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RESOLUTION A.275(VIII)
adopted on 20 November 1973

RECOMMENDATION ON PERFORMANCE STANDARDS FOR
MECHANICAL PILOT HOISTS

THE ASSEMBLY,

NOTING Article 16(i) of the Convention on the Inter-Governmental
Maritime Consultative Organization concerning the functions of the Assembly,

HAVING TAKEN INTO ACCOUNT the provisions of the new Regulation 17,
Chapter V of the International Convention for the Safety of Life at Sea, 1960
adopted by Resolution A.263(VIII),

HAVING CONSIDERED the Report of the Maritime Safety Committee on its
twenty-seventh session,

RESOLVES

- (a) to adopt the Recommendation on Performance Standards for
Mechanical Pilot Hoists, appearing at Annex hereto,
- (b) to invite Member Governments to draw the attention of all
concerned to the need for strict compliance with the
relevant provisions concerning pilot ladders and mechanical
pilot hoists,
- (c) to invite Member Governments to ensure that mechanical pilot
hoists conform to performance standards not inferior to those
shown in the Annex to this Resolution.

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ANNEX

RECOMMENDATION ON

PERFORMANCE STANDARDS FOR MECHANICAL PILOT HOISTS

1. GENERAL

- 1.1 Mechanical pilot hoists and ancillary equipment should be of such design and construction as to ensure that the pilot can be embarked and disembarked in a safe manner. The hoist should be used solely for the embarkation and disembarkation of personnel.
- 1.2 The working load should be the sum of the weight of the ladder and falls in the fully lowered condition and the maximum number of persons which the hoist is designed to carry the weight of each person being taken as 150 kgs.
- 1.3 Every pilot hoist should be of such construction that when operating under the defined working load each component should have an adequate factor of safety having regard to the material used, the method of construction and the nature of its duty.
- 1.4 In selecting the materials of construction, due regard should be paid to the conditions under which the hoist will be required to operate.
- 1.5 The pilot hoist should be located within the parallel body length of the ship and clear of all discharges.
- 1.6 The operator should be able to control the hoist when he is in a standing position and looking over the ship's side for observing the hoist, even in its lowest position.
- 1.7 The manufacturer of the pilot hoist should supply with each installation an approved maintenance manual, together with a maintenance log;

Each installation should be kept in good order and maintained in accordance with the instructions of the manual. All maintenance and repairs of the installation should be recorded in the log.

2. CONSTRUCTION

2.1 The hoist should generally consist of the following three main parts, but hoists of other equally efficient constructions may be considered:

- (a) a mechanical powered appliance together with means for a safe passage from the hoist to the deck and vice versa;
- (b) two separate falls;
- (c) a ladder consisting of two parts:
 - (i) a rigid upper part for the transportation of the pilot upwards or downwards;
 - (ii) a lower part consisting of a short length of pilot ladder, which enables the pilot to climb from the pilot launch to the upper part of the hoist and vice versa.

2.2 Mechanical powered appliance

- (a) The source of power for the winches may be electrical, hydraulic or pneumatic. In the case of a pneumatic system an exclusive air supply should be provided with arrangements to control its quality. It may be necessary to give special consideration to the selection of the type of source of power for ships engaged in the carriage of flammable cargoes. All systems should be capable of efficient operation under the conditions of vibration, humidity and change of temperature likely to be experienced in the vessel in which they are installed.
- (b) The design of the winch should include a brake or other equally effective arrangement such as a properly constructed worm drive, which is capable of supporting the working load in the event of power failure.

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- (c) Efficient hand gear should be provided to lower or recover the pilot(s) at a reasonable speed in the event of power failure. The brake or other arrangement in subparagraph (b) above should be capable of supporting the working load when the hand gear is in use.
- (d) Crank handle(s) provided for manual operation should, when engaged, be interlocked so that the power supply is automatically cut off.
- (e) Hoists should be fitted with safety devices to automatically cut off the power supply when the ladder comes against any stop to avoid overstressing the falls or other parts of the hoist. However, in the case of hoists operated by pneumatic power, if the maximum torque available from the air motor cannot result in overstressing of the falls or other parts of the hoist, the safety cut-out device may be omitted.
- (f) All hoist controls should incorporate an emergency stop to cut off the power supply.
- (g) The winch controls should be clearly and durably marked to indicate the action to "Hoist", "Stop" and "Lower". The movement of these controls should correspond with the movement of the hoist returning to the stop-position when released.
- (h) Efficient arrangements should be provided to ensure that the falls wind evenly onto the winch-drums.
- (i) Pilot hoists should be securely attached to the structure of the ship. Proper and strong attachment points should be provided for hoists of the portable type on each side of the ship. Attachment of the pilot hoist should not be solely by means of the ship's side rails.

- (j) The winch should be capable of hoisting or lowering the pilot(s) at a speed of between 15 and 30 metres per minute.
- (k) There should be safe means of access between the top of the hoist and the deck and vice versa; such access should be gained directly by a platform securely guarded by handrails.
- (l) Any electrical appliance associated with the ladder section of the hoist should be operated at a voltage not exceeding 25 volts.

