



SUB-COMMITTEE ON SUBDIVISION,
STABILITY AND LOAD LINES -
26th session
Agenda item 11

IMCO

MATTERS RELATED TO THE 1969 TONNAGE CONVENTION

Guidance for Calculations of Volumes

Note by the International Association of Classification Societies

In pursuance of the decision made at the forty-fourth session of MSC to establish an ad hoc group within the Sub-Committee on Subdivision, Stability and Load Lines to consider problems associated with the implementation of the 1969 Tonnage Convention, IACS has undertaken studies on this subject and the attached document is submitted for the information of the ad hoc group.

The proposal contained in the IACS document is suggested as one method which could be considered by the ad hoc group when preparing guidelines for calculation of volumes to be agreed by the ad hoc group on tonnage measurement - paragraphs 4.2 and 4.3 of MSC XLIV/WP.10 refers.

The paper now submitted is not the unanimous view of all members of IACS.

INTERNATIONAL CONFERENCE ON TONNAGE MEASUREMENT, 1969

Guidelines for Calculations of Volumes

Regulation 6(1) Calculation of Volumes

- (a) The length of the upper most continuous tonnage deck shall be measured in a straight line in the middle plane of the ship between the points at the forward and after ends of the deck where the underside of the deck or line of continuation thereof in way of breaks or discontinuous of the deck meets the inner side of the shell in ships constructed of metal or meets the outer surface of the hull in ships constructed of any other material. Such length shall be referred to as the "tonnage length", T_L .
- (b) The volume under the Upper Deck to be measured in three parts where the length of the foremost and aftermost parts shall be taken as twenty five per cent of the Tonnage Length, T_L .
- (c) Each of the three parts of the Tonnage Length shall be divided into equal parts as shown in the following table : (See Fig. 1)

Tonnage Length T_L in Metres	Forward 25% T_L and After 25% T_L	Centre 50% T_L
24 - 60	4	4
> 60 - 120	6	6
> 120	8	8

- (d) The Tonnage Depth of a transverse section shall be the distance from the underside of the Tonnage Deck at centreline to the upper side of the keel or bottom plating in ships built of metal, to the underside of the keel rabbet in ships built of wood and to the outside of the hull in ships built of other material corrected by deducting one-third of the round of beam in the case of ships where the tonnage deck is of parabolic form or in other cases an equivalent deduction based on equal areas.

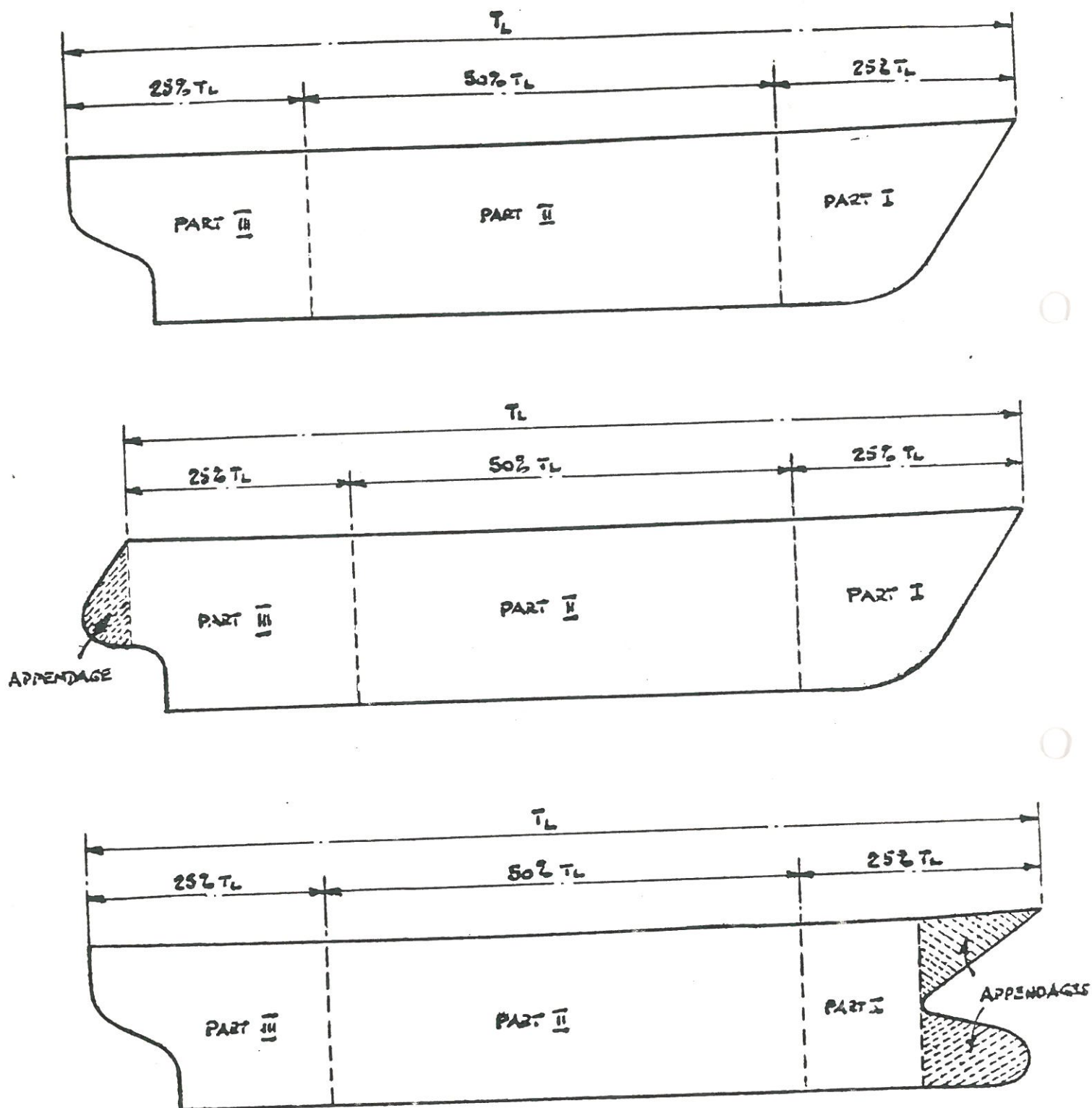
- (e) The Tonnage Depth as defined in(d) and taken at amidships of the total tonnage length T_L shall be divided into 4 equal parts where the depth is 6 metres or less, into 6 equal parts where the depth exceeds 6 metres but is less than 12 metres and into 8 equal parts where the depth exceeds 12 metres.
- (f) The bottom part of each transverse section to be further subdivided into 4 equal parts. (See Fig. 2)
- (g) The volume of each separate cargo space in a hold or superstructure bounded by deck, shell, longitudinal and/or transverse bulkheads, as the case may be, shall be measured separately and generally in accordance with the method of measurement of the underdeck.
- (h) The space below the top of floor line of cargo ships with single bottoms to be included in the measurement of the cargo space irrespective of whether there is any ceiling fitted on top of the open floors.
- (i) Superstructures such as Poop, Bridge or Forecastle shall be measured generally in accordance with the method of measurement of the underdeck.

Regulation 6 (2)

Such construction as a bulbous bow, unusual shaped stem, stern and shaft bossings shall be measured separately as an appendage by any practical method acceptable to the Administration and the volume added to the underdeck volume.

Regulation 6 (3)

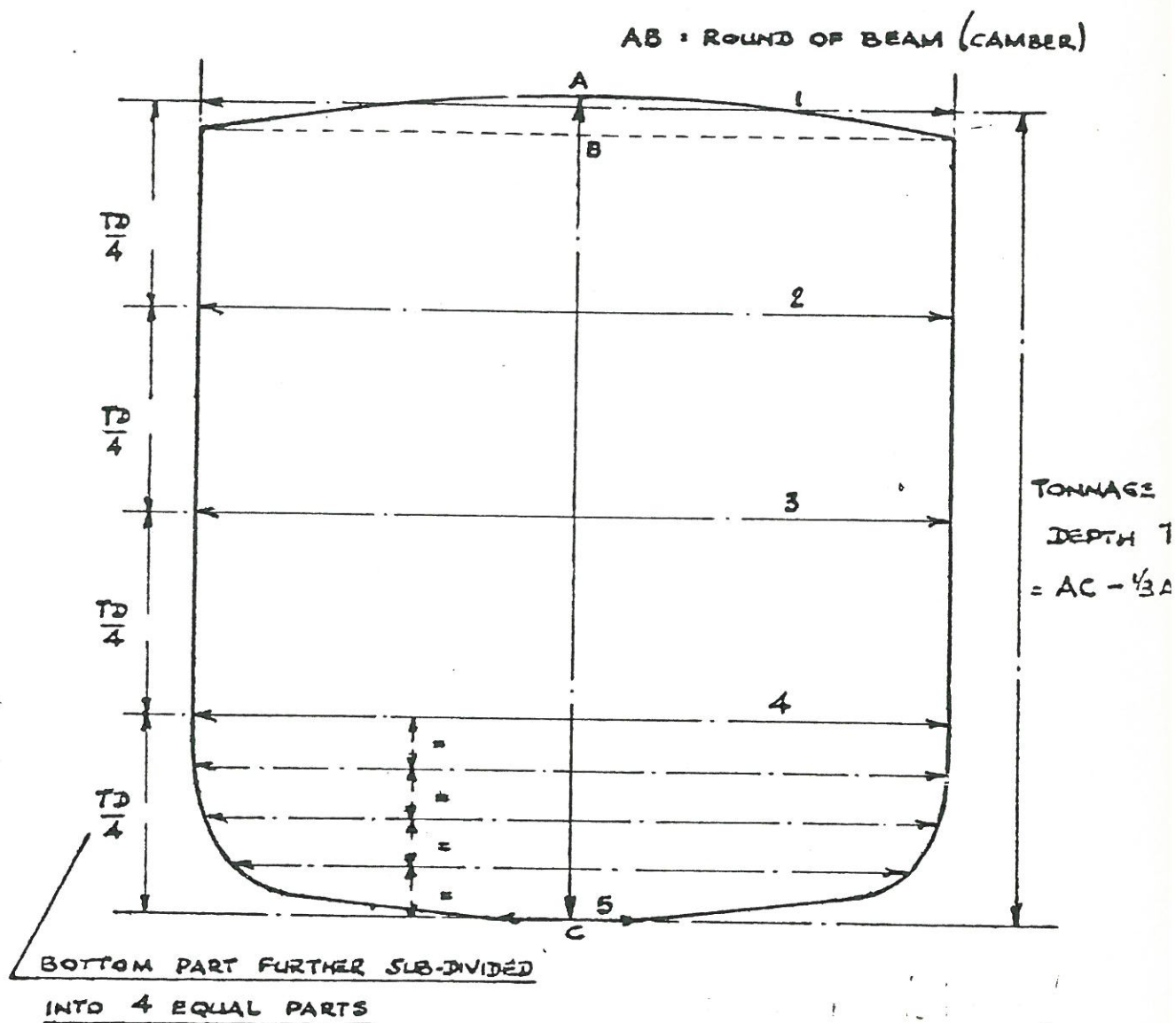
Spaces open to the sea and located below the load water line such as bow thrust units, rudder trunks and stabiliser fin openings etc. and spaces open to the sea and weather above the load waterline such as hawse and chain pipes shall be measured and excluded from the gross tonnage and also the net tonnage where applicable.

MEASUREMENT OF UNDERDECK VOLUMES

T_L = TONNAGE LENGTH

FIG. 1.

MEASUREMENT OF A TRANSVERSE SECTION



TONNAGE DEPTH T_D LESS THAN 6 METRES
THEREFORE DIVIDED INTO 4 EQUAL PARTS

FIG. 2

