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INTERNATIONAL CONFERENCE ON  
TONNAGE MEASUREMENT, 1969

Technical Committee

PROVISIONAL SUMMARY RECORD OF THE SECOND MEETING

held at Church House, Westminster, London S.W.1  
on Friday, 30 May 1969, at 9.35 a.m.

Chairman: Mr. F. SPINEILI (Italy)

Secretary: Mr. Y. SASAKURA

A list of participants is given in TM/CONF/INF.1

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N.B. Corrections to be incorporated in the final summary record of the meeting should be submitted in writing (two copies in French or English), preferably on the provisional summary record, to the Documents Officer, Committee Room 2 and after the Conference to the IMCO Secretariat, 22 Berners Street, London, W.1, not later than 8 July 1969

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AGENDA ITEM 3 - CONSIDERATION OF MATTERS AS INSTRUCTED BY THE  
CONFERENCE (TM/CONF/WP.3; TM/CONF/3;  
TM/CONF/6; TM/CONF/7; TM/CONF/9/Add.1)(continued)

The CHAIRMAN reminded the Committee that it had to decide on the gross tonnage parameters to be submitted to the plenary meeting of the Conference on 3 June. One solution proposed was the adoption of a single parameter, whereas others were based on a combination of two parameters; under-deck volume in register tons and the volume of above-deck passenger spaces (proposal by Norway); the ship's total volume, and displacement (Proposal C). The Netherlands delegation had proposed a method which, by applying a coefficient "q", would allow for maximum use of displacement in the case of open shelter-deckers and of volume for closed shelter-deckers.

Mr. ROCQUEMONT (France) thought the parameters could be put into two categories: on the one hand, those considering the volume of the ship as a whole, that is to say, displacement, number of passengers and, taking the broadest possible view, the volume of passenger spaces; on the other hand, those considering only part of the ship. The second category would give rise to difficulties of application and interpretation. His delegation therefore advocated the choice of unequivocal parameters, namely total volume and load displacement.

Mr. GRUNER (Finland) noted that if certified displacement were considered to be equal to the sum of the ship's light displacement and deadweight tonnage, the first and third values were variables and the second a constant. That method of calculation might, if it were in their interest to do so, encourage shipowners to increase their deadweight tonnage - a variable - while the light displacement remained constant.

Conversely, owners wanting a lower deadweight tonnage would be penalized by inclusion of the light displacement in the certification. The formula was thus somewhat unfair and that was why Finland had suggested that only the ship's deadweight tonnage should be certified.

Mr. PRIVALON (USSR) stressed that gross tonnage was the criterion recognized both in international conventions and regulations and in national legislative and administrative provisions. Hence it should not be too difficult for the Committee to arrive at a definition acceptable to all delegations.

Norway's Proposal and Proposal C, both being based on the ship's volume, came near to the principles which his delegation considered essential. However, he did not think that the second parameter should be displacement, which was a variable, but a net tonnage value representing a fraction of the total volume which would be the first parameter. He also felt that Norway's Proposal would be more satisfactory if the gross tonnage expressed the total volume of all closed spaces. If the Committee incorporated in that Proposal certain elements of Proposal C, which the Soviet Union, for its part, favoured, it would be very close to reaching a decision.

Mr. PROHASKA (Denmark) did not think that the adoption of displacement as a parameter would be likely to penalize small ships, as the Finnish representative seemed to fear, for port authorities could levy dues which were not calculated in exact ratio to the gross tonnage.

The representative of the Soviet Union suggested the adoption of a second parameter which would be a fraction of the total volume, the latter being the first parameter. Mr. Prohaska pointed out that, if a country wished to take the total volume into account, it could insert provisions to this effect in its domestic legislation. In regard to port dues, practice had changed over the years: at the beginning of the century, net tonnage had still been the generally accepted basis of calculation, but the current practice of some port authorities was to adopt gross tonnage. The Conference should eliminate the concept of net tonnage and the system of dual tonnage from the text of the Convention and establish a value which would correspond to an exact definition of the ship, that is to say, the certified displacement.

