

RESOLUTION A.208(VII)

RECOMMENDATION ON CONSTRUCTION OF FISHING VESSELS
AFFECTING THE VESSEL'S STABILITY AND CREW SAFETY

The Assembly,

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

Noting also Recommendation 7 of the International Conference on Safety of Life at Sea, 1960,

Bearing in mind Recommendation 3 of the International Conference on Load Lines, 1966,

Recalling that by Resolution A.168(ES.IV) it adopted the Recommendation on Intact Stability of Fishing Vessels, and further that its Appendices VI and VII contained recommended practices for freeing ports and for exterior hatch coamings and door sills on fishing vessels,

Desiring to establish internationally applicable standards for certain constructional features of fishing vessels affecting the vessel's stability and crew safety,

Having considered the Recommendation by the Maritime Safety Committee at its twenty-fourth session,

Adopts the Recommendation on Construction of Fishing Vessels Affecting the Vessel's Stability and Crew Safety, the text of which is given at Annex to this Resolution and which supersedes Appendices VI and VII of Resolution A.168(ES.IV)).

Invites all governments concerned to take appropriate steps to give effect to the Recommendation as soon as possible,

Requests the Maritime Safety Committee to continue its study on this subject, particularly in conjunction with the development of Part B of the Code of Safety for Fishermen and Fishing Vessels and the preparation for an international conference on safety of fishing vessels.

ANNEX

RECOMMENDATION ON CONSTRUCTION OF FISHING VESSELS
AFFECTING THE VESSEL'S STABILITY AND CREW SAFETY

1. *Introduction*

This Recommendation assumes that the Administration, when considering its application to a particular vessel, has approved the intact stability characteristics of that vessel having regard to the intact stability criteria contained in the Recommendation on Intact Stability of Fishing Vessels (Resolution A.168(ES.IV)).

2. Definitions

Where used in this Recommendation the under-mentioned terms should be taken to mean the following:

2.1 *Freeboard deck* is normally the uppermost complete deck exposed to the weather and sea which has permanent means of closing all openings in the weather part thereof and below which all openings in the side of the vessel are fitted with permanent means of closing watertight. In a vessel having a discontinuous freeboard deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is to be taken as the freeboard deck.

A lower deck may be designated as the freeboard deck provided that it is a complete and permanent deck continuous in a fore and aft direction at least between the machinery spaces and peak bulkheads and continuous athwartships. When this lower deck is stepped, the lowest line of the deck and the continuation of that line parallel to the upper part of the deck is to be taken as the freeboard deck. When a lower deck is designated as the freeboard deck, that part of the hull which extends above the freeboard deck is treated as superstructure.

2.2 *Superstructure* is the decked structure on freeboard deck extending from side to side of the vessel or with the side structure not being inboard of the vessel's side more than 4 per cent of the vessel's breadth. An enclosed superstructure is a superstructure with:

- (i) enclosing bulkheads of efficient construction;
- (ii) access openings, if any, in those bulkheads fitted with doors complying with the provisions of 6.2; and
- (iii) all other openings in sides or ends of the superstructure fitted with efficient weathertight means of closing.

A raised quarter-deck is regarded as a superstructure.

A bridge or poop shall not be regarded as enclosed unless access is provided for the crew to reach machinery and other working spaces inside these superstructures by alternative means which are available at all times when bulkhead openings are closed.

2.3 *Superstructure deck* is that complete or partial deck or the top of a superstructure, deckhouse or other erections situated at a height of not less than 1.8 m above the freeboard deck.

2.4 *Height of a superstructure or other erection* is the least vertical distance measured at side from the top of the deck beams of a superstructure or an erection to the top of the freeboard deck beams.

2.5 *Weathertight* means that in any sea conditions water will not penetrate into the vessel.

2.6 *Watertight* means capable of preventing the passage of water through the structure in any direction under a head of water up to the superstructure deck.

2.7 *Length* of a fishing vessel is the length on the standard waterline between perpendiculars.

