INTERNATIONAL MARITIME ORGANIZATION

IMO

SLF 38/20
31 March 1994
Original: ENGLISH

SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY - 38th session
Agenda item 20

REPORT TO THE MARITIME SAFETY COMMITTEE

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W/0079n/EWP

LIST OF ANNEXES

1 GENERAL

1.1 The Sub-Committee held its thirty-eighth session from 14 to 18 March 1994 under the chairmanship of Mr. H. Hormann (Germany).

1.2 The session was attended by representatives from the following countries:

ARGENTINA
AUSTRALIA
BELGIUM
BRAZIL
CANADA
CHILE
CHINA
COLOMBIA
COTE D'IVOIRE
CROATIA
CYPRUS
DENMARK
EGYPT
FINLAND
FRANCE
GERMANY
GREECE
ICELAND
INDIA
IRELAND
ITALY
JAPAN
LATVIA
LIBERIA
MEXICO
NETHERLANDS
NORWAY
PANAMA
POLAND
REPUBLIC OF KOREA
ROMANIA
RUSSIAN FEDERATION
SPAIN
SWEDEN
UNITED KINGDOM
UNITED STATES
VENEZUELA

the following Associate Member of IMO:

HONG KONG

an observer from the following intergovernmental organization:

INTERNATIONAL MARITIME SATELLITE ORGANIZATION (INMARSAT)

and observers from the following non-governmental organizations:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)
THE BALTIC AND INTERNATIONAL MARITIME COUNCIL (BIMCO)
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATION (IFSMA)
INTERNATIONAL ROAD TRANSPORT UNION (IRU)
INTERNATIONAL COUNCIL OF CRUISE LINES (ICCL)

1.3 In welcoming participants, the Secretary-General, having referred to the eighteenth Assembly which adopted more than forty resolutions addressing important maritime safety and marine pollution matters, noted that the Sub-Committee had its fair share in the accomplishment of that achievement. In acknowledging this, he also expressed his appreciation for the Sub-Committee's contribution to the successful conclusion of the 1993 Torremolinos Conference which adopted the 1993 Torremolinos Protocol relating to the 1977 Torremolinos Convention.

1.4 Noting that the 1969 Tonnage Convention, which entered into force on 18 July 1982, will apply to existing ships on 18 July 1994 and that concern has been expressed that many ships may not have been remeasured and issued

with the International Tonnage Certificate by the target date of 18 July 1994, the Secretary-General invited the Sub-Committee to carefully consider this matter and the best appropriate action.

1.5 Having emphasized that the safety of ships engaged in the carriage of solid bulk cargoes is a matter of concern to the Organization, the Secretary-General referred to resolution A.713(17) which addressed the issue in a comprehensive manner from all safety aspects. Noting that, in pursuance of the objectives of that resolution, the Organization has made substantial progress in putting in place a satisfactory set of relevant standards, he pointed out that the accidents of two bulk carriers with heavy loss of lives incurred since the beginning of 1994 served again as a grim reminder to the international shipping community that much remains to be done towards the enhancement of bulk carrier safety.

1.6 The Secretary-General, noting that the adoption and subsequent entry into force last year of new regulations 13G and 13F of Annex I to MARPOL 73/78 is one of the most significant developments, which have taken place in the Organization recently, welcomed the work of the Sub-Committee concerning stability aspects of alternative arrangements for existing tankers.

1.7 In concluding his speech, the Secretary-General observed that steps were being taken to improve the efficiency and effectiveness of the various committees and sub-committees of the Organization which will be aided by decisions of the first Joint MSC/MEPC session, the recommendations of the Chairmen's meeting and the provision of resolution A.777(18) on work methods and organization of work in committees and their subsidiary bodies.

Adoption of the agenda

1.8 The Sub-Committee adopted the agenda (SLF 38/1/Rev.1), which, together with a list of documents considered under each agenda item, is set out in annex 1.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted, in general, decisions and comments pertaining to its work taken by MSC 62, MEPC 34, BC 32, LSR 24, DE 36, STW 24, FSI 1, FP 38 (SLF 38/2), NAV 39, A 18, MSC/MEPC 1, COM 39 (SLF 38/2/1), STW 25 (SLF 38/2/2), FSI 2 (SLF 38/2/3), DE 37 (SLF 38/2/4) and MEPC 35 (SLF 38/2/5).

2.2 The Sub-Committee noted, in particular, that the MSC and the MEPC at their first joint session, in considering the need to establish priorities in their work and the question of whether the present structure of sub-committees and traditional allocation of meeting-weeks of committees and their subsidiary bodies responded satisfactorily to present needs or whether a more rationalized structure would provide a more efficient mechanism towards achieving the required goal, agreed, inter alia, that:

.1 priorities should be assigned to all new items agreed to be included in the work programme;

.2 the sub-committees should, as necessary, operate under the instructions of, and report to, both the MSC and the MEPC;

.3 use of correspondence groups should be encouraged and rules and procedures for such groups should be developed;

.4 intersessional meetings should only be held after careful consideration of their need by the Committee concerned, taking into account the priority and urgency of each individual matter;

.5 guidelines for the organization and method of work should be established for the Committees and their subsidiary bodies.

2.3 The Chairman informed the Sub-Committee of the outcome of the meeting of the Secretary-General with the Chairmen of the MSC and the MEPC and the sub-committees and, in particular, of the proposals aimed at improving the efficiency and effectiveness of the Organization within the resources available. He noted that the proposals, if accepted, would serve well the cause of maritime safety and marine pollution prevention.

2.4 The Sub-Committee noted the decisions taken by the eighteenth Assembly and, in particular, the adoption of the following resolutions which are closely related to the work of the Sub-Committee:

A.747(18) - Application of tonnage measurement of segregated ballast tanks in oil tankers;

A.749(18) - Code on intact stability for all types of ships covered by IMO instruments;

A.750(18) - Damage stability standard for existing ro-ro passenger ships;

A.758(18) - Application of recommendation 2 of the International Conference on Tonnage Measurement of Ships, 1969; and

A.777(18) - Work methods and organization of work in committees and their subsidiary bodies.

2.5 The Sub-Committee decided to deal with the instructions and requests of the other IMO bodies, with due regard being given to the decisions and comments provided in the above documents, when considering the relevant agenda items.

3 INTACT STABILITY

3.1 The Sub-Committee considered documents submitted to the session under this agenda item. The outcome of the consideration of the documents is outlined in the following paragraphs.

Avoidance of potentially dangerous operational restrictions regarding strength and stability of double hull tankers

3.2 The Sub-Committee noted that MEPC 34 expressed its concern regarding possible stability problems in the operation of tankers having full width cargo tanks and referred a related document by OCIMF (MEPC 34/7/10) to this Sub-Committee for consideration.

