RELIABILITY for ENGINEERING MANAGERS

"Unfortunately, the development of quality and reliability has been afflicted with more nonsense than any other branch of engineering."

Patrick DT O'Connor

… a 1-day course for engineering managers:

- What is wrong with conventional wisdom on reliability engineering?
- What is the real meaning of Mean Time Between Failure?
- Why should prototypes be tested beyond specification limits (as in HALT)?
- Why should reliability not be the responsibility of logistics or maintenance?
- What can be learned from the latest reliability engineering standards?

The objective of this course is to provide engineering managers (including systems engineers, project managers, quality managers, logistics managers and maintenance managers) with an overview of modern reliability engineering. The course refers to conventional wisdom on reliability to indicate that many "industry standard" practices are incorrect and misleading. It argues that the focus of reliability engineering should be on value adding "engineering" activities, and not on "accounting" activities. Reliability can be defined as the "absence of failures". The emphasis of reliability engineering should therefore be on "failure prevention" during development and production, and not on "failure correction" during operations. Course topics have been selected to show "what" should be done to improve reliability, and not on "how" to perform individual reliability tasks.

Course contents

- What is reliability engineering?
- The real meaning of MTBF
- Why do products fail?
- Reliability programmes
- Reliability analysis methods
- Reliability testing and HALT
- Examples of good practices
- Management of reliability

Course presenter

Albertyn Barnard received the degrees B Eng (Electronics) *cum laude*, B Eng Hons (Electronics), M Eng (Electronics) and M Eng (Engineering Management) from the University of Pretoria. He has provided consulting services to defence, aerospace, nuclear, industrial and commercial companies since 1982. Lambda Consulting specialises in reliability engineering applicable to the design and development phase of products. Special interest areas include reliability analysis of electronic designs, and Highly Accelerated Life Testing. Albertyn has presented numerous papers on reliability engineering at national and international symposia. He won the Ad Sparrius Best Paper Award at the 2nd INCOSE SA conference in 2004, and the Gold Award at the International Applied Reliability Symposium (Europe) in 2009. He is a part-time lecturer at the Graduate School of Technology Management at the University of Pretoria.

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