Mr. CHRISTIANSEN (Norway) agreed with the representative of the Soviet Union that the gross tonnage should express a volume but emphasized the need to apply a conversion factor.

Mr. HUNNICH (Federal Republic of Germany) said that, in his opinion, the total volume could be combined with the volume up to the load line with a conversion factor to relate the values obtained to existing gross tonnages.

Mr. GRUNER (Finland) said he was not thinking only in terms of large ships. Port Authorities were not keen on using a sliding scale; they preferred a single figure for the calculation of harbour dues. Under the Finnish Proposal, it was the certified deadweight tonnage which would serve as the basis for the calculation of dues.

Mr. CUNNINGHAM (USA) agreed with the comments of the Norwegian representative concerning the shelter-deck. Thitherto, port authorities in different countries had succeeded in solving their problem by taking gross tonnage as the basis but with due regard to economic considerations. In 1960, at the time of the Conference on Safety of Life at Sea, the shelter-deck had presented a problem because the aim had been to improve the safety of ships. Governments could have proposed the closing of the shelter-deck but they had not done so. Between 1961 and 1969 IMCO had been engaged on the task of finding a solution which would make it possible to increase the safety of ships while maintaining their economic viability. Now a new formula was proposed although little was known of the laws and regulations in force in the different countries. There was a risk of arriving at a solution which could be prejudicial to certain types of ships. The Conference must remember that it was dealing with two existing factors, namely, the shelter-deck and gross tonnage, which, from the economic standpoint, were of great importance to many countries. The total volume would be an entirely new formula unless it were qualified by an appropriate conversion factor. Any decision to exclude the shelter-deck concept might be prejudicial to a great many countries. It was impossible to take an arbitrary decision on the subject and a compromise must be found. If it were decided to abolish the tonnage mark, it was questionable how far that decision would be applied. Shipowners would be guided by economic considerations and only those who would gain some advantage from the change would request the alteration of their tonnage. It seemed essential that the shelter-deck concept should be taken into consideration.

Mr. UGLAND (Norway) fully approved the remarks made by the United States representative. That was why Norway had submitted a compromise solution. The shelter-deck concept was very important to the future of shipping.

As for the concept of displacement, there was no doubt that if it were applied some ships would be seriously penalized and it was very important that ships should not be penalized for increasing their safety. The question of ballast also raised a problem. Everyone agreed that a ship was often more seaworthy if it was ballasted. Why, then, should this factor be eliminated and ships penalized in future if they required ballast? That was what would happen under Proposal C.

It was also important to preserve the register ton of 100 cubic feet as a unit. Norway had attempted to find a solution along those lines. Under the Norwegian proposal it would be possible to obtain a tonnage very close to the present tonnage of standard international vessels. There might perhaps be some difficulties in regard to small vessels, but a solution to that problem could no doubt be found. The Norwegian proposal would also make it possible to fix the tonnage of a vessel in the early stages of its construction, which could not be done under the displacement system because it was difficult to establish the total volume of all the superstructures at the beginning, since a vessel always underwent modifications right up to the moment of its final completion.

The United States representative had raised the problem of the shelter-deck. That was a difficult problem which must not be further complicated. Moreover, as the displacement system was very different from the system currently in use, a long

transitional period would have to be allowed, during which the authorities would have to operate two different systems side by side. It would be better to find a method which could be brought into operation as quickly as possible. Finally, the French proposal took no account of the shelter-deck concept. If the Conference decided to set up a new system of tonnage measurement, it must do it in such a way as to avoid creating new difficulties in the future. A solution must therefore be found which was not too far removed from the present system.

Mr. DE JONG (Netherlands) said that the shelter-deck question gave rise to many problems, and a solution must be found for it. He felt that whatever system was chosen, tonnage must not depend on the construction of the vessel and the number of decks. Tonnage represented no more than 7 to 23 per cent of the dues paid by vessels in ports.

