

# **RSA-MIL-STD-105 Part 1**

## ***PART 1: SYSTEM ENGINEERING: TO DESIGN FOR OR TO GROW RELIABILITY?***

### **SCOPE**

1. This Part of the Standard shows that Reliability Engineering is about DESIGNING Reliable Systems through the practice of REAL System Engineering and the INTEGRATION of Reliability (and other) requirements through a COST-EFFECTIVENESS BREAKDOWN, DECISION-THINKING and MULTIOBJECTIVE DECISION ANALYSIS.
2. This part of the Standard shall always apply to all phases of the life cycle of an equipment or system being procured for the SADF.
3. This Standard is in a number of Parts and each Part is subdivided into Sections which set out specific practices and procedures.  
The 11 Parts on reliability are:  
  
PART 1: System Engineering: To design for or to grow reliability?  
PART 2: Guidelines for the design of reliable systems.  
PART 3: Apportionment, modelling and calculation of reliability parameters.  
PART 4: Prediction of reliability parameters.  
PART 5: Reliability design evaluation and assurance.  
PART 6: Test, evaluation and corrective action for improving reliability.  
PART 7: Cost-effectiveness and reliability through decision thinking and multi objective decision analysis.  
PART 8: The competitive edge: Quality and reliability through world-class manufacturing.  
PART 9: No logistic support analysis or life-cycle cost analysis without reliability inputs.  
PART 10: Management of, and requirements for, Reliability and Maintainability programs and plans.  
PART 11: A guide to facilitate the use of Part 10.
4. Although each Part (except Part 11) may be used as a separate Standard, it is desirable that the reliability and maintainability concept in this RSA-MIL-STD be considered as a whole.
5. This RSA-MIL-STD, in total or in part shall be incorporated in, or used for, all future designs, specifications, tenders, contracts, purchase orders etc. and wherever practicable, by amendment to those already in existence.
6. If any difficulty arises which prevents application of this RSA-MIL-STD ,  
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RSA-MIL-STD STEERING COMMITTEE (RMSS)  
Quality Systems Improvement and Standardisation (QSI&S)  
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0001  
shall be informed so that a remedy may be sought.
7. This Part of the MIL-STD has been devised for the use of the SADF, Armcor and its Project Managers, Engineers, Clients, Suppliers and Contractors in the execution of contracts, but nor

the SADF nor Armscor will be liable in any way whatever where this MIL-STD is used for other purposes.

8. Any enquiries regarding this MIL-STD in relation to an invitation to tender, request-for-proposal or contract in which it is invoked, are to be addressed to the responsible technical and supervisory authority named in that invitation to tender, request-for-proposal or contract.
9. The provisions of this MIL-STD in total or in part, apply to materiel when called up in the Request-for-Proposal, Tender, Contract or Purchase Order. If any inconsistency exists between the Contractual requirements and this MIL-STD, the former shall prevail.
10. In the event of a conflict between the text of this MIL-STD and the references cited herein, the text of this MIL-STD shall take precedence.
11. Any user of this Standard is responsible for its appropriate and correct application and for complying with contract requirements.