

No. 24 Intact Stability

(1988)
 (Rev. 1
 1989)
 (Rev. 2
 1994)
 (Rev. 3
 June 2000)
 (Rev. 4
 June
 2002)
 (Rev. 5
 May 2004)

In UR L2 the proof of adequate intact stability is required without setting definite values except for postulating an absolute lowest level.

In case the Administration concerned has not laid down criteria applicable for the particular ship, it is recommended that the ship is accepted as having adequate stability, if at least the following sets of criteria or their equivalents are met:

- For passenger ships and cargo ships of all sizes/with or without deck cargo:
IMO Res A. 749(18), Chapters 3.1, 3.2 and 4.1 as amended by MSC Resolution 75(69).
- For offshore supply vessels of all sizes:
The intact stability requirements of IMO Res A. 749(18) Chapters 3.2 and 4.5 as amended by MSC Resolution 75(69).
- For pontoons of all sizes:
The intact stability requirements of IMO Res A.749(18) Chapter 4.7 as amended by MSC Resolution 75(69).
- For towing vessels:
 - The intact stability requirement of IMO Res. A.749(18), Chapter 3.1, as amended by MSC Resolution 75(69),
 - alternatively, if applicable:
the intact stability requirement of IMO Res. A.749(18) Chapters 4.5 as amended by MSC Resolution 75(69).
 - Additionally:
 - The residual area between a righting lever curve and a heeling lever curve developed from 70% of the maximum bollard pull force acting in 90° to the ship-length direction should not be less than 0,09 mrad. The area has to be determined between the first interception of the two curves and the second interception or the angle of down flooding whichever is less.
 - alternatively, the area under a righting lever curve should not be less than 1.4 times the area under a heeling lever curve developed from 70% of the maximum bollard pull force acting in 90° to ship-length direction. The areas to be determined between 0° and the 2nd interception or the angle of down flooding whichever is less.

The heeling lever curve should be derived by using the following formula:

$$b_h = 0.7 TH \cos\theta / 9.81\Delta$$

where:

b_h = heeling arm, in m

T = maximum bollard pull, in kN

H = vertical distance, in m, between the towing hook and the centre of the propeller

Δ = loading condition displacement, in t.

Vessels of the following types are not covered by this recommendation:

fishing vessels, sailing vessels, special purpose vessels MODUs, dynamically supported craft and multi hull craft.

Note. While UR L2 and this Recommendation refer to intact stability, for vessels to which requirements governing subdivision and damage stability are applicable, the intact stability shall be sufficient to meet such requirements in all prescribed damage conditions.