3.3 The Sub-Committee, in considering the document by OCIMF (SLF 38/3/6) updating the above document MEPC 34/7/10 and comments thereon by IACS (SLF 38/3/7), noted OCIMF's concern that many new double hull tankers, being built without longitudinal bulkheads and having cargo tanks extending their full beam, would be subject to operational restrictions in order to maintain adequate intact and reserve stability during cargo/ballast operations.

3.4 Based on the conclusion of a study that, with appropriate attention paid by the designer during the design phase to either the internal subdivision or the proportions of the ship, it is possible to design the ship so that all intact and damage stability requirements are met without a need to impose operating restrictions in the handling of cargo and ballast, OCIMF considered that the design of new tankers should meet the applicable intact stability criteria of resolution A.167(ES.IV) without resorting to any operational restrictions and proposed relevant amendments to regulation I/13F of MARPOL 73/78 to this effect. In contrast to this proposal, IACS (SLF 38/3/7) gave reasoning that use of these criteria in full may not be entirely appropriate for safety margins during loading/unloading.

3.5 In the course of discussion, the Sub-Committee agreed that, instead of amendments to regulation I/13F of MARPOL 73/78, a set of recommendations should be developed for stability values to be met during loading and unloading, which might ultimately be included in the Intact Stability Code.

3.6 In the context of this discussion, the Sub-Committee considered a draft MEPC resolution on oil tanker stability, operational safety and protection of the marine environment (MEPC 35/8/2) referred to it by MEPC 35 for comments and recommendations. The Sub-Committee agreed that the draft MEPC resolution should be reviewed in the light of a conclusion made on the above issue.

3.7 The Sub-Committee referred the matter to a drafting group of intact stability experts for review. Having received the report of the group (SLF 38/WP.6), the Sub-Committee agreed to the following, as outlined in paragraphs 3.8 to 3.14.

Intact stability of double hull tankers

3.8 The Sub-Committee noted that the intact stability characteristics of double hull tankers and other tanker designs under MARPOL 73/78 regulation I/13F, which have significant slack space during loading/unloading/ballasting/tank cleaning operations, may require special consideration.

3.9 The Sub-Committee recognized the serious nature of this issue, and noted that design solutions, which achieve positive intact stability under all operating conditions without reliance upon operational restrictions relating to stability, should be encouraged, but agreed not to recommend mandatory design criteria for intact stability.

3.10 With regard to the group's proposals to amend MARPOL 73/78 to include intact stability criteria, which may be satisfied through simple operational instructions for liquid transfer operations, and for modifications to the Intact Stability Code, as set out in annexes 1 and 2 to SLF 38/WP.6, the delegations of Japan and Greece observed that there were certain inconsistencies between the requirements proposed in these two annexes and that it was necessary to study the proposals in detail.

3.11 The group's Chairman clarified that the requirements are believed to be technically consistent between the two annexes. However, the order of presentation of the requirements is revised and the format changed between the two annexes in order to be inserted in the respective instruments.

3.12 The Sub-Committee decided to continue consideration of the proposed amendments to both of those instruments (annexes 1 and 2 to SLF 38/WP.6) at its next session and invited Members to submit comments on them and also on possible intact stability problems of double hull tankers without longitudinal centre bulkheads in the cargo tanks.

Guidelines for the use and application of on-board computers

3.13 The Sub-Committee concurred with the group's view on encouraging the use of shipboard computers for stability calculations and the training of ship's officers in their use and decided to invite the DE Sub-Committee to take into account paragraph 17 of SLF 38/WP.6 while developing guidelines for the use and application of on-board computers, in co-operation with the Sub-Committee, as required (see also paragraph 14.3).

Draft MEPC resolution on oil tanker stability, operational safety and protection of the marine environment (MEPC 35/8/2)

3.14 As instructed by the MEPC, the Sub-Committee reviewed the above draft MEPC resolution and agreed to the text contained in annex 3 of SLF 38/WP.6. The MEPC is invited to consider the revised version of the draft MEPC resolution set out in annex 2 and decide as appropriate.

Guidance to the master for avoiding dangerous situations in following and quartering seas

3.15 The Sub-Committee, in reviewing documents submitted by Canada (SLF 38/3/3), Japan (SLF 38/3/5 and SLF 38/INF.10) and Poland (SLF 38/3), recalled that it agreed, at its thirty-seventh session, that the following should be addressed in the course of the development of the guidance:

.1 the guidance should be based on the proposal by Japan (SLF 37/3/2) incorporating relevant items from the proposal by the Russian Federation (SLF 37/3/5);

.2 indications of dangerous situations in the guidance should be specified; and

.3 any training needs for master and officers for ensuring proper use of the guidance should be identified.

3.16 Having considered the interim report of the correspondence group on the development of the guidance (SLF 38/3/5) and the present text of the draft guidance (SLF 38/INF.10), the Sub-Committee noted the progress made by the group and comments on the subject by Canada and Poland. The Sub-Committee further noted that document SLF 38/INF.10 reflects the active search for a compromise within the group to develop a final document.

3.17 In the course of discussion, several delegations observed that, in order to improve the master's capability for avoidance of dangerous situations, in particular in the case of small ships, the guidance should provide a set of simple basic provisions which could be used by him to take action in a rapid and effective manner. In this context, a view was expressed that for large ships the provisions of the guidance may differ from those for small ships, and a proposal was therefore made that the final guidance should take account of the actual size of the ships.

3.18 In considering a time-scale for the completion of the guidance, the Sub-Committee noted the opinion of the Chairman of the correspondence group that another two years may be needed. The Sub-Committee, in re-establishing the correspondence group, co-ordinated by Japan*, express the desire to receive a revised draft guidance for consideration already at SLF 39.

In-service inclining test

3.19 The German delegation informed the Sub-Committee of a research project recently completed on in-service inclining test on containerships as well as on multipurpose ships. The results now available provide information to the master on actual stability under service conditions after de-berthing. The delegation offered to submit a paper on the matter to the next session.

Review of the Intact Stability Code

3.20 The Sub-Committee, recalling that MSC 62 approved the draft Intact Stability Code which was later adopted by the eighteenth Assembly by resolution A.749(18), noted that, because of the ongoing work on the development or updating of standards for different ship types, the Code should be considered a "living document" and should be kept under review on a periodical basis.

3.21 Having briefly reviewed documents by Canada (SLF 38/INF.8), the United States (SLF 38/3/4) as well as a document by Chile (MSC 62/4/1) referred to the Sub-Committee by MSC 62, the Sub-Committee agreed that, in view of the recent adoption of the Code and the need to deal with other priority items at this session, proposals for modifications to the Code submitted in the above documents could only be considered in detail at its next session. Members were invited to submit their comments on the proposals submitted to this session and on those issues identified in paragraph 3.14 of SLF 37/25 to the next session, together with any other suggestions for improvement of the Code, they may by then have.