Mr. PROHASKA (Denmark) shared the view of the United States representative in regard to the shelter-deck question. He also considered that tonnage should not depend on the 'tween-deck spaces, and it was clear that those spaces were not taken into account in the concept of displacement. A slight variation in port dues might represent a considerable loss for a shipowner.

In spite of what the representative of Norway had said, the displacement could be determined when the first plans for the ship were drawn up. It had been said that the concept of displacement would lead to figures different from the present ones. But from the figures which he had submitted the day before, it would be seen that the difference was insignificant.



Mr. GRUNER (Finland) said that it was important to choose a system which would suit not only existing ships but also ships to be constructed in the future. The Netherlands proposal merited consideration. The problems raised by smaller ships would have to be studied separately.

Mr. CUNNINGHAM (USA) stressed the need to find a compromise formula. In March 1963 the United States had agreed, in a spirit of compromise and in order to make progress towards a universal system, to abandon the concept of water ballast. Everybody must make concessions.

Mr. UGLAND (Norway) pointed out that delays occurred in ship construction because the position of the load line was not known. It would be possible to abandon the concept of the second deck by preserving the shelter-deck concept. The difference in costs as between closed and open shelter-decks might be as much as 10,000 dollars during a voyage of four to five months. For a shipowner with ten or a dozen ships that could represent a substantial sum.

Mr. MUENCH (Israel) said he had listened with interest to the arguments put forward by the various delegations and he was still convinced that displacement was the best parameter for calculating gross tonnage. It was a simple formula which solved most of the problems involved. The Committee would have to decide whether displacement should be certified or whether it could change frequently. A formula would have to be found which would take the interests of the owners and the port authorities into account. According to the formula submitted by Mr. Prohaska there was nothing to suggest that displacement would give figures very different from the present ones except in the case of passenger vessels. In order to meet that difficulty, he would propose a new formula.

The PRESIDENT stressed the need to find a compromise formula which would be approved by all.

Mr. MUENCH (Israel) suggested that gross tonnage could be calculated according to the formula:

$$GT = \frac{\Delta}{a} + P.b$$

$$\text{or } a + P.b$$

where  $\Delta$  is the displacement

$a$  is a general coefficient, which might be 2

$P$  is the volume of passenger space

$b$  is the coefficient proposed by Norway in Document TM/CONF/9/A.1.1

Mr. GUPTA (India) said he was pleased to note that all representatives had agreed that the shelter-deck problem must be solved, whatever parameters were chosen. The important thing, in his view, was to provide adequate safeguards to obviate any manipulations by owners. As far as India was concerned, displacement was the best parameter.

Mr. SOLDA (Italy) supported the Israeli proposal.

Mr. ROCQUEMONT (France) supported the formula proposed by Israel. In his view, it ought to meet the wishes of those delegations which had insisted that the parameter to replace gross tonnage should make allowance for vessels carrying light cargoes.

Mr. CUNNINGHAM (USA) said his delegation might perhaps be able to accept the Israeli formula, but it must first study the proposal. It would have to enter certain reservations, particularly in regard to shelter-decks and the complications which might result from a variable tonnage. It would also be

difficult to find a formula for defining the second deck. Moreover, the United States wished to keep the concept of the shelter-deck. The Israeli proposal might perhaps serve as a basis for a compromise.

Mr. SAGARA (Japan) said he could not support the Israeli formula. His delegation did not much like the concept of displacement and, in addition, a volumetric coefficient had been used for the passenger spaces.

Mr. MUENCH (Israel), replying to the remarks made by the United States representative, said that calculations carried out, in cubic metres, on a dozen ships of the convertible shelter-deck type, using the system based on half the displacement, had given variations of from 10 to 20 per cent on the tonnages obtained under the present system. More thorough studies, particularly if carried out with computers, would no doubt be useful, but it seemed likely that they would confirm the results already obtained. Since a compromise was essential, it would be advisable to accept a formula slightly less favourable to vessels of the shelter-deck type if that would make it possible to solve all the other difficulties and, in particular, to get round the problem of defining the second deck.

