

**RESOLUTION A.651(16)**

*Adopted on 19 October 1989  
Agenda item 10*

**AN EXAMPLE OF ALTERNATIVE STABILITY CRITERIA FOR A RANGE OF  
POSITIVE STABILITY AFTER DAMAGE OR FLOODING FOR  
COLUMN-STABILIZED SEMISUBMERSIBLE UNITS**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

RECALLING ALSO that, by resolution A.649(16), it adopted the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989 (1989 MODU Code) to promote the international operation of mobile offshore drilling units,

NOTING that mobile offshore drilling units continue to be moved and operated internationally,

RECOGNIZING that chapter 3 of the 1989 MODU Code allows for alternative damage stability criteria to be considered by Administrations,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its fifty-seventh session,

1. ADOPTS an example of alternative stability criteria for a range of positive stability after damage or flooding for column-stabilized semisubmersible units, 1989, as set out in the Annex to the present resolution;
2. RECOMMENDS that Governments concerned accept the application of this example as being an equivalent to the provisions of paragraphs 3.4.3.3 and 3.4.4.3 of the 1989 MODU Code;
3. INVITES all Governments concerned to consider putting this alternative into effect and to evaluate its use;
4. FURTHER INVITES all Governments concerned, through the Organization, to exchange experience gained as a result of the application of this alternative;
5. AUTHORIZES the Maritime Safety Committee to amend the alternative, as necessary, after consultations with appropriate organizations.

ANNEX

**AN EXAMPLE OF ALTERNATIVE STABILITY CRITERIA FOR A RANGE OF  
POSITIVE STABILITY AFTER DAMAGE OR FLOODING FOR  
COLUMN-STABILIZED SEMISUBMERSIBLE UNITS**

1 The criteria hereunder constitute an alternative to those of paragraphs 3.4.3.3 and 3.4.4.3 of the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989 (1989 MODU Code). These criteria apply only to column-stabilized semisubmersible units which have buoyant volumes contained in watertight upper-deck structure.

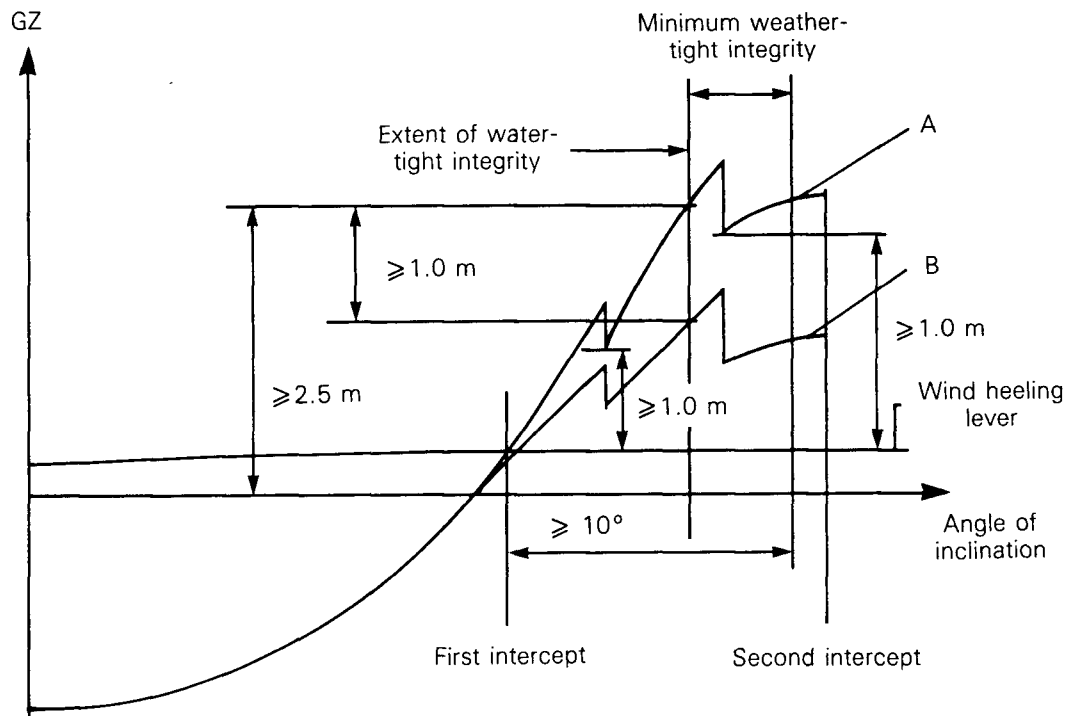
1.1 The righting lever curve after damage or flooding, as set out in paragraphs 3.5.10 and 3.4.4 of the Code respectively, should, before the second intercept angle, reach a value of at least 2.5 m (see figure below). At least 1.0 m of this righting lever should arise from enclosed watertight volumes above watertight flats positioned at, or above, the lowest continuous deck.

1.2 The righting lever curve after damage or flooding, as set out in paragraphs 3.5.10 and 3.4.4 of the Code respectively, should have a positive range of at least 10° between the first and second intercept.

1.3 For the purposes of calculating the righting lever curve, buoyancy may be assumed from all spaces which are closed as described in 1.4 and 1.5 below. If the lower edge of any opening which is not closed as required in 1.4 and 1.5 is submerged, then the corresponding space shall be excluded from the buoyancy beyond the angle where this opening is submerged, but shall be included up to the angle where this opening is submerged. Any such loss of buoyancy shall not cause the righting lever to fall below 1.0 m above the wind lever curve within the range specified in 1.2.

1.4 Any opening submerged before the angle at which the righting lever required in 1.1 is reached should be fitted with a remotely operated watertight means of closure. Means of closure of a self-activating type may also be accepted by the Administration.

1.5 Any opening submerged after the angle referred to in 1.4 is reached and within the range specified in 1.2 should be fitted with means of closure as required in 1.4 or with easily operable weathertight means of closure.



- A = GZ-curve including enclosed volumes above watertight flats at or above the lowest continuous deck
- B = GZ-curve excluding enclosed volumes above watertight flats at or above the lowest continuous deck