



Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities^{1,2}

This standard is issued under the fixed designation F1166; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This practice provides ergonomic design criteria from a human-machine perspective for the design and construction of maritime vessels and structures and for equipments, systems, and subsystems contained therein, including vendor-purchased hardware and software.

1.1.1 The focus of these design criteria is on the design and evaluation of human-machine interfaces, including the interfaces between humans on the one side and controls and displays, physical environments, structures, consoles, panels and workstations, layout and arrangement of ship spaces, maintenance workplaces, labels and signage, alarms, computer screens, material handling, valves, and other specific equipments on the other.

1.2 The criteria contained within this practice shall be applied to the design and construction of all hardware and software within a ship or maritime structure that the human crew members come in contact in any manner for operation, habitability, and maintenance purposes.

1.3 Unless otherwise stated in specific provisions of a ship or maritime structure design contract or specification, this practice is to be used to design maritime vessels, structures, equipment, systems, and subsystems to fit the full potential user population range of 5th % females to 95th % males.

1.4 This practice is divided into the following sections and subsections:

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¹ This practice is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.07 on General Requirements.

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² A user-friendly format of this standard is available for download from ASTM's website. While the content is the same, ASTM Practice F1166 in standard published format should be considered the official version (for any legal or liability purposes).

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