International Code for the Safe Carriage of Grain in Bulk

3.22 The Sub-Committee noted a document by Poland (SLF 38/3/1) containing proposals to be included in the stability booklet for the masters of ships carrying grain and instructed the Secretariat to bring that document to the attention of the BC Sub-Committee for action as appropriate.

Trial in order to improve the actual stability criteria

3.23 The Sub-Committee noted a study contained in a document by Italy (SLF 38/INF.4), of the influence of the various indices of the actual stability criteria (resolutions A.167(ES.IV), A.168(ES.IV) and A.562(14)) on the maximum allowable height of the ship's centre of gravity. The study

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determined some analytical relations which allow the fishing vessel designer to check the stability indices in the design stage on the basis of several geometrical and mechanical parameters of fishing vessels, and is aimed at proposing an integration of various criteria in order to rationalize and simplify the existing stability criteria.

4 SUBDIVISION AND DAMAGE STABILITY OF PASSENGER SHIPS

4.1 The Sub-Committee had for its consideration under this agenda item documents submitted by Canada (SLF 38/4/7 and SLF 38/INF.9), Germany (SLF 38/4/3), Japan (SLF 38/4/8), the Russian Federation (SLF 38/4/2), Sweden (SLF 38/4/4), the United Kingdom (SLF 38/4/6), the United States (SLF 38/4/5), IACS (SLF 38/4/9) and joint papers by the Secretariat and the former Chairman of the SDS working group (SLF 38/4 and SLF 38/4/1).

4.2 The Sub-Committee recalled that, in respect of its work on the development of requirements for application of the SOLAS 90 standard to existing passenger ships other than ro-ro passenger ships, the delegation of Sweden undertook to collect and analyse the results of calculations carried out by Members in accordance with the calculation method specified in document SLF 38/4.

4.3 There were further issues which had to be resolved for an effective and uniform application of the damage stability requirements already in force and as agreed at its thirty-seventh session, the Sub-Committee established the ad hoc working group on subdivision and damage stability (SDS group) under the chairmanship of Mr. R. Tagg (United States), which was given the following terms of reference:

.1 application of the SOLAS 90 standard to existing passenger ships other than ro-ro passenger ships;

.2 interpretations of provisions of resolution MSC.26(60) and MSC/Circ.574; and

.3 interpretations of provisions of resolution MSC.12(56).

4.4 Having received the report of the working group (SLF 38/WP.1), the Sub-Committee approved it in general and took appropriate decisions outlined in paragraphs 4.5 to 4.10.

Application of the SOLAS 90 standard to existing passenger ships other than ro-ro passenger ships

4.5 The Sub-Committee considered documents submitted by Germany (SLF 38/4/3), the Russian Federation (SLF 38/4/2), the sample ship collation by Sweden (SLF 38/4/4) and a joint paper by the Secretariat and the former Chairman of the SDS group (SLF 38/4).

4.6 After due evaluation of the Swedish collation paper, the Sub-Committee agreed that there was no compelling need, at the present time, to consider this matter and, recalling the spirit of resolutions A.500(XII) and A.777(18), decided to deal with this matter in its future work on the harmonization of damage stability requirements. This decision was based on consideration of the following:

.1 the lack of relevant casualty information on non-ro/ro passenger ships;

.2 the limited number of samples in the Swedish collation;

.3 the generally higher level of subdivision for existing non-ro/ro passenger ships in comparison with ro-ro passenger ships;

.4 the general dissatisfaction of using the A/Amax formula as a basis for the phase-in of damage stability regulations; and

.5 as part of the ongoing harmonization effort, the working group on subdivision and damage stability is currently considering proposals which incorporate a different phase-in schedule, for existing ships, into the required subdivision index.

4.7 The Committee is invited to endorse the Sub-Committee's decision on the matter.

Interpretations of provisions of resolution MSC.26(60) and circular MSC/Circ.574

4.8 The Sub-Committee agreed to a draft MSC circular on interpretations of provisions of resolution MSC.26(60) (amendments to SOLAS chapter II-1 regarding damage stability of existing ro-ro passenger ships) and circular MSC/Circ.574 (calculation procedure to assess the survivability characteristics of existing ro-ro passenger ships) prepared by the group on the basis of document SLF 38/4/1, as set out in annex 3. The Committee is invited to approve the draft MSC circular for dissemination to Member Governments.

Interpretation of resolution MSC.12(56)

4.9 Following consideration of documents submitted by Japan (SLF 38/4/8) and the United Kingdom (SLF 38/4/6), the Sub-Committee, in concurring in principle with the proposal concerning the least acceptable range of residual stability contained in the United Kingdom's submission, agreed to draft amendments to SOLAS regulation II-1/8 set out in annex 4. The Committee is invited to approve the draft amendments for future adoption.

4.10 The Sub-Committee further agreed that, once amended, paragraphs 2.3.1 and 2.3.3 of SOLAS regulation II-1/8 should be interpreted as follows:

"When major progressive flooding occurs, that is when it causes a rapid reduction in the righting lever of 0.04 m or more, the righting lever curve should be considered as terminated at the angle at which the progressive flooding occurs and the range and area referred to in 2.3.1 and 2.3.2 should be measured to that angle.

In cases where the progressive flooding is of a limited nature that does not continue unabated and causes an acceptably slow reduction in righting lever of less than 0.04 m, the remainder of the curve should be partially truncated by assuming that the progressively flooded space is so flooded from the beginning."

Intermediate stages of flooding

4.11 The Canadian delegation (SLF 38/4/7) drew the attention of the Sub-Committee to SOLAS regulation II-1/8.2.4, which specifies that in all cases only one breach of the hull and only one free surface need to be assumed, and stated that this provision can be seen to conflict with other pertinent requirements of the SOLAS Convention such as regulation II-1/8.2.2 which appears to cater for the fact that internal hull configurations can cause more than one free surface of ingressed water during intermediate stages of flooding, and regulation II-1/8.4.4 which calls for damage of a lesser extent being taken into account in the calculations.

4.12 The Sub-Committee agreed that the matter should be considered further in the context of future amendments to SOLAS chapter II-1 and invited the Canadian delegation to submit, in due course, relevant draft amendments, for consideration by the Sub-Committee.

Integrity of flooding boundaries above the bulkhead deck

4.13 In their paper SLF 38/4/9, IACS referred to circular MSC/Circ.541 which prescribes requirements for watertight doors in flooding boundaries above the bulkhead deck of passenger ships and states that, for the purpose of establishing boundaries to satisfy the residual stability requirements, enclosed spaces included in the damage stability calculations may have weathertight subdivision if they do not become submerged during any stage of flooding. IACS concluded that such weathertight subdivisions, including weathertight doors therein, may be calculated submerged for satisfying the residual stability requirements beyond damage equilibrium. Subsequently, in order to have uniform application, IACS established requirements for these weathertight doors as set out in the annex to SLF 38/4/9. Some delegations stated that similar requirements were currently being applied by their Administrations.

