

## ABSTRACT

The creation of successful products is linked with the ability to reach longings and desires of costumers. Several factors compose these desires and a group of factors have a special characteristic, this group embraces reliability, maintainability and safety. The management of these three factors carries in a deep look of the entire product's life cycle and not only in design, manufacture or in functional test phase.

The following work intend discuss an implementation of a management system for reliability, maintainability and safety in companies that develop products seeking profit and keeping intense attention to rules from concurrent engineering.

Will be discussed aspects of this implementation, firstly defining what should be managed, the reasons to manage, what kind of organizational structure should control this management system, what management tools are relevant and how these tools can be implemented, what special attention any aspect needs and what results are expected.

Finally will be presented an implementation case of one of most important tool for the management system, the system FRACAS, "Failure Reporting, Analysis and Corrective Action System", that organizes and standardizes the data collection, making some analysis possible and creating basis for the decision making process.

During the development of all this discussion a broad number of subjects will be pointed, like product's life cycle, designs, projects, quality, information systems, data base technology e obviously reliability, maintainability and safety.

The case will start from a preexistent product that already have available field data, following to construction of an information system capable to collect, organize, filter and pre-analyze the information.

The main goal of this work is to orientate companies that develop products that demand huge engineering efforts in optimization of making decisions process, showing some options to control their operations, their

programs and projects, concerning reliability, maintainability, availability and safety.

Keywords: Engineering, Program Management, Project Management, Reliability, Maintainability and Safety.