2.8 *Aft and forward perpendiculars* are vertical lines intersecting the standard waterline:

- (i) on the inside of the stern plating and on the inside of the stem plating, respectively, of a vessel with a metal shell, or
- (ii) at the rabbet aft line of the stern and at the rabbet front line of the stem, respectively, of a vessel with a shell of any other material or of a composite vessel.

The forward and aft terminals of any other waterline are parallels to the perpendiculars intersecting the ends of the vessel as described in (i) and (ii) above.

3. *Application*

3.1 The provisions hereunder are recommended for new decked sea-going fishing vessels of 24 m in length and over, operating in unlimited waters and in weather of unlimited severity.

3.2 It is recommended also that these provisions should be applied as far as is reasonable and practicable to:

- (i) existing decked vessels;
- (ii) new decked vessels less than 24 m in length; and
- (iii) vessels approved for limited service.

4. *Construction*

Strength and construction of hull, superstructure, deckhouses, machinery casings, companionways and other structures should be sufficient to withstand all foreseeable conditions of the intended service and should comply with the requirements of the Administration. A vessel built and maintained for the intended service in conformity with rules of a classification society recognized by the Administration may be considered by the Administration to be adequate in this respect.

5. *Information to the skipper*

The skipper should be supplied with sufficient information in a form approved by the Administration, for guidance as to the stability of the vessel under the varying conditions of loading.

6. *Devices to prevent the entry of water*

6.1 *General*

- 6.1.1 Openings through which water can enter and endanger the vessel should be kept to a minimum and provided with effective closing devices in accordance with the provisions of this Section. Where closing devices fitted to such openings are of types or of materials other than those specified in this Section, they should be equivalent thereto and to the satisfaction of the Administration.

6.2 Doors

Doors should be permanently attached to the bulkhead, properly framed and stiffened so that the strength is equivalent to the unpierced structure. They should be capable of being closed weathertight to the satisfaction of the Administration and means should be provided so that they can be operated from either side.

6.3 Wood hatchway covers

6.3.1 The finished thickness of the wood hatchway covers should be at least 40 mm in association with a span of not more than 1.0 m and the width of their bearing surfaces should be at least 65 mm.

6.3.2 Wood hatchway covers should be secured weathertight by means provided to the satisfaction of the Administration.

6.4 Hatchway covers other than wood

6.4.1 For the purpose of strength calculations it should be assumed that hatchway covers other than wood are subjected to the weight of cargo intended to be carried on them or to the following static loads, whichever is the greater:

1.0 t/m² for vessels of 24 m in length;

1.75 t/m² for vessels of 100 m in length and over. For intermediate lengths the load values should be determined by linear interpolation. The Administration may reduce the loads to not less than 75 per cent of the above values for covers to hatchways situated on the superstructure deck in a position abaft a point 25 per cent of the length of the vessel measured from the forward perpendicular.

6.4.2 Where covers are constructed of mild steel, the maximum stress according to 6.4.1 multiplied by 4.25 should not exceed the minimum ultimate strength of the material. Under these loads the deflections should be not more than 0.0028 times the span.

6.4.3 Strength and stiffness of covers made of materials other than mild steel should be equivalent to those of mild steel to the satisfaction of the Administration.

6.4.4 Covers should be fitted with gaskets and clamping devices sufficient to ensure weathertightness, or other equivalent arrangements to the satisfaction of the Administration.

6.5 Machinery space openings

6.5.1 Machinery space openings should be properly framed and efficiently enclosed by casings of ample strength and external access openings therein should be fitted with doors complying with the provisions of 6.2.

6.5.2 Openings other than access openings should be fitted with strong covers of equivalent strength to the unpierced structure, permanently attached thereto and capable of being closed weathertight.

6.6 *Other deck openings*

- 6.6.1 Where it is essential for fishing operations, flush deck scuttles of the screw, bayonet or equivalent type and manholes may be fitted provided these are capable of being closed watertight and, except where secured by closely spaced bolts, such devices should be permanently attached to the structure. Having regard to the size and disposition of the openings and the design of the closing devices a metal-to-metal closure may be fitted if the Administration is satisfied that they are effectively watertight.
- 6.6.2 An efficient superstructure, deckhouse or companionway fitted with weathertight doors or their equivalent should be provided to protect openings, other than hatchways, machinery space openings, manholes and flush scuttles in the freeboard or superstructure deck. Companionways should be situated as close as is practicable to the centreline of the vessel.

6.7 *Ventilators*

- 6.7.1 Coamings of ventilators should be of substantial construction and capable of being closed weathertight by devices permanently attached to the ventilator or adjacent structure.
- 6.7.2 Closing appliances need not be fitted to ventilators in which the coamings extend more than 4.5 m above the freeboard deck or more than 2.3 m above the superstructure deck unless specifically required by the Administration.

6.8 *Air pipes*

Where air pipes to tanks and other spaces below deck extend above the freeboard or the superstructure deck, the exposed parts of the pipes should be of substantial construction. Openings of air pipes should be provided with efficient means of closing permanently attached to the pipe or adjacent structure, to the satisfaction of the Administration.

6.9 *Sidescuttles*

- 6.9.1 Sidescuttles to spaces below the freeboard deck or to enclosed erections on the freeboard deck should be fitted with hinged deadlights capable of being closed watertight.
- 6.9.2 No sidescuttle should be fitted in a position such that its sill is below a line drawn parallel to the freeboard deck at side and having its lowest point 500 mm above the highest load waterline.
- 6.9.3 Sidescuttles, together with their glasses and deadlights should be of a substantial construction to the satisfaction of the Administration.

6.10 *Side openings*

Openings in the sides of the vessel below the freeboard deck should be the minimum compatible with the design and proper working of the vessel. Such openings should be fitted with means of closing so designed as to ensure watertightness and structural integrity commensurate with the surrounding shell structure.

6.11 Scuppers, inlets and discharges

- 6.11.1 Each discharge pipe through the hull below the freeboard deck or within an enclosed erection on the freeboard deck should have an automatic non-return valve with a positive means of closing it from an accessible position. Such a valve is not required if the Administration considers that the entry of water into the vessel, through the opening, is not likely to lead to dangerous flooding and that the thickness of the piping is sufficient.
- 6.11.2 In manned machinery spaces main and auxiliary sea inlets and discharges in connexion with the operation of machinery may be controlled locally. Controls should be readily accessible and should be provided with indicators showing whether the valves are open or closed.
- 6.11.3 In unmanned fully automated machinery spaces the provisions of 6.11.2 should apply provided suitable warning devices are incorporated to indicate leakage of water into the space or leakage from any other systems. In such spaces the controls should be readily accessible and be provided with indicators at the control position showing whether the valves are open or closed.
- 6.11.4 Fittings attached to the shell and all valves should be of steel, bronze or other ductile material approved by the Administration. All pipes between the shell and the valve should be of steel, except that in vessels constructed of material other than steel the Administration may approve the use of other material.

6.12 Heights of hatchway coamings and sills of doorways, ventilators and air pipes

- 6.12.1 The height above deck of hatchway coamings on the exposed parts of the freeboard deck should be at least 600 mm and on the superstructure deck at least 300 mm.
- 6.12.2 Where operating experience has shown justification and on the approval of the Administration, the height of hatch coamings may be reduced from the heights specified in 6.12.1 or the coaming may be omitted entirely, provided efficient watertight hatch covers are fitted. Such covers should be kept as small as practicable, be permanently attached by hinges or equivalent means and be capable of being rapidly closed and battened down.
- 6.12.3 The height above deck of sills in those doorways, in companionways, erections and machinery casings which give direct access to parts of the deck exposed to the weather and sea should be at least 600 mm on the freeboard deck and at least 300 mm on the superstructure deck.
- 6.12.4 Where operating experience has shown justification and on approval of the Administration the height above deck of sills in the doorways specified in 6.12.3, except those giving direct access to machinery spaces, may be reduced to not less than 380 mm on the freeboard deck and to not less than 150 mm on the superstructure deck.