4.14 The Sub-Committee took note of the above IACS requirements for such weathertight doors and agreed that these requirements may also be used by individual Administrations in applying the provisions of circular MSC/Circ.541.

Research into damage stability of passenger ro-ro ferries

4.15 The Sub-Committee noted the information on the status of research conducted by Canada (SLF 38/INF.9) having the objective to develop a theoretical model of damage stability of a ro-ro monohull in waves and to apply it to evaluate the SOLAS 90 standard criteria, at the same time aiming at providing an improved understanding of the SOLAS 90 standard criteria with respect to survivability in particular sea states and corresponding freeboard, together with advantages from the provision of freeing ports for flooding protection. The Sub-Committee concurred with the invitation of Canada for Members to co-operate in this research by sharing the results of similar studies in order to derive a rational basis for any future considerations.

4.16 The United Kingdom delegation advised the Sub-Committee that phase II of the related United Kingdom research programme had just been completed. This phase carried out research similar to that proposed by Canada including damage model test and research into mathematical modelling. It further informed the Sub-Committee of its intention to hold a seminar in London to disseminate the results of that phase II. The paper presented at that seminar will be

forwarded for the information of the Sub-Committee. The United Kingdom delegation offered to make the report of the research available to the delegation of Canada as soon as possible.

5 HARMONIZATION OF DAMAGE STABILITY PROVISIONS IN IMO INSTRUMENTS

5.1 The Sub-Committee had for its consideration documents submitted by Croatia (SLF 38/5/4), Poland (SLF 38/5/6), the Russian Federation (SLF 38/5/1), the United Kingdom (SLF 38/5/5), the United States (SLF 38/5/3), IACS (SLF 38/5/7, SLF 38/5/8 and SLF 38/5/9), joint papers by Denmark, Finland and Sweden (SLF 38/5/2 and SLF 38/INF.5) and a note by the former Chairman of the SDS group (SLF 38/5).

5.2 The Sub-Committee recalled that, at its thirty-seventh session, it reviewed the items in its work programme relating to subdivision and damage stability and rearranged them in the light of its decision that in future subdivision and damage stability requirements for all ships should be based on the probabilistic approach and that the work on harmonization of the damage stability provisions should take prevalence over the attempts to develop such regulations for individual types of ships in isolation.

5.3 The Sub-Committee, having briefly reviewed the documents, referred them to the working group established under agenda item 4 and instructed the group to:

.1 develop draft requirements concerning subdivision and damage stability of dry cargo ships of less than 100 m in length and the explanatory notes thereto;

.2 review proposals for draft probabilistic regulations for passenger ships;

.3 prepare draft amendments to provisions of part B-1 of SOLAS chapter II-1;

.4 consider comments by the United Kingdom and the United States relating to the work on the harmonization of damage stability provisions; and

.5 continue consideration of an interpretation of alterations or modifications of a major character for the purpose of chapter II-1 of SOLAS.

5.4 Having received the report of the group (SLF 38/WP.1), the Sub-Committee considered it and took action as specified in paragraphs 5.5 to 5.21 below.

Subdivision and damage stability requirements for cargo ships of less than 100 m in length

5.5 The Sub-Committee had a lengthy discussion on the formula of the R index that should be applied to cargo ships of less than 100 m in length, and also on the minimum length value, if any, from which the requirements should start to apply.

5.6 With regard to the minimum length, the Sub-Committee agreed that the requirements should be applied to ships over 80 m in length and that the formula for calculating the index R for ships over 80 m but under 100 m in length should be that contained in SLF 38/5/1.

5.7 The Sub-Committee, pointing out that any amendments should only apply to new ships, agreed to draft amendments to SOLAS chapter II-1, part B-1 regarding subdivision and damage stability requirements for cargo ships over 80 m but under 100 m in length, set out in annex 5. The Committee is invited to approve the draft amendments for future adoption.

5.8 The Sub-Committee agreed that the lower limit of length would be further considered in the context of the work on the harmonization of damage stability provisions, and when sufficient information is made available on the attained indices of ships less than 80 m in length.

Consideration of amendments to SOLAS chapter II-1, part B-1 (resolution MSC.19(58)

5.9 The Sub-Committee reviewed documents submitted by Croatia (SLF 38/5/4) and Poland (SLF 38/5/6), and agreed that both of these submissions deserve further consideration during the development of the harmonization of damage stability provisions in IMO instruments. However, it considered that these proposals were primarily refinements in nature and need not, at this session, be considered as amendments to the current cargo ship regulations.

5.10 The Sub-Committee reviewed a document submitted by IACS (SLF 38/5/7) and generally agreed that item .6 of the footnote to SOLAS regulation II-1/25-1.1 is adequate and does not require modifications or clarifications. The Sub-Committee confirmed that it was the intent of the footnote to only exempt ships that were covered by the other IMO instruments. Simply demonstrating compliance, by calculations, with regulation 27 of the 1966 LL Convention without the assignment of a reduced freeboard is not sufficient for the ship to be excluded from compliance with SOLAS chapter II-1, part B-1. Regulation 27 of the 1966 LL Convention is not intended to be an equivalent alternative to the probabilistic standards of SOLAS.

Comments related to the work on harmonization of damage stability provisions

5.11 The Sub-Committee considered documents submitted by the United Kingdom (SLF 38/5/5) and the United States (SLF 38/5/3) regarding the overall strategy and philosophy for the harmonization effort. The Sub-Committee was generally in agreement with both submissions and recalled the other previous submissions on harmonization (SLF 36/4/13, MSC 59/WP.9 and others) which will all be useful in developing an agenda and proposed schedule.

5.12 The Sub-Committee reviewed, with great interest, a report of the Nordic Group submitted by Denmark, Finland and Sweden (SLF 38/5/2 and SLF 38/INF.5) and considered that this report is an excellent first step to integrate the passenger damage stability regulations into a format more compatible for harmonization with the cargo ship regulations specified in SOLAS chapter II-1, part B-1.

5.13 The Sub-Committee agreed to initially proceed with harmonization of the cargo and passenger ship damage stability regulations, bearing in mind the future inclusion of other ship types, and decided to discuss and determine the level of current consensus regarding the following items:

.1 damage statistics

.2 probability factors (p.r.v)

.3 draughts for evaluation

.4 permeabilities

.5 survivability factor (s)

.6 subdivision for minor damage

.7 required index (R)

.8 definitions, watertight integrity, classification of openings, immersion lines, etc.

