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Foreword

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This document was prepared by ISO/TC 8, *Ships and marine technology*, Subcommittee SC 1, *Maritime safety.*

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Introduction

The International Life-saving Appliance (LSA) Code states in paragraph 6.2.2.1.8 that a marine evacuation system shall be designed to, as far as practicable, remain effective under conditions of icing. This document is intended to provide uniform test specifications in support of this critical functional requirement.

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Ships and marine technology — Marine evacuation systems — Testing under conditions of icing

1 Scope

This document provides specifications for a test of marine evacuation systems (MES) under conditions of icing in support of the requirement in paragraph 6.2.2.1.8 of the International Life-saving Appliance (LSA) Code.

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.

IMO International Code on Intact Stability. 2008 (2008 IS Code) adopted by 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 survival craft by means of a *passage* (3.2)

3.2
passage
designated connection between the embarkation station and the survival craft(s) which can be an inflatable or rigid slide, a vertical *passage* (3.4) or any other arrangement that can provide for safe transfer to survival crafts

3.3
inclined passage
angled (to the horizontal) inflatable or rigid *passage* (3.2), which provides access for persons to a *floating platform* (3.5) or directly into survival crafts

3.4
vertical passage
passage (3.2) providing vertical controlled descent for persons to a *floating platform* (3.5) or directly into survival crafts

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3.5
floating platform
platform that may be fitted at the bottom of the *passage* (3.2) to hold evacuees awaiting entry to survival craft

Note 1 to entry: In some system configurations, a survival craft may also serve as a platform.

3.6
stowage container
container that stows the *marine evacuation system* (3.1) or part of it

3.7
integrated survival craft
survival craft designed to be deployed simultaneously with the *passage* (3.2)

4 Test arrangements and functions to be tested

Marine evacuation systems (MES) encompass a wide range of different configurations and designs that can be exposed to icing. The test is intended to demonstrate that a MES can be deployed satisfactorily under conditions of icing on the basic structure of the system, which means the stowed system, including integrated survival crafts, shall be exposed to the icing test. The icing test does not need to include a complete MES system, but only parts of the system that would be exposed to icing conditions and are critical to a safe deployment and use of the system. The following functions shall be tested under the conditions of icing described in Clause 5.

4.1 Deployment

It shall be demonstrated that the system can be deployed by one person.

4.2 Stowage container

It shall be demonstrated, when the system is activated, that the passage, platform and integrated survival crafts will deploy satisfactorily.

4.3 Bowsing/retaining system

It shall be demonstrated that winches for bowsing/retaining lines can be operated satisfactorily when the system is activated.

4.4 Access to the passage

If the entrance to the passage is positioned on open deck, it shall be demonstrated, when the system is activated, that there is unobstructed access to the passage.

5 Test procedure

The conditions of icing during the functional test described in Clause 4, shall be equivalent to a minimum of 30 kg per square metre as required in 6.3.1.1 of the IMO Intact Stability Code 2008.

5.1 Ice accretion procedure

The system shall be arranged for a test in a location at temperatures below at least –10 °C and in a way that allows for a verification of a proper deployment function.

An ice layer of at least 3,5 cm thickness shall be built onto the parts and areas of the system with potential critical functions to the operation of the system by spraying cold fresh water from angles above 45 ° to the horizontal plane, with intermittent pauses to let icing form.

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