The objection raised by the Japanese delegation was a valid one, though not insurmountable. Perhaps the volumetric coefficient could be replaced by one which would assign a certain space to every berthed passenger.

Mr. NOZIGLIA (Argentina) pointed out that the Israeli formula was not consistent, because displacement was measured by weight and passenger space by volume. To overcome that difficulty, the formula might either be written as  $a = \left[ \frac{t}{m} 3 \right]$  or displacement volume might be used, thus giving a non-dimensional formula.

Mr. CHRISTIANSEN (Norway) said he did not favour a system based on displacement and he therefore associated himself with the criticisms made by the representative of Japan. He recalled that the system put forward by his delegation took account of the volume to the upper deck, ignoring the superstructures. That volume could be calculated in the early stages of the design of the vessel. The method based on total volume would give distinctly higher tonnages. As for the shelter-deck type of vessel, the problem of the second deck was indeed a difficult one; it might perhaps be solved by the use of the imaginary waterline advocated by the Soviet delegation. But the problem of where to put it would still have to be solved.

Mr. OVERGAARD (Netherlands) thought it was the duty of the Conference to adopt a simple, straightforward and equitable system. If it was not prepared to accept variations of around 20 to 30 per cent as compared with the results obtained under the existing system, it might as well give up the whole attempt. The Israeli proposal was however liable to penalize Dutch passenger ships. In view of the competition between sea and air transport, it was important to facilitate the task of shipowners.

Mr. PROHASKA (Denmark) regretted the fact that the Israeli proposal was expressed in cubic metres whereas tons were normally used. But in fact the tonnage obtained was based on the displacement volume of the ship. Thus weight and volume were not used jointly and the objections to the Israeli proposal were without foundation.

With regard to ships of the shelter-deck type, the speaker agreed with the comments of the United States representative. Although less favourable, the new proposal still left them some advantage. Calculations made on a few Danish ships confirmed deviations of between 10 and 20 per cent obtained in Israel. In regard to the comment by the representative of the Netherlands a comparison of proposed gross tonnages and existing gross tonnages carried out by the Danish delegation (TM/CONF/C.2/WP.1) was of interest. Whereas the coefficients calculated for six types of cargo ships were around 1.0, the values relating to passenger ships obtained by applying the Danish proposal were 0.49, 0.67 and 0.52 respectively. If they seemed unacceptable, a coefficient relating to passenger spaces or to the number of passengers could possibly be added to the formula, on a basis of 5 tons per passenger with berth and half a ton per passenger without berth. In any event, it would be sufficient to decide that Pb should represent the number of passengers and not the spaces allocated to them.

Mr. MURRAY-SMITH (UK) held the same views as the representatives of Denmark and the Netherlands. The  $\Delta$  factor in the Israeli formula could represent volume rather than weight and should thus be acceptable to the Japanese delegation. One of the advantages of the system based on displacement was that it was suitable for dual-purpose ships. Too much importance should not be attached to the problem of shelter-deck ships, for in the case of new ships that problem no longer existed. The fears expressed by the Netherlands with regard to passenger ships were not unfounded, but those fears could perhaps be dispelled by the use of the coefficient which the Danish representative had suggested.

Mr. GUPTA (India) explained that there were a great number of Indian ships engaged primarily in unberthed passenger transport. He could therefore not take a decision on the Israeli proposal before it had been examined more thoroughly.

Mr. ROCQUEMONT (France) pointed out that passenger ships accounted for a mere 5 per cent of world shipping. Moreover, since they generally plied regular routes, there should be no difficulty in drawing up individual agreements. The choice between volume and mass was likewise only of secondary importance. For its part, his delegation would prefer the use of mass, for when a ship went from salt water to fresh water, the displacement volume was, in fact, altered whereas the mass remained unchanged.

Mr. SOLDA (Italy) observed that the introduction of a passenger coefficient into the formula penalized no-one; being a constant, it would enable shipowners to provide all the passenger space they wished.

The CHAIRMAN invited delegations to submit at the afternoon meeting any further compromise proposals they might wish to formulate.

The meeting rose at 12.35 p.m.