5.14 There was considerable discussion regarding the statistical basis for the regulations and the use of alternative damage statistics for different ship types. The Sub-Committee agreed that, while improvement of the statistical database should be continued, the harmonization of the passenger and cargo ships regulations on the basis of the existing casualty statistics should nevertheless be initiated.

5.15 There was considerable discussion also regarding the assumed distributions from the damage statistics and the mathematical procedures to develop equations in the regulations from these distributions.

5.16 It was generally agreed that the formulae in the cargo ship regulations represent the best starting-point; however, there are current proposals from Croatia, the Netherlands, Poland and the Nordic Group to revise these formulae. No consensus regarding the revised formulae was reached at this session.

5.17 In order that this work may continue intersessionally, the Sub-Committee decided to establish a correspondence group on harmonization of damage stability provisions, jointly co-ordinated by Sweden and the United States* and instructed it to work as much as possible on items listed in paragraph 5.13 above, taking into account the priorities assigned by the working group.

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Interpretation of alterations and modifications of a major character

5.18 The Sub-Committee based its deliberations on the proposals contained in document SLF 36/4/23 (Germany) and also referred to the decisions of the Sub-Committee at its thirty-seventh session as reported in SLF 37/25, paragraphs 4.30 to 4.38.

5.19 After some discussion on whether it was necessary to define the term "modification of a major character", the Sub-Committee decided that it should be sufficient to relate the modification, whatever its nature or extent, to the effect on the level of subdivision of the ship, and agreed on the draft interpretation of alterations and modifications of a major character set out in annex 6. The Committee is invited to approve dissemination of the proposed interpretation by an MSC circular.

Maximum number of passengers to be permitted on new one-compartment passenger ships

5.20 In addition to the issues outlined in the preceding paragraphs, the Sub-Committee referred to the papers submitted by the United States (SLF 38/4/5) and the United Kingdom (SLF 38/5/5) which each addressed the carriage of large numbers of passengers on one-compartment ships. Reference was also made to earlier papers by France, Poland and Sweden and to the request from MSC 59 (MSC 59/WP.7/Add.1) that "this matter needs to be considered as a matter of priority to ensure that the number of persons permitted to be carried on one-compartment passenger ships should be significantly reduced".

5.21 The Sub-Committee therefore proposed that Members take note of the following paragraph developed within the SDS working group on a tentative basis, and comment, as appropriate, for completion of this item at the next session:

> "The maximum number of persons which may be carried on a new one-compartment standard passenger ship, even when all the subdivision and damage stability requirements are fully complied with, is not to exceed [300].
>
> In those cases where it is demonstrated that the attained subdivision index A, calculated according to the provisions of [resolution A.265(VIII)] [the simplified calculation procedure of MSC/Circ.574, annex] for the intended number of persons is at least as great as [0.8] R, then a maximum of [600] persons may be carried.
>
> For this purpose, when calculating R, Ls and N in formula (I) of regulation 2(c) of resolution A.265(VIII) are to be taken as the subdivision length and number of persons respectively."

Interpretations of regulations of part B-1 of SOLAS chapter II-1 (resolution MSC.19(58))

5.22 The Sub-Committee noted that, in order to progress conclusion of the work on the subject, the former Chairman of the SDS group had undertaken preparation of the relevant draft SLS circular, as given in the annex to SLF 38/5, which contains interpretations of regulations 25-7, 25-8 and 25-9 of part B-1 of SOLAS chapter II-1, agreed by the Sub-Committee at its thirty-seventh session. The Sub-Committee felt, however, that an MSC circular

would better serve the purpose and agreed, with minor editorial modifications, to the draft MSC circular, as set out in annex 7. The Committee is invited to approve the draft MSC circular for dissemination to Member Governments.

Application of part B-1 of SOLAS chapter II-1 and regulation 27 of the 1966 LL Convention to containerships

5.23 In their paper SLF 38/5/8, IACS referred to the case of containerships designed to take advantage of the fact that a reduced freeboard assignment based on compliance with the damage stability requirements of regulation 27 of the 1966 LL Convention will exempt the ship from having to comply also with provisions of part B-1 of SOLAS chapter II-1. As, in general, a type B reduced freeboard is not likely to be a frequent design requirement for a containership which may also have quite different features compared with ships to which traditionally regulation 27 is applied, IACS established general guidelines for the application of resolution A.320(IX) to containerships, subject to agreement of the responsible flag Administration.

5.24 The Sub-Committee took note of the IACS guidelines, as outlined in SLF 38/5/8, and was of the opinion that further information on the experience with application of the guidelines would be beneficial.

Application of part B-1 of SOLAS chapter II-1 to segmented ships and specifically to integrated tug/barge combinations

5.25 The Sub-Committee considered document SLF 38/5/9 wherein IACS addressed the application of provisions of the SOLAS and MARPOL Conventions to integrated tug/barge combinations. In view of safety considerations, for this type of ships, other than those related to SOLAS chapter II-1, part B-1 such as location of collision bulkhead, fire fighting, life saving, manning which may be affected by their treatment as combined or separate ships, IACS proposed that the principle of rigid versus non-rigid tug/barge connections to determine the unit's size should be used by all relevant sub-committees to evaluate all safety measures for integrated tug/barge combinations.

5.26 In this context, noting that the DE Sub-Committee established a correspondence group, co-ordinated by Finland*, to deal with tug/barge combinations and instructed it to use the United States proposal (DE 37/12) as a basis, identify any particular SOLAS regulations that should apply to different categories of combinations and submit its report to DE 38, the Sub-Committee agreed that it may participate, as necessary, in this work if requested by the DE Sub-Committee. Meanwhile, Members were invited to contribute to the work of the DE Sub-Committee correspondence group.

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Requirements for stability of monohull and multihull high speed craft

5.27 The Sub-Committee was informed that DE 37, in considering the draft High Speed Craft (HSC) Code's requirements with regard to stability, took note of the outcome of a recent study conducted by the United Kingdom and agreed to draw the Sub-Committee's attention to the need for further research into harmonization of damage stability standards between monohulls and multihulls and to investigate the dynamic stability of these craft. The DE Sub-Committee considered the latter aspect to be of comparable importance to intact and damage stability in determining the overall safety of craft.

5.28 The Sub-Committee agreed that the matter should be further pursued at its subsequent sessions and, having noted that more information is necessary, invited Members to submit their comments to the next session. The United Kingdom delegation offered to submit a paper to the next session identifying areas for future research into harmonization of damage stability standards of monohulls and multihulls and into the dynamic stability of such craft.

6 ANALYSIS OF DAMAGE CARDS

6.1 The Sub-Committee recalled that, at its previous session, it instructed the Secretariat to prepare a list of ships, extracted from information available in the Organization, which were involved in collisions or strandings, in order to assist Members in identifying ship casualty information which could be submitted in damage cards.

