



SUB-COMMITTEE ON STABILITY AND
LOAD LINES AND ON FISHING VESSELS
SAFETY
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TONNAGE MEASUREMENT OF OPEN-TOP CONTAINERSHIPS

Proposals to address long-term effect with regard to safety

Submitted by Australia

SUMMARY

Executive summary: This document details how the problem being addressed under this item extends beyond open-top containerships and its longer-term solution should take account of the effect of tonnage measurement upon ship design and safety

Action to be taken: Paragraph 20

Related documents: MSC 78/24/5, MSC 78/26, TM.5/Circ.4 and SLF 48/INF.4

Background

1 Australia has taken a prominent interest since 1990 in the development of open-top containerships through work in IMO and in this Sub-Committee in particular. It therefore supports Germany's efforts through document MSC 78/24/5 to update TM.5/Circ.4 and thus address an impediment to the increased use of this ship type.

2 While the updating of the TM circular will address the immediate problem, it is Australia's view that the problem is more deep-seated in that it arises from the fact that the International Convention on Tonnage Measurement of Ships, 1969 (1969 TM Convention) bases gross tonnage on the total enclosed volume of the ship. This concept has the effect of penalizing in gross tonnage terms, and thus in tonnage-based fees, any increase in freeboard and in the extent of above-deck superstructures and houses.

3 Greater-than-minimum freeboard on open-top container ships, which affords improved stability and protection to cargo, is therefore penalized. Other ship types having high freeboard for similar safety-based reasons are also penalized in gross tonnage terms, particularly ro-ro ships and car carriers.

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4 Livestock carriers, while not necessarily having increased freeboard, are penalized by having the volumes of their extensive above-deck livestock houses included in their total enclosed volume and therefore their gross tonnage, according to what Australia believes to be the correct interpretation of the 1969 TM Convention. In comparison, containers carried on a similar position on the deck of a containership are exempt from tonnage measurement despite the fact that they afford similar if not better protection for the cargo from the weather and sea.

5 Australia understands that the introduction in recent years within SOLAS chapter II-1 of subdivision and damage stability requirements for dry cargo ships has made it feasible to design containerships which meet the requirements for assignment of reduced freeboard and consequently with further reduced gross tonnage.

6 More fundamental action than that currently proposed by Germany will therefore be necessary to provide a longer-term solution to this deep-seated problem.

7 In instructing the Sub-Committee on this item, MSC (paragraph 24.50 of MSC 78/26) referred to the document by Germany (MSC 78/24/5) proposing “to amend the interpretation to better address the tonnage measurement of open-top containerships”. In Australia’s view, it is up to the Sub-Committee to express its view as to whether this matter can be adequately addressed for the foreseeable future by amending TM.5/Circ.4 or whether longer-term action needs to be taken in addition to this short-term action.

Proposal to address fundamental problems with 1969 TM Convention

8 Although the 1969 TM Convention seems to work well without detriment to safety as a measure of size of some particular types of space-critical ships, such as passenger ships, for many other types of ships it provides incentive to reduce freeboard at the expense of safety. The remainder of this paper is based on a presumption that the Sub-Committee considers, in relation to the matters raised in the preceding paragraph, that longer-term action will be required.

9 This delegation holds the view that an alternative measure based on the ship’s required maritime real estate (ie. volume of length x breadth x draught) would appear a more appropriate basis than gross tonnage for most tonnage-based fees. Introduction of such a measure, used in place of gross tonnage for the determination of fees, would remove the tonnage penalty for ships having improved safety due to increased freeboard.

10 Australia proposes that such a measure would be additional to the gross and net tonnages currently measured under the 1969 TM Convention, constituting a third tonnage to which the name “register tonnage” is used for the purposes of this document. This would enable gross tonnage to continue to be used as a basis for fees for ship types, such as passenger ships, for which it continues to be appropriate and to make the migration to use of the new tonnage measure voluntary rather than mandatory, thereby overcoming possible disruption from the introduction of a changed tonnage measurement regime.

Effect of above proposal on existing world fleet

11 To quantify the effect of introduction of a “register tonnage” on the world fleet, Australia has examined using “register tonnage” values in place of 1969 TM Convention gross tonnage as a basis for generating the same quantity of fees. Once the gross tonnage and “register tonnage” for each of the ships in the sample had been computed and the totals tallied, a nominal exchange rate was struck to provide the same total fees across the sample. Then the two fee values were

compared for each ship. Results were grouped into 10 percent intervals of fee change (plus 0 to 10%, plus 10 to 20%, etc., similarly on the negative side).

12 The Sub-Committee should note that the analysis was performed using existing definitions of length, breadth and draught from the ship's certification, as recorded on the database. By maximizing use of such definitions, the "register tonnage" can be readily determined for existing ships.

13 To demonstrate the effect of such a change on smaller groups of ships, a similar analysis was conducted in relation to the ships visiting three Australian ports over a 12-month period.

14 The detailed analysis is presented in document SLF 48/INF.4, which also provides a commentary on the observed trends. It should be noted in particular that large ships generally fared comparatively better than smaller ships, so it was considered inappropriate to apply a similar "K" factor to the calculated "register tonnage" volumes as is applied to measured volumes under the 1969 TM Convention.

Amendment of the 1969 TM Convention

15 It would be possible to give effect to "register tonnage" either through another instrument operating in parallel with the 1969 TM Convention or even by decisions of individual bodies (such as port authorities) to use a formulation such as "register tonnage" as the basis for their fees.

16 Despite these alternatives, amendment of the 1969 TM Convention would be clearly be preferable to provide a long-term and internationally agreed solution to the above problem. But, as has been the experience with adoption of amendments to other IMO instruments having explicit rather than tacit amendment procedures, changing the 1969 TM Convention will not be easy.

17 Australia therefore proposes that the 1969 TM Convention should be amended by a Protocol which introduces not only the above-mentioned third tonnage measure ("register tonnage") but also includes a tacit amendment procedure. As with the introduction of tacit amendments to load line matters under the 1988 Load Lines Protocol, it would not be desirable for regular amendments to be made to the 1969 TM Convention, but the opportunity should be taken to at least permit correction of problems in the implementation of that Convention.

18 Associated with the adoption of the Protocol should be resolutions which not only urge Governments to give priority to giving effect to the Protocol but also to maximize their use of "register tonnage" as a basis for setting fees so as to remove the present tonnage incentive towards design features that reduce safety.

19 In making this proposal, Australia notes that the 1969 TM Convention did not enter force internationally until 1982 and that a Protocol may therefore take an undesirably long period to enter force. However, by leaving the existing provisions for the measurement of gross and net tonnage unchanged and introducing "register tonnage" as a third tonnage type, this proposal attempts to minimize barriers to the prompt implementation of the Protocol.

Action requested of the Sub-Committee

20 Taking into account the foregoing, the Sub-Committee is invited to express to the Committee its view on the question raised in paragraph 7 above and its recommendations on any necessary course of action to progress not only the tonnage measurement of open-top containerships but also the underlying safety-related problems with the implementation of the 1969 TM Convention to other ship types.
