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MATTERS RELATED TO THE 1969 TONNAGE CONVENTION

Submitted by Sweden

The International Convention on Tonnage Measurement of Ships, 1969, will enter into force on 18 July, 1982. In Sweden, as probably in many other countries, preliminary calculations using the regulations of the Convention are currently made in order to study the impact of the new regulations on different types of ships, and to establish new routines for tonnage measurement and calculations using i.a. computers.

During these preliminary calculations several problems have been encountered with regard to interpretation of the regulations. Some of these problems are considered to be of such importance that they should be discussed at IMCO as soon as possible with an aim to reach a uniform interpretation before the entering into force of the Convention.

1 Regulation 2(1) - Definition of Upper Deck

The definition of Upper Deck in the 1969 Tonnage Regulation is the same as the definition of Freeboard Deck in the 1966 Load Line Regulations (Reg. 3(9)).

1.1 The upper deck is the uppermost complete deck exposed to weather and sea, which has permanent means of weathertight closing of all openings in the weather part thereof, and below which all openings in the sides of the ship are fitted with permanent means of watertight closing. In the majority of today's ro/ro ships the lower deck is the freeboard deck at the owner's request. This is of course due to the fact that according to most of the present national tonnage measurement regulations the volume of the cargo space above the freeboard deck then may be exempted from the tonnages. In some countries this space is considered as a tween-deck space and a tonnage mark is assigned to the ship in accordance with resolution A.48(III), in others it is considered as a superstructure and no tonnage mark is assigned. This difference depends on whether the stern/bow/side ports are considered to be weathertight or watertight. With the

present tonnage regulations, the tonnages of the ship will be the same in both cases, the only difference being the tonnage mark to be painted on the ship's sides or not. In the 1969 tonnage regulations, however, the formula for the net tonnage contains the factor $(4d/3D)^2$ where D is the moulded depth to the upper deck. It is therefore important if e.g. a stern door can be regarded as watertight. An interesting fact is that if the door(s) is (are) watertight the upper deck will be the freeboard deck and the draught may be somewhat increased (to the lower edge of the door opening) thus increasing the deadweight capacity; according to the present tonnage regulations, this would mean considerably higher gross and net tonnages, but according to the 1969 regulations it would mean unchanged gross tonnage but considerably lower net tonnage, compared to the case where the lower deck is the freeboard deck. This means that in the future it will be of great interest to the owner of a ro/ro ship that the stern, bow or side doors are considered as being watertight. A precise definition of how a watertight door in the hull should be constructed is therefore needed.

1.2 In a ship having a stepped upper deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is taken as the upper deck. This case is similar to 1.1 above. Many ro/ro ships and car ferries have an upper deck somewhat shorter than the lower deck at the rear of the ship to make room for a stern ramp. This could be regarded as a stepped upper deck according to the definition, in which case the same anomaly as in 1.1 will appear: a smaller deadweight will correspond to a higher net tonnage and vice versa. A more precise definition of what is meant by a step is therefore necessary. In our opinion, in order to be taken into account a step should be

(a) situated between the peak bulkheads,

(b) at least 0.6 metres in length and

(c) of the ship's full breadth.

2 Article 2(8) and Regulation 2 - Definitions

The definitions of 'Length', 'Moulded Depth', 'Breadth' and 'Weathertight' are also the same in both the 1969 Tonnage Convention and the 1966 Load Line Convention. Since the Load Line Convention has been in force for several years, there should be some common interpretations developed with respect to the above-mentioned definitions (including the definition of the upper deck/freeboard deck). A list of any such interpretations would certainly be of great help to the tonnage measurement authorities.

3 Regulation 2(6) - Passenger

According to the definition in this regulation a passenger is a person other than the master, member of the crew or other person employed or engaged in any capacity on board the ship on the business of that ship, or a child under one year of age. It is rather clear - even if not crystal clear - that e.g. a diver on a diving support vessel or a researcher on a research vessel is not to be considered as a passenger. It is also rather clear that a lorry driver carried on a ro/ro ship is a passenger. But how should 'industrial personnel' on e.g. a supply vessel be treated? Or offshore workers living on an accommodation ship? In our opinion they should be regarded as passengers.

4 MSC/Circular 254

On the recommended "standard form giving particulars of uniform tonnage calculation" among other things the underdeck volume is to be stated. When the upper deck is stepped, the upper deck is to be taken as the lowest line of the exposed deck continued parallel to the upper part of the deck, according to Reg. 2(1). When computer programmes are used to determine the volumes, it is in many cases preferable to calculate the whole volume below the real upper deck as one part (i.e. including e.g. a break). It would therefore save a lot of extra work if the underdeck volume could be taken as the volume below the real upper deck.

5 Regulation 7 - Measurement and Calculation

5.1 Many administrations plan to use computer programmes for calculations of volumes as well as of tonnages in accordance with Regs. 3 and 4. In our opinion it would be of great interest to collect information regarding such computer programmes and the types of computers used in various countries. The Swedish delegation therefore proposes that such information should be submitted to IMCO and then distributed to all members or at least to the contracting governments to the 1969 Tonnage Convention. Such information could contain:

Type of computer(s) used
Short description of each programme
Output sample
If possible, a listing of each programme

5.2 Computers will of course not be available to all administrations in all cases. Manual calculations of volumes and tonnages will be performed especially for smaller ships. Even if the item of "accuracy of calculations" has been discussed by the STAB Sub-Committee at earlier sessions, with the result that it should be left to the discretion of each administration, it still seems desirable - as

proposed by France in document MSC XLIV/17 - to develop some guidelines regarding i.a. the least number of transverse sections, waterlines etc. to be taken to achieve an appropriate degree of accuracy with manual calculations.

6 Regulation 6 - Calculation of Volumes

For several ships to be measured in accordance with the 1969 regulations/there are no drawings available, which means that their hulls have to be completely measured in order to establish lines drawings and body plans to be used for the volume calculations. In most cases /this will be best achieved by outside measurement of the hull when the ship is on a slipway or drydocked. There are different methods to establish a lines drawing (body plan) by outside measurement, requiring more or less sophisticated tools (from a piece of string and an air bubble-type level to laser instruments). It would be of great interest to know if any method has been found to be especially suitable for this type of task and what instruments that are used in connexion with the method. It is proposed that members are invited to submit any information on this item.