6.2 The Sub-Committee noted this list (SLF 38/INF.3, annex) and, in realizing with concern that no damage cards had been submitted to this session, invited Members to use the list in the annex to SLF 38/INF.3 as well as other sources, as may be deemed appropriate, to augment the collection of damage cards which is an indispensable basis for using correct damage patterns in the probabilistic regulations.

6.3 The Sub-Committee noted that the format of the damage card (MSC 59/33, annex 3) does not cover breaches of the hull below double bottom and invited Members to submit to the next session their proposals for improving the format of the damage card to also cater for such damages.

7 ANALYSIS OF FISHING VESSEL AND FISHERMEN CASUALTY STATISTICS

7.1 The Sub-Committee recalled that MSC 62 approved circular MSC/Circ.539/Add.2, as prepared by SLF 37 and recommended by FSI 1, and invited Member Governments to submit corresponding casualty data, as specified in that MSC circular.

7.2 The Sub-Committee noted that FSI 2, in considering document FSI 2/6/2/Rev.1, found that the information on collection and analysis of casualty statistics of fishing vessels and fishermen contained in that document was based on data provided by only a few countries and agreed that these casualty statistics of fishing vessels and fishermen would only be of value in case of increased reporting by Members. The FSI Sub-Committee further noted a booklet on analysis of serious casualties to seagoing tankers for the years 1977 to 1991 and to fishing vessels for the years 1982 to 1991 prepared by the Secretariat pursuant to relevant decisions of MSC 61. FSI 2, having agreed to discontinue issuing the booklet, invited the MSC and the MEPC to consider using any available funds for the development of a casualty database within the Organization.

7.3 Having noted that no documents have been submitted to the session under this agenda item, the Sub-Committee agreed that, for the purpose of its work concerning the safety of fishing vessels, there was no need for further action on this item as the work on collation of information on casualties is now being undertaken by the FSI Sub-Committee's working group on casualty statistics and investigations.

7.4 In the light of the above, the Committee is invited to delete this item from the work programme of the Sub-Committee.

8 REVISION OF TECHNICAL REGULATIONS OF THE 1966 LL CONVENTION

8.1 The Sub-Committee recalled that, at its previous session, it generally agreed on basic principles and elements for reviewing the 1966 LL Convention and, in order to facilitate its further work on the matter, had established correspondence groups on review of requirements for conventional ships and on establishment of requirements for novel type ships.

8.2 The Sub-Committee briefly reviewed documents submitted under this agenda item and instructed an ad hoc working group on the revision of technical regulations of the 1966 LL Convention, established under the chairmanship of Mr. R.H. Bertz (United States), to continue its work and to also consider a proposal by the United Kingdom regarding the amalgamation of the SOLAS and LL Conventions. In addition, the group was instructed to consider, as requested by DE 37, how the 1966 LL Convention requirements should apply to craft covered by the High Speed Craft (HSC) Code.

Revision of technical regulations of the 1966 LL Convention

8.3 In respect of the revision of the 1966 LL Convention, the Sub-Committee noted a verbal report of the Chairman of the group on the progress in the work on the matter and requested him to prepare the report of the group as a document for consideration at the next session of the Sub-Committee. The Sub-Committee authorized the proposed re-establishment of the correspondence group* to make progress in consideration of the technical requirements of the 1966 LL Convention (see also paragraph 14.5).

Load line survey and certification of high speed craft

8.4 With regard to load line survey and certification of high speed craft, the Sub-Committee noted that DE 37 agreed to bring the matter to the attention of this Sub-Committee with a view to obtaining a recommendation on application of the 1966 LL Convention to high speed craft.

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8.5 The Sub-Committee considered proposals of the working group (SLF 38/WP.4) including draft MSC circular on the application of the 1966 LL Convention to high speed craft. The Sub-Committee agreed to the proposed draft MSC circular, modified in line with comments by Members, as set out in annex 8. The Committee is invited to approve the draft MSC circular for dissemination to Member Governments.

8.6 In the course of the discussion on the draft MSC circular it was envisaged that, in the future, the 1966 LL Convention may have to be amended to address the high speed craft, either by inclusion of a new chapter on high speed craft or by a new paragraph under article 6 - "Exemptions" specifically referring to such craft.

8.7 The Greek delegation, referring to section 1.9 of the draft HSC Code dealing with the Permit to Operate such craft, expressed its opinion that the same approach should be taken in case of application of the 1966 LL Convention to high speed craft.

Submission of documents

8.8 The delegation of Germany informed the Sub-Committee that they had submitted a document relevant to this agenda item which could not reach this session in time. Consequently, the delegation of Germany requested the Secretariat to make necessary arrangements to have the document processed for consideration at the next session.

9 SMALL FISHING VESSEL SAFETY AND TRAINING GUIDELINES

9.1 The Sub-Committee recalled that, at its previous sessions, it agreed that the revision of part A of the Code of Safety for Fishermen and Fishing Vessels and the Document for Guidance on Fishermen's Training and Certification should be undertaken after a Protocol to the 1978 STCW Convention on the training and certification of fishermen has been adopted.

9.2 In this respect the Sub-Committee was informed that MSC 62 agreed that the instrument should be developed and adopted as a new convention rather than as a Protocol to the STCW Convention. The Sub-Committee noted that MSC 62 proposed, the Council at its seventieth session approved and the eighteenth Assembly agreed to include in the 1994-1995 biennium, a two-week conference or conferences to be held simultaneously, to adopt a revised STCW Convention and a new instrument on fishermen's training and certification.

9.3 With regard to the revision of the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels and the Code of Safety for Fishermen and Fishing Vessels, part B, which was agreed to be undertaken after the adoption of the 1993 Torremolinos Protocol, the Sub-Committee noted that LSR 24 invited its Members, taking into account the outcome of the 1993 Torremolinos Conference, to submit their comments and proposals on the revision of chapter VIII, part B of the Code of Safety and that COM 39, having noted resolution 8 of the 1993 Torremolinos Conference regarding implementation of the GMDSS requirements in respect of existing fishing vessels, agreed, inter alia, that some guidelines or recommendations should be prepared on the application of the GMDSS requirements appropriate for fishing vessels of between 24 m and 45 m in length covered by the 1993 Torremolinos Protocol and vessels of between 12 m and 24 m covered by the Voluntary Guidelines.

9.4 The Sub-Committee recalled that it requested the Secretariat to prepare an outline of modifications to provisions of, and to identify chapters in, both the Voluntary Guidelines and the Code of Safety which should be reviewed by the relevant sub-committees (SLF 38/9). In considering this document, the Sub-Committee agreed that the contents of its annexes 1 and 2 should later be brought to the attention of the DE, FP, LSR, COM and NAV Sub-Committees for them to review the relevant chapters of the Voluntary Guidelines and the Code of Safety and prepare draft amendments to those documents. The Sub-Committee noted that, in view of the fact that the texts of several chapters of the 1977 Torremolinos Convention have been replaced by new texts in the 1993 Torremolinos Protocol and that the revision of the Code of Safety and the Voluntary Guidelines might not be necessarily limited to modifications emanating from the provisions of the 1993 Torremolinos Protocol, the scope of the revision could be better decided by the sub-committees concerned.

