido	235,0988	1,319508	310,2147322	330,2147322	2,87284E+12	29,6932	96750917080	
100	-20	334,9	68.989,400	262,6583332	Válido	242,65833	1,319508	320,1895903	340,1895903	3,36539E+12	29,6932	1,13339E+11	
100	-20	133,4	27.480,400	165,7721328	Válido	145,77213	1,319508	192,3474823	212,3474823	2,63289E+11	29,6932	8866975884	
100	-20	112,2	23.113,200	152,0302601	Válido	132,03026	1,319508	174,2149727	194,2149727	1,60482E+11	29,6932	5404684946	
100	-20	212,5	43.775,000	209,2247595	Válido	189,22476	1,319508	249,6835671	269,6835671	9,70398E+11	29,6932	32680808928	
100	-20	231,2	47.627,200	218,2365689	Válido	198,23657	1,319508	261,5747209	281,5747209	1,22456E+12	29,6932	41240303155	
100	-20	247,3	50.943,800	225,7073326	Válido	205,70733	1,319508	271,4324527	291,4324527	1,47336E+12	29,6932	49619439224	
100	-20	212,3	43.733,800	209,1262776	Válido	189,12628	1,319508	249,5536195	269,5536195	9,67875E+11	29,6932	32595853888	
100	-20	224,4	46.226,400	215,0032558	Válido	195,00326	1,319508	257,3083386	277,3083386	1,1279E+12	29,6932	37985014805	
100	-20	100,6	20.723,600	143,956938	Válido	123,95694	1,319508	163,5621603	183,5621603	1,17062E+11	29,6932	3942368231	
100	-20	123,7	25.482,200	159,6314505	Válido	139,63145	1,319508	184,2448036	204,2448036	2,12313E+11	29,6932	7150217225	
100	-20	82,8	17.056,800	130,6016845	Válido	110,60168	1,319508	145,9397977	165,9397977	66201632505	29,6932	2229521658	
100	-20	223	45.938,000	214,3315189	Válido	194,33152	1,319508	256,4219765	276,4219765	1,1086E+12	29,6932	37335262889	
100	-20	74,4	15.326,400	123,7998384	Válido	103,79984	1,319508	136,964708	156,964708	48199593913	29,6932	1623253604	
100	-20	683,1	140.718,600	375,1247792	Válido	355,12478	1,319508	468,5899555	488,5899555	2,25925E+13	29,6932	17,20314213	
100	-20	288,5	59.431,000	243,7847411	Válido	223,78474	1,319508	295,2857362	315,2857362	2,24498E+12	29,6932	75605839636	

specimen width W, mm	test W, mm temperature centigrade	fracture resistance Jo, N/mm	E*Jc	Raiz(E*Jc)	Limite	Jc - 20	Conv Pol	Mult	Mult + 20	Kjc-20 ^{5,0}	r-0,3068	Kjc-20 ⁵ / r - 0,3068
100	-20	299,8	61.758,800	248,5131787	Válido	228,51318	1,319508	301,524947	321,524947	2,49239E+12	29,6932	83938121526
100	-20	301,3	62.067,800	249,1341004	Válido	229,1341	1,319508	302,3442582	322,3442582	2,52644E+12	29,6932	85084729593
100	-20	384,1	79.124,600	281,2909526	Válido	261,29095	1,319508	344,7754789	364,7754789	4,87171E+12	29,6932	1,64068E+11
100	-20	324,6	66.867,600	258,5877027	Válido	238,5877	1,319508	314,8183612	334,8183612	3,09243E+12	29,6932	1,04146E+11
100	-20	588,7	121.272,200	348,2415828	Válido	328,24158	1,319508	433,1173652	453,1173652	1,52415E+13	29,6932	5,133E+11
100	-20	318,2	65.549,200	256,02578	Válido	236,02578	1,319508	311,4378838	331,4378838	2,92993E+12	29,6932	98673423184
Total de Válidos					30						Somatoria	2,00294E+12
Total de Censurados					0						Somatoria ^{1/5}	288,6246909
											K0	308,6246909
											Kjc Médio	283,341168
												253,341168
												3,619159542
											Ln	1,286241828
											T-T0	67,69490742
											T0	-87,69490742
200	-20	117	24.102,000	155,2481884	Válido	135,24819	1,515717	204,9979197	224,9979197	3,62032E+11	14,6932	24639442651
200	-20	234	48.204,000	219,5540936	Válido	199,55409	1,515717	302,4674455	322,4674455	2,53159E+12	14,6932	1,72297E+11
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,515717	260,7427185	280,7427185	1,20521E+12	14,6932	82024682137
200	-20	175	36.050,000	189,8683755	Válido	169,86838	1,515717	257,4723108	277,4723108	1,1315E+12	14,6932	77008074408
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,515717	246,5768441	266,5768441	9,1151E+11	14,6932	62036181584
200	-20	166	34.196,000	184,921605	Válido	164,92161	1,515717	249,9744089	269,9744089	9,76063E+11	14,6932	66429557617
200	-20	162	33.372,000	182,6800482	Válido	162,68005	1,515717	246,5768441	266,5768441	9,1151E+11	14,6932	62036181584
200	-20	179	36.874,000	192,0260399	Válido	172,02604	1,515717	260,7427185	280,7427185	1,20521E+12	14,6932	82024682137
200	-20	199	40.994,000	202,4697508	Válido	182,46975	1,515717	276,5724242	296,5724242	1,61825E+12	14,6932	1,10136E+11
200	-20	239	49.234,000	221,8873588	Válido	201,88736	1,515717	306,0040143	326,0040143	2,68309E+12	14,6932	1,82608E+11
200	-20	112	23.072,000	151,8947004	Válido	131,8947	1,515717	199,9149824	219,9149824	3,1932E+11	14,6932	21732531856
200	-20	236	48.616,000	220,4903626	Válido	200,49036	1,515717	303,886564	323,886564	2,59154E+12	14,6932	1,76377E+11
200	-20	125	25.750,000	160,4680654	Válido	140,46807	1,515717	212,9097737	232,9097737	4,375E+11	14,6932	29775674065
200	-20	168	34.608,000	186,0322553	Válido	166,03226	1,515717	251,6578399	271,6578399	1,00937E+12	14,6932	68696709032
200	-20	187	38.522,000	196,2702219	Válido	176,27022	1,515717	267,1756955	287,1756955	1,3614E+12	14,6932	92654891717
Válidos					15						Somatoria	1,31048E+12
Censurados					0						Somatoria ^{1/5}	265,1464214
											K0	285,1464214
											Kjc Médio	261,9195949
												231,9195949
												3,31313707
											Ln	1,197895496
											T-T0	63,04523994
											T0	-83,04523994
Resumo do Kmin 20 com 1/5,0												

