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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, Subcommittee SC 1, *Lifesaving and fire protection*.

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Introduction

The International Convention for the Safety of Life at Sea (SOLAS), 1974 requires all life-saving appliances and arrangements to comply with the requirements of the LSA Code and to be tested in accordance with the recommendations of the IMO. The revised recommendation on testing of life-saving appliances, as adopted by IMO Resolution MSC.81(70), prescribes in paragraph 12.2.2 and 12.3.2.2 the execution of a static load test to the structural attachment to the ship of a marine evacuation system. However, this resolution does not refer to any specific calculation method for this test. This document is intended to provide specifications for an appropriate calculation method for this test in order to facilitate consistent implementation by maritime administrations when approving marine evacuation systems.

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Ships and marine technology — Marine evacuation systems — Load calculations and testing

1 Scope

This document specifies a calculation method for the application of a static load test to the structural attachment of marine evacuation systems to ships.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

International Maritime Organization, *The International Convention for the Safety of Life at Sea (SOLAS)*, 1974, as amended

International Maritime Organization, *The International Life-Saving Appliance (LSA) Code*, as adopted by IMO Resolution MSC 48(66) as amended

International Maritime Organization, *The Revised recommendation on testing of life-saving appliances*, as adopted by IMO Resolution MSC.81(70) as amended

International Maritime Organization, *International Code on Intact Stability, 2008 (2008 IS Code)*, as adopted by IMO Resolution MSC.267(85) as amended

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
marine evacuation system
MES
appliance for the rapid transfer of persons from the embarkation deck of a ship to a *floating platform (3.3)* or survival craft by means of a *passage* (3.2)

3.2
passage
integral component of a *marine evacuation system* (3.1) to provide safe descent of persons from the embarkation station to the *floating platform* (3.3) or survival craft

Note 1 to entry: The passage can be an inflatable or rigid slide, a vertical passage or any other arrangement providing the same function.

3.3
floating platform
inflatable structure which may be fitted to the bottom of the *passage* (3.2) to hold evacuees awaiting entry to survival craft

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3.4
stowage container
arrangement providing means for stowing a *marine evacuation system* (3.1) and so constructed as to withstand heavy conditions encountered at sea

3.5
structural attachment
attachment of a *marine evacuation system* (3.1) to the ship structure designed to withstand loads calculated in accordance with this document

Note 1 to entry: Such attachments may include blocks, falls, pad eyes, links, fastenings and all other fittings used for restraining the *floating platform* (3.3), if fitted, and survival craft(s) to the ships side during evacuation.

4 Load calculations

4.1 Load calculation

The load imposed by the maximum number and size of fully loaded liferafts for which the system is designed, attached to the loaded floating platform, if fitted, with the ship moving through the water at 3 kn against a head wind of force 10 on the Beaufort scale shall be calculated in accordance with the method in Annex A.

4.2 Additional loads

Where significant gravitational and moment loads of the passage, floating platform, if fitted, or survival craft(s) are imposed to the structural attachments in the fully deployed condition of the marine evacuation system, these loads shall be added when performing the static load tests required.

4.3 Load distribution

Where the loads calculated in 4.1 and 4.2 are shared by more than one structural attachment, the calculated load for load testing of individual structural attachments may be reduced, taking into consideration the distribution of loads in the scenario described in 4.1.

5 Load testing

5.1 Static load testing

All structural attachments of the MES shall be subjected to a static load of 2,2 times the maximum load calculated in accordance with Clause 4. The load shall be applied to the structural attachments for a period of no less than 30 min and in the same direction as the load is applied during service. The structural attachments may be tested with or without the MES in place.

5.2 Load test acceptance criteria

On completion of this test, there shall be no evidence of significant deformation, signs of any fracture, stranding to its connections or any other damage as a result of this factory test.

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