9.5 The Sub-Committee, recognizing that the 1993 Torremolinos Protocol contains no specific requirements in a number of chapters for vessels under 45 m in length, because such requirements were to be subject to regional agreements depending on the geographical region in which the vessels concerned operate, was of the view that it would not be reasonable to establish priorities in a revised Code of Safety, part B, which did not take into account the regional principle enshrined in the Protocol.

9.6 Compared with the Code of Safety, part B, the situation with the Voluntary Guidelines was judged to be possibly different, as the provisions contained therein were so general in nature that regional differences are covered.

9.7 The Sub-Committee emphasized that:

.1 both the Code of Safety, part B, and the Voluntary Guidelines would merit being updated and maintained as instruments also after the 1993 Torremolinos Protocol came into being;

.2 the different instruments must not contain competing standards; consequently, whenever in the course of amending the Code of Safety, part B, provisions were included which are also covered by the Protocol, its relevant texts should be used for the Code of Safety as well, notwithstanding the possibility to detail them further, if found appropriate.

9.8 In discussing the above matter, the Sub-Committee agreed that those chapters within the Code, to which the corresponding chapters of the Protocol allow regional standards, should contain technical provisions, which represent the desired level of safety, but at the same time make reference to any existing regional standards. This would leave the Administration wishing to use the Code with the option to apply the most suitable set of standards taking account of the area of operation of their vessels.

9.9 The relevant chapters of the Code of Safety, part B, and the corresponding chapters of the Protocol are given hereunder:

1993 Torremolinos Protocol	Code of Safety, part B
Chapter IV - Machinery and electrical installations and periodically unattended machinery spaces	Chapter V
Chapter V - Fire protection, fire detection, fire extinction and fire fighting	Chapter VI
Chapter VII - Life-saving appliances and arrangements	Chapter VIII
Chapter IX - Radiocommunications	Chapter IX

9.10 This approach was seen to cater for the fact that for quite some time to come it cannot be expected that regional standards will be developed for all regions of the world. Presently, such standards exist or are being established for the North Atlantic and the East Asian regions.

9.11 The Sub-Committee agreed that Members should consider the concept outlined in the above paragraphs, and invited them to submit comments to the next session, including proposals, as the case may be, for implementation of this concept in the text of the Code of Safety, part B.

9.12 With regard to the revision of chapters I, III and IV and annexes I and III of the Code of Safety and chapters 1, 2 and 3 and the annex of the Voluntary Guidelines, the Sub-Committee invited Members to submit their comments and proposals for the revision of the above documents to the next session.

9.13 The Sub-Committee briefly discussed proposals by the Polish delegation (SLF 38/9/1) regarding the stability and freeboard assessment of small fishing vessels and agreed to consider them in detail at its subsequent sessions in conjunction with other proposals for revision of chapter 3 of the Voluntary Guidelines.

10 AMENDMENTS TO, AND INTERPRETATION OF, TONNAGE MEASUREMENT REQUIREMENTS

10.1 The Sub-Committee recalled that, at its thirty-seventh session, it established a correspondence group to deal with a number of tonnage issues which were not finalized at that session.

10.2 The Sub-Committee noted that MSC 62 requested it to consider, as a matter of high priority, the problem raised by the United Kingdom in document MSC 62/INF.7 and to prepare draft guidelines on how to proceed in respect of ships which will not have been remeasured by the end of the period of grace (18 July 1994).

10.3 The Sub-Committee further noted that STW 25, having prepared, for approval of MSC 63, a draft MSC circular on tonnage measurement of certain ships relevant to the International Convention on Standards of Training,

Certification and Watchkeeping for Seafarers, 1978 (SLF 38/2/2, annex), submitted the draft circular to this Sub-Committee for information and comments.

10.4 The Sub-Committee discussed the draft MSC circular prepared by STW 25 and agreed that the term "ships of equivalent physical size and type", which seemed to be a very vague expression, should be further defined.

10.5 The delegation of the Netherlands expressed its concern on the draft MSC circular, as prepared by the STW Sub-Committee. In their view a precedent will be created by giving Administrations the possibility to exempt new "ships of equivalent size" from having crew members qualified in accordance with the tonnage thresholds of the present or future STCW Convention. This may also lead to other attempts to exempt new "ships of equivalent size" e.g. from safety requirements which are related to the tonnage thresholds in the SOLAS Convention.

10.6 The Sub-Committee, having reviewed documents submitted to this session, established a drafting group of tonnage experts and instructed the group to deal with the following issues:

.1 draft guidelines on the procedure to be followed in respect of ships not remeasured by 18 July 1994;

.2 comments on the draft MSC circular, prepared by STW 25 in respect to application of the 1978 STCW Convention;

.3 consolidated IM circular on interpretations of the provisions of the 1969 Tonnage Convention;

.4 unified reference to the old national tonnage to be shown in the SOLAS, MARPOL or other international certificates;

.5 other issues referred to in paragraphs 11, 12 and 18 of document SLF 38/10/1.

10.7 Having received the report of the group (SLF 38/WP.2 and Add.1), the Sub-Committee approved it in general and took specific decisions as outlined in the following paragraphs.

Provisional tonnage for existing ships

10.8 In considering proposals by the group for a draft MSC circular for a procedure to follow in respect of ships not remeasured by 18 July 1994, the Sub-Committee noted that the simplified formula for the calculation of the tonnage proposed by the group shows good results only for normal cargo ships. Special types of ships, e.g. car carriers, passenger ships, etc., that have large superstructures/erections should be considered individually at the discretion of the Administration.

10.9 The Sub-Committee agreed that the provisional gross tonnage calculated according to the simplified formula should only be valid for harbour and other dues. It may be used in lieu of the gross tonnage to be shown in an International Tonnage Certificate (1969) or a preliminary document replacing the International Tonnage Certificate (1969) for a short period.

10.10 The Sub-Committee, having reviewed the draft MSC circular on the simplified tonnage calculation for existing ships not having their gross tonnage determined in accordance with the 1969 Tonnage Convention, agreed to the proposed draft MSC circular, revised in line with the comments by Members, as set out in annex 9. The Committee is invited to approve the draft MSC circular for dissemination to Member Governments.

10.11 The Greek delegation proposed that a document stating the provisional gross tonnage determined in accordance with the simplified tonnage calculation method referred to in the draft MSC circular should be given to the master of the ship and kept on board. The proposal, however, was not accepted by the Sub-Committee.

