RESOLUTION A.207(VII) adopted on 12 October 1971
RECOMMENDATION FOR AN INTERIM SIMPLIFIED STABILITY CRITERION FOR DECKED FISHING VESSELS UNDER 30 METRES IN LENGTH
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, concerning intact stability of passenger ships, cargo ships and fishing vessels,

RECALLING Resolution A.168(ES.IV) concerning the Recommendation on Intact Stability of Fishing Vessels,

RECOGNIZING the need to provide internationally a simple stability criterion for small fishing vessels for which no stability data or lines drawings are available,

HAVING CONSIDERED the recommendation by the Maritime Safety Committee at its twenty-second session,

ADOPTS the Recommendation on an Interim Simplified Stability Criterion for Decked Fishing Vessels under 30 metres in Length, the text of which appears at Annex to this Resolution,
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INVITES all governments concerned to take steps to give effect to the Recommendation as soon as possible,

REQUESTS the Maritime Safety Committee to continue study on the subject,

AUTHORIZES the Maritime Safety Committee to amend the Recommendation if necessary in the light of such studies.

ANNEX

RECOMMENDATION FOR AN INTERIM SIMPLIFIED STABILITY CRITERION FOR DECKED FISHING VESSELS UNDER 30 METRES IN LENGTH

1. For decked vessels with a length less than 30 m, the following approximate formula for the minimum metacentric height $G_M^{\text{min}}$ (in metres) for all operating conditions should be used as the criterion:

$$G_M^{\text{min}} = 0.53 + 2L\sqrt{0.075 - 0.37\left(\frac{f}{B}\right)^7 + 0.82\left(\frac{f}{B}\right)^6 - 0.014\left(\frac{B}{D}\right) - 0.032\left(\frac{L}{f}\right)^4}$$

where

$L$ = Length of the vessel on the waterline in maximum load condition (in metres)

$\ell_s$ = Actual length of enclosed superstructure extending from side to side of the vessel (in metres)

$B$ = Extreme breadth of the vessel on the waterline in maximum load condition (in metres)

$D$ = Depth of the vessel measured vertically amidships from the base line to the top of the upper deck at side (in metres)

$f$ = Smallest freeboard measured vertically from the top of the upper deck at side to the actual waterline (in metres)
The formula is applicable for vessels having:

(i) \( \frac{F}{B} \) between 0.02 and 0.20;
(ii) \( \frac{S}{L} \) smaller than 0.60;
(iii) \( \frac{D}{D} \) between 1.75 and 2.15;
(iv) sheer fore and aft at least equal to or exceeding the standard sheer prescribed in Regulation 38(8) of the International Convention on Load Lines, 1966;
(v) height of superstructure included in the calculation not less than 1.8 m.

For ships with parameters outside of the above limits the formula should be applied with special care.

2. The above formula is not intended as a replacement for the basic IMCO criteria (Res.A.168(ES.IV)), but is to be used only if circumstances are such that cross curves of stability, KM curve and subsequent GZ curves are not and cannot be made available for judging a particular vessel's stability.

3. The calculated value of \( GM_{\min}^* \) should be compared with actual \( GM \) values of the vessel in all loading conditions. If a rolling test**, an inclining experiment based on estimated displacement or another approximate method of determining the actual \( GM \) is used, a safety margin should be added to the calculated \( GM_{\min}^* \).

* GM_{\min} may also be determined graphically using the attached table.

** The rolling test should be performed according to the "Memorandum to the Administrations on Approximate Determination of Ship's Stability by Means of the Rolling Period Tests, Appendix IV of the Recommendation on Intact Stability of Fishing Vessel" (Res.A.168(ES.IV)).
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NOMOGRAM "SIMPLIFIED STABILITY CRITERIA" (fishing vessels under 30 m in length)

Example:
- $f/B = 0.10$
- $B/D = 1.95$
- $L_s/L = 0.32$
- $B = 60 m$

\[ \text{GM}_{m,1} = 0.53 \cdot 2B \left[ 0.075 - 0.37\left(\frac{f}{B}\right) - 0.02\left(\frac{B}{L}\right)^2 - 0.014\left(\frac{B}{D}\right) - 0.032\left(\frac{L_s}{L}\right) \right] \]