RSA-MIL-STD-127: Vol 1

ERGONOMIC DESIGN: ANTHROPOMETY AND ENVIRONMENT

SCOPE

1. Scope

This standard establishes general ergonomic design criteria for systems, subsystems, equipment and facilities in the RSA.

2. Purpose

The purpose of this standard is to present ergonomic design criteria, principles and practices to reach overall design objectives through integration of the human into the system, subsystem, equipment and facility and achieve effectiveness, simplicity, efficiency, reliability and safety of system operation, training and maintenance. The purpose of this standard is furthermore to provide South African specific ergonomic design criteria. The design criteria, principles, and practices contained in this document will therefore supersede similar information contained in MIL-Std-1472F : Human Engineering Design Criteria for Military Systems, Equipment and Facilities; unless otherwise stated.

3. Application

This standard shall be applied to the design of all systems, subsystems, equipment and facilities. Nothing in this standard shall be construed as limiting the selection of hardware, materials or processes to the specific items described herein. Unless otherwise stated in specific provisions, this standard is applicable to the design of systems, subsystems, equipment and facilities for use by both men and women. This standard is not intended to be a criterion for limiting use of material already in the field in areas such as anthropometry.

The approach that was used in determining the format of this standard is the workstation analysis approach, For each part of a system where a human element is used, the interaction between the person, machine, the workspace and environment in which they operate must be optimised. The ergonomic approach at this level is to define the profiles and characteristics of the likely range of end-users of the system, equipment or facility. Next to examine the task and operational sequence which the user must follow, and work outwards from this, considering the interaction firstly with the machine, next with the immediate workspace, and finally with the general environment in which the task is carried out. This approach is applicable to both separate workstations within any large system and the consideration of single user-equipment combinations. It differs from traditional approaches to design in that it places the human at the centre of the frame of reference and works outwards to consider machine (equipment), workspace and environment and interactions among elements, this is commonly understood as the Human Centric Model. The format of par 5 - *"Detailed Requirements"* therefore follows the workstation analysis approach.