10.12 The Greek delegation, also expressing their objection to the proposed solution which:

- penalizes the ships, although they may not be responsible for the delayed remeasuring;

- overestimates, through the proposed formula, their new tonnage; and

- deals only with what are called "normal" cargo ships,

proposed that ships which would not have been remeasured, although they have submitted an application before 18 July 1994, should be provided with a provisional national certificate (statement of tonnage) showing an increased national tonnage by [20%] with a validity of [one] year(s) and that this certificate should be acceptable by the port States. The delegation of Cyprus associated itself with this proposal.

10.13 The delegation of Liberia expressed its reservation on the proposed solution, as contained in the draft MSC circular, which attempts to establish a criteria for the purpose of determining harbour and other fees for vessels which are not in compliance with the 1969 Tonnage Convention after 18 July 1994. There exists no legal basis under the Convention for a Party to require that a ship of another Party is to be measured when found to be in non-compliance. Additionally, an MSC circular cannot be a substitute for the legal requirements established by a Party to implement the 1969 Tonnage Convention within its jurisdiction nor can the circular provide the legal basis for the acceptance by the shipowner of fees imposed on a vessel as a result of the measurement carried out in accordance with the draft MSC circular.

Non-convention flag ships

10.14 The Sub-Committee noted the opinion of the group that, as an International Tonnage Certificate (1969) cannot be shown by a non-convention flag ship, such a ship may show a statement of tonnage issued by the national tonnage authority or appointed organizations, e.g. a classification society, confirming gross and net tonnages according to the regulations of the 1969 Tonnage Convention and further that each port State may accept such a statement but reserves the right to verify the data of such a document.

Unified reference to the old national tonnage to be shown on SOLAS, MARPOL or other international certificates

10.15 The Sub-Committee considered a proposal by the group regarding the old tonnage to be shown in SOLAS or other international certificates and agreed to a draft Assembly resolution on the application of the 1969 Tonnage Convention to existing ships as set out in annex 10. The MSC and the MEPC are invited to approve the draft Assembly resolution for submission to the nineteenth Assembly for adoption.

10.16 However, bearing in mind the fact that the date of the next Assembly has been scheduled for autumn 1995, that is well after the date of application of the 1969 Tonnage Convention to existing ships, and the need for Administrations to take action before 18 July 1994, the Sub-Committee recommended that an MSC circular containing the draft Assembly resolution be disseminated for advance information and necessary action by Administrations. The Committee is invited to note the Sub-Committee's proposal and take action as appropriate.

Comments on a draft MSC circular prepared by STW 25 in respect of tonnage measurement of certain ships relevant to the 1978 STCW Convention

10.17 The Sub-Committee, considering the problem of small ships the keel of which is laid on or after 18 July 1994, with regard to the application of the 1978 STCW Convention, noted that the new gross tonnage of such ships may be considerably higher than the old tonnage. In this respect the draft MSC circular prepared by the STW Sub-Committee (SLF 38/2/1, annex) requests measures to allow seafarers who have served on board such small ships to continue to serve on "ships of equivalent physical size and type" built on or after 18 July 1994 and measured only under the 1969 Tonnage Convention.

10.18 The Sub-Committee was of the opinion that the term "ships of equivalent physical size and type" cannot be used by the tonnage authority for defining the true overall size of a ship (article 2(4) of the 1969 Tonnage Convention) and that it is within the purview of the Administration dealing with STCW standards to decide if a ship the keel of which is laid on or after 18 July 1994 is of "equivalent size" or not, to allow a seafarer to serve on board such a ship by a suitable exemption. It was also emphasized that if a parameter is used for determination of the overall size of a ship, gross tonnage according to the 1969 Tonnage Convention is the best parameter for this purpose.

Consideration of the term "spaces" in regulation I/13F of MARPOL 73/78

10.19 The Sub-Committee noted the opinion of the group that it is inappropriate to extend the definition of resolution A.747(18) concerning tonnage measurement of segregated water ballast tanks to "spaces" as mentioned in regulation I/13F of MARPOL 73/78. The water ballast spaces are only those ascertained in the IOPP Certificate.

Double hull construction under regulation I/13F of MARPOL 73/78

10.20 The Sub-Committee concurred with the group's opinion that it is up to the Administration concerned to state that the ship has a double hull construction according to regulation I/13F of MARPOL 73/78, in the International Tonnage Certificate (1969) under the REMARKS column when referring to tankers below the 5,000 tons deadweight size of application of regulation 13F.

10.21 The Greek delegation observed that resolution A.747(18) also refers to double hull tankers.

Clarification of the date for entry into force of the 1969 Tonnage Convention

10.22 The Sub-Committee noted that according to relevant IMO circulars, the 1969 Tonnage Convention came into force on 18 July 1982 and that following the wording of article 3(2)(d) of the Convention it would be applicable to all existing ships "twelve years after the date on which the Convention comes into force", that is, on 18 July 1994.

Consolidated TM.5 circular on interpretations of the 1969 Tonnage Convention

10.23 The Sub-Committee agreed to draft consolidated interpretations, as set out in annex 11, superseding interpretations indicated in circulars TM.5/Circ.1, TM.5/Circ.1/Corr.1 and TM.5/Circ.3 and requested the Secretariat to prepare a draft TM.5 circular on interpretations of provisions of the 1969 Tonnage Convention. The Committee is invited to approve the draft interpretations for dissemination to Member Governments by a TM.5 circular.

10.24 The Sub-Committee noted the discussion within the group of TM.5/Circ.4 regarding a provisional formula to calculate a reduced gross tonnage of open-top containerships. The Sub-Committee, being of the view that more information about open-top containerships and conventional containerships of modern design is necessary to discuss the matter further, invited Members to submit such information to the next session.

Other matters

10.25 The Sub-Committee noted the discussion by the group on the problems which may arise if a remark is not inserted in the REMARKS column of the International Tonnage Certificate (1969), and the group's opinion that if such remark is made on a separate paper it is valid only if that paper refers specifically to the valid International Tonnage Certificate (1969).

10.26 In pursuance of the proposal by the group, the Sub-Committee requested the Secretariat to issue a document containing information on the status of the 1969 Tonnage Convention for information of the Sub-Committee at its next session.

11 HULL STRUCTURAL INTEGRITY OF TANKERS AND BULK CARRIERS

11.1 The Sub-Committee recalled that, at its thirty-seventh session, in considering a draft action plan for hull structural integrity of large ships, prepared by the DE Sub-Committee, it identified the following issues as possible subjects for action and co-operation:

.1 development of mandatory requirements for on-board loading manuals and/or loading instruments;

.2 voyage data recorders (VDRs) and operational response monitors; and

.3 cargo loading and unloading operