INSPECTION AND SURVEY REQUIREMENTS FOR ACCOMMODATION LADDERS

Proposal for an amendment to SOLAS and associated guidelines

Report of an informal group

1 As instructed, an informal group has prepared the final text of a proposed new SOLAS regulation on Means of embarkation and associated Guidelines for construction, maintenance and inspection of accommodation ladders and gangways, set out in annexes 1 and 2, respectively, based on document DE 50/5.

Action requested of the Sub-Committee

2 The Sub-Committee is invited to agree to:

.1 the draft SOLAS regulation on Means of embarkation on and disembarkation from ships (annex 1), for submission to MSC 83 for approval with a view to adoption at MSC 84; and

.2 the draft Guidelines for construction, maintenance and inspection of accommodation ladders and gangways (annex 2), for submission to MSC 83 for approval, in principle, and final approval at MSC 84 in conjunction with the adoption of new SOLAS regulation referred to in subparagraph .1, and request the Secretariat to prepare a draft MSC circular.

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ANNEX 1

DRAFT AMENDMENTS TO SOLAS CHAPTER II-1

CHAPTER II-1
CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

The following new regulation 3-[9] is added after existing regulation II-1/3-8:

“Regulation 3-[9]

Means of embarkation on and disembarkation from ships

1 Ships constructed on or after [date of entry into force] shall be provided with means of embarkation on and disembarkation from ships for use in port and in port-related or pilotage operations, such as gangways and accommodation ladders, in accordance with paragraph 2 unless the Administration deems that compliance with a particular provision is unreasonable or impractical.

2 The means of embarkation and disembarkation required in paragraph 1 shall be constructed and installed based on the guidelines developed by the Organization.

3 For all ships the means of embarkation and disembarkation shall be inspected and maintained in suitable condition for its intended purpose, taking into account any restrictions related to safe loading. All wires used to support the means of embarkation and disembarkation shall be maintained as specified in regulation III/20.4.”

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* Circumstances where compliance may be deemed unreasonable or impractical may include where the ship:

.1 has small freeboards and is provided with boarding ramps; or

.2 travels between designated ports where appropriate shore accommodation/embarkation ladders (platforms) are provided.

** Refer to the Guidelines for construction, maintenance and inspection of accommodation ladders and gangways (MSC.1/Circ.[...]).
ANNEX 2

DRAFT GUIDELINES FOR CONSTRUCTION, MAINTENANCE AND INSPECTION OF ACCOMODATION LADDERS AND GANGWAYS

1 APPLICATION

1.1 This document is intended to provide guidelines on the construction, installation, maintenance and inspection/survey of accommodation ladders and gangways required under the regulation II-1/3-[9] of the 1974 SOLAS Convention, as adopted by resolution MSC.[...(...)].

2 CONSTRUCTION

2.1 Equipment and arrangements for accommodation ladders or gangways which are provided on board ships on or after [date of entry into force of SOLAS amendment] should meet the international standards such as ISO 5488-1979 Shipbuilding – accommodation ladders, ISO 7061:1993 Shipbuilding – aluminium shore gangways for seagoing vessels and/or national standards and/or other requirements recognized by the Administration. Equipment and arrangements of ships constructed before [date of entry into force of SOLAS amendment] which are replaced after that date should, in so far as reasonable and practicable, comply with these guidelines.

2.2 The structure of the ladders and its fittings and attachments should be such as to allow regular inspection, maintenance of all parts, and if necessary, lubrication of its pivot pin. Special care should be taken to ensure the welding connection works are properly performed.

2.3 The construction and test of the accommodation ladder winch should be in accordance with ISO 7364:1983 Shipbuilding and marine structures – deck machinery – accommodation ladder winches.

3 INSTALLATION

3.1 Location

As far as practicable, the boarding arrangements should be sited clear of the working area and should not be placed where cargo or other suspended load may pass overhead.

3.2 Lighting

Adequate lighting should be provided to illuminate the boarding equipment, the position on deck where person embark or disembark and controls of the arrangement.

3.3 Lifebuoy

A lifebuoy equipped with a self-igniting light plus buoyant lifeline should be available for immediate use in the vicinity of the boarding arrangement. This paragraph does not intend to provide additional lifebuoys other than those required under SOLAS chapter III.
3.4 Arrangement

3.4.1 Upon installation, the arrangement and appropriateness of the ladders and associated davit, storing facilities, winch and other fittings should be confirmed.

3.4.2 Each ladder should be of such a length to ensure at a maximum design operating angle of inclination, the lowest platform will be of no more than 600 mm above the waterline in the lightest seagoing condition as defined in SOLAS regulation III/3.13.

3.4.3 For ships on which the height of the embarkation/disembarkation deck exceeds 20 m above the waterline specified in paragraph 3.4.2 above and on other ships for which the Administration considers compliance with the provisions of that sub-paragraph is impractical, an alternative means of providing safe access to the ship or supplementary means of safe access to the bottom platform of the accommodation ladder may be accepted.

3.5 Marking

3.5.1 Each gangway or accommodation ladder should be clearly marked at each end with a plate visible by a person before entering that end of the ladder, which shows restrictions on the safe operation and loading of the ladder including maximum permitted design angle of inclination, design loading, maximum load on bottom end plate, etc. Where the maximum operational loading is less than the design loading, the maximum operational loading should also be shown on the marking plate.

3.5.2 Additional information, which need not be included in the marking required by paragraph 3.5.1 but should be shown in the ship’s planned maintenance records, should include the date of the most recent inspection, the name of the person or body who carried out that inspection, due date for the next inspection and dates of renewal of wires used to support the boarding arrangement.

3.6 Test

3.6.1 After installation, the winch and the accommodation ladder should be operationally tested to confirm proper operation and condition of the winch and the ladder after the test.

3.6.2 The winch should be tested as a part of the complete accommodation ladder unit through minimum two hoisting and lowering of the accommodation ladder in accordance with onboard test requirement specified in ISO 7364:1983.

3.6.3 Every new accommodation ladder should be subjected to a static load test of the specific maximum working load upon installation.

4 Maintenance

4.1 Positioning

4.1.1 Gangways should not be used at an angle of inclination greater than 30° from the horizontal and accommodation ladders should not be used at an angle greater than 55° from the horizontal, unless designed and constructed for use at angles greater than these and marked as such as specified in paragraph 3.5.1.
4.1.2 Gangways and other access equipment should never be secured to a ship’s guardrails unless they have been designed for that purpose. If positioned through an open section of bulwark or railings, any remaining gaps should be adequately fenced.

4.1.3 Adequate lighting for boarding equipment and the immediate approaches should be ensured from the ship and/or the shore in hours of darkness.

4.2 Rigging

4.2.1 It should be ensured that the gangway or accommodation ladder is correctly rigged. Rope guardrails should be tight and all stanchions should be fitted into place and properly secured.

4.2.2 A safety net should be mounted whenever possible where a person may fall from boarding equipment or between the ship and quayside. The net should be securely rigged around both sides of the boarding equipment for the entire length of the equipment and the shipboard side of the net should be secured to the side of the ship.

4.2.3 Steps, handrails and platforms should be free of oil, grease and ice.

4.3 Maintenance

4.3.1 Gangways and accommodation ladders including associate winch and fittings should be properly maintained and inspected by competent persons at appropriate intervals as specified in SOLAS regulation III/20.7 in accordance with manufacturers’ instructions. Additional checks should be made each time the ladder is rigged, looking out for signs of distortion, cracks and corrosion. Close examination should be made for possible corrosion especially when an aluminium ladder has fittings made of mild steel.

4.3.2 Bent stanchions should be replaced or repaired, and guard ropes inspected for wear and renewed where necessary.

4.3.3 Moving parts should be free to turn, and greased as appropriate.

4.3.4 The lifting equipment should be inspected, tested and maintained paying careful attention to the condition of the hoist wire. The wires used to lift the boarding equipment should be renewed, when necessary, as required by SOLAS regulation II-1/3-[9].

4.3.5 Arrangements should also be made to examine the underside of gangways and accommodation ladders at regular intervals.

4.3.6 All inspections, maintenance work and repairs for accommodation ladders and gangways should be recorded in order to provide an accurate history for each appliance.
5 EXAMINATION AND OPERATIONAL TEST DURING SURVEYS REQUIRED BY SOLAS REGULATIONS I/7 AND I/8

5.1 Accommodation ladders/gangways and davits

5.1.1 Accommodation ladder

5.1.1.1 The following items should be thoroughly examined during annual surveys required by SOLAS regulations I/7 and I/8 and checked for satisfactory condition of the accommodation ladder:

.1 steps;
.2 platforms;
.3 all support points such as pivots, rollers, etc;
.4 all suspension points such as lugs, brackets, etc;
.5 stanchions, rigid handrails, hand ropes and turn tables;
.6 davit structure, wire and sheaves, etc.; and
.7 any other relevant provisions stated in these guidelines.

5.1.1.2 At every five-yearly survey, upon completion of the examination specified in paragraph 5.1.1.1, the accommodation ladder should be operationally tested with the specific maximum operational load of the ladder.

5.1.2 Gangway

5.1.2.1 The following items should be thoroughly examined during annual surveys required by SOLAS regulations I/7 and I/8 and checked for satisfactory condition of the gangway:

.1 tread;
.2 side stringer, cross-member, decking, deck plates, etc.;
.3 all support points such as wheel, roller, etc;
.4 stanchions, rigid handrails, hand ropes; and
.5 any other relevant provisions stated in these guidelines.

5.1.2.2 At every five-yearly survey, upon completion of the examination specified in paragraph 5.1.2.1, the gangway should be operationally tested with the specific maximum operational load of the ladder.
5.2 Winch

5.2.1 During annual surveys required by SOLAS regulations I/7 and I/8, the following items should be examined for satisfactory condition:

.1 brake mechanism including condition of brake pads and band brake, if fitted;
.2 remote control system; and
.3 power supply system (motor).

5.2.2 At every five-yearly survey, upon completion of the examination specified in paragraph 5.2.1, the winch should be operationally tested with the specific maximum operational load of the accommodation ladder.

5.3 Fittings and davits

All fittings and davits on ship’s deck associated with accommodation ladders should be examined for satisfactory condition.

5.4 Means of access to deck

The fittings or structures for means of access to deck such as handholds in a gateway or bulwark ladder and stanchion should be examined for satisfactory condition.