2.3 Falls

- (a) Two separate wire rope falls should be used, made of flexible steel of adequate strength and resistant to corrosion in a salt-laden atmosphere.
- (b) Wire ropes should be securely attached to the winch-drums and the ladder. These attachments should be capable of withstanding a proof load of not less than 2.2 times the load on such attachments. The falls should be maintained at a sufficient relative distance from one another.
- (c) The wire rope falls should be of sufficient length to allow for all conditions of freeboard encountered in service and to retain at least three turns on the winch-drums with the hoist in its lowest position.

2.4 Ladder section

The ladder section should comprise a rigid and a flexible part, complying with the following requirements:

- (a) The rigid part should be not less than 2.50 metres (7 $\frac{1}{2}$ feet) in length and be equipped in such a way that the pilot can maintain a safe position whilst being hoisted or lowered. Such parts should be provided with:
 - (i) a sufficient number of steps to provide a safe and easy access to and from the platform referred to in paragraph 2.2, sub-paragraph (k);

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- (ii) suitable protection against extremes of temperature to provide safe handholds and fitted with non-skid steps;
 - (iii) a spreader at the lower end of not less than 1.80 metres (5 feet 10 inches). The ends of the spreader should be provided with rollers of adequate size which should roll freely on the ship's side during the whole operation of embarking or disembarking;
 - (iv) an effective guard ring, suitably padded, so positioned as to provide physical support for the pilot without hampering his movements;
 - (v) adequate means for communication between the pilot and the operator and/or the responsible officer who supervises the embarkation or disembarkation of the pilot;
 - (vi) whenever possible an emergency stop switch within easy reach of the pilot by means of which he may cut off the power.
- (b) Below the rigid part mentioned in sub-paragraph (a) above, a section of pilot ladder comprising 8 steps should be provided, constructed in accordance with the following requirements:
- (i) The steps of the pilot ladder should be:
 - (1) of hardwood, or other material of equivalent properties, made in one piece free of knots, having an efficient non-slip surface; the four lowest steps may be made of rubber of sufficient strength and stiffness or of other suitable material of equivalent characteristics;

- (2) not less than 480 millimetres (19 inches) long, 115 millimetres ($4\frac{1}{2}$ inches) wide, and 25 millimetres (1 inch) in depth, excluding any non-slip device;
 - (3) equally spaced not less than 300 millimetres (12 inches) nor more than 380 millimetres (15 inches) apart and be secured in such a manner that they will remain horizontal.
- (ii) No pilot ladder should have more than two replacement steps which are secured in position by a method different from that used in the original construction of the ladder and any steps so secured should be replaced as soon as reasonably practicable by steps secured in position by the method used in the original construction of the ladder. When any replacement step is secured to the side ropes of the ladder by means of grooves in the sides of the step, such grooves should be in the longer sides of the step.
- (iii) The side ropes of the ladder should consist of two uncovered manilla ropes not less than 60 millimetres ($2\frac{1}{4}$ inches) in circumference on each side. Each rope should be continuous with no joins below the top step.
- (c) The steps of the flexible pilot ladder and those of the rigid ladder should be in the same vertical line, of the same width, spaced vertically equidistant and placed as close as practicable to the ship's side. The handholds of both parts of the ladder should be aligned as closely as possible.

2.5 Operational aspects

- (a) Rigging and testing of the hoist and the embarkation and disembarkation of a pilot should be supervised by a responsible officer of the ship. Personnel engaged in rigging and operating the hoist should be instructed in the safe procedures to be adopted and the equipment should be tested prior to the embarkation or disembarkation of a pilot.

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- (b) Lighting should be provided at night such that the pilot hoist overside, its controls and the position where the pilot boards the ship should be adequately lit. A lifebuoy equipped with a self-igniting light should be kept at hand ready for use. A heaving line should be kept at hand ready for use if required.
- (c) A pilot ladder complying with the provisions of **Regulation 17, Chapter V, of the International Convention for the Safety of Life at Sea, 1960**, should be rigged on deck adjacent to the hoist and available for immediate use.
- (d) The position on the ship's side where the hoist will be lowered should be indicated as well as possible.
- (e) An adequate protected stowage position should be provided for the portable hoist. In very cold weather to avoid the danger of ice formation, the portable hoist should not be rigged until use is imminent.
- (f) The assembly and operation of the pilot hoist should form part of the ship's routine drills.

2.6 Testing

- (a) Every new pilot hoist should be subjected to an overload test of 2.2 times the working load. During this test the load should be lowered a distance of not less than 5 metres (15 feet).
 - (b) An operating test of 10 per cent overload should be carried out after installation on board the ship to check the attachment and performance of the hoist to the satisfaction of the Administration.
 - (c) Subsequent examinations of the hoists under working conditions should be made at each survey for the renewal of the vessel's safety equipment certificate.
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