6.12.5 The height above deck of ventilators on the freeboard deck should be at least 900 mm and on the superstructure deck at least 760 mm. The height of ventilators of machinery spaces should be as high as reasonable and practicable and to the satisfaction of the Administration.

6.12.6 The height of air pipes above deck to a point where water may have access below should be at least 760 mm on the freeboard deck and at least 450 mm on the superstructure deck. The Administration may accept reduction of the height of an air pipe to avoid interference with the fishing operations provided its efficiency as a closing appliance is not impaired.

7. *Freeing ports*

7.1 *Freeing port area*

7.1.1 Where bulwarks on weather parts of the freeboard deck form wells, the minimum freeing port area (A) in square metres, on each side of the vessel for each well on the freeboard deck should be determined in relation to the length (ℓ) and height of bulwark in the well as follows:

(i) $A = 0.7 + 0.035\ell$ where ℓ is 20 m or less; or
 $A = 0.07\ell$ where ℓ exceeds 20 m
 ℓ need in no case be taken as greater than
0.7 times the length of the vessel.

(ii) Where the bulwark is more than 1.2 m in average height the required area should be increased by 0.004 m² per metre of the length of well for each 0.1 m difference in height.

Where the bulwark is less than 0.9 m in average height the required area may be decreased by 0.004 m² per metre of length of well for each 0.1 m difference in height.

7.1.2 The Administration may consider it necessary to increase the freeing ports area (A) given in 7.1.1 where there is a deficiency in the vessel's sheer.

7.1.3 Subject to the approval of the Administration the minimum freeing port area for each well on the superstructure deck should be not less than one half the area (A) given in 7.1.1.

7.2 *Arrangement of freeing ports*

Freeing ports should be so arranged along the length of bulwarks as to provide the most rapid and effective freeing the deck of water. Lower edges of freeing ports should be as near the deck as is practicable.

7.3 *Covers and fittings*

7.3.1 Devices for locking freeing port covers should be considered generally as dangerous. If locking devices in particular cases are considered necessary for the service of the vessel they should be to the satisfaction of the Administration and easily operable from a readily accessible position. Freeing ports over 300 mm in depth should be fitted with bars spaced not more than 230 mm apart or other suitable protective arrangements.

- 7.3.2 Stowage racks, etc. for fishing gear should be arranged so that the effectiveness of freeing ports will be maintained.
- 7.3.3 In a vessel intended to operate in areas subject to icing, covers and protective arrangements for freeing ports should be capable of being removed to restrict ice accumulation. Size of opening and means provided for removal of these protective arrangements should be to the satisfaction of the Administration.

8. *Protection of the crew*

8.1 *Bulwarks, rails and guards*

- 8.1.1 Efficient bulwarks or guard rails should be fitted on all exposed parts of freeboard and superstructure decks. The height above deck of bulwarks or guard rails should be at least 1.0 m, provided that where this would interfere with the normal operation of the vessel, a lesser height may be approved by the Administration if adequate protection is provided.
- 8.1.2 Clearance below the lowest course of guard rails should not exceed 230 mm and other courses should be no more than 380 mm apart. In a vessel with rounded gunwales guard rail supports should be placed on the flat of the deck. Rails should be free from sharp points, edges and corners and be of adequate strength.
- 8.1.3 Satisfactory means in the form of guard rails, life lines, gangways or underdeck passages, etc. should be provided for protection of the crew in getting to and from their quarters, machinery space and other working spaces. Storm rails should be fitted on the outside of all deck houses and casings.
- 8.1.4 A stern trawler should be provided with doors, gates or other suitable protective arrangements at the top of the stern ramp at the same height as the adjacent bulwarks. A chain or other means should be provided for fitting a guard across the ramp when the doors, etc. are open.

8.2 *Stowage of deck cargo*

Cargo carried on deck should be so stowed as not to impair:

- (i) crew working on deck and access to their living quarters or machinery spaces;
- (ii) free drainage of water; and
- (iii) effective operation of closing devices, control valves, etc.

9. *Exemptions*

Where operating experience has clearly shown that departure from the provisions of this Recommendation are justified the Administration may permit adequate alterations or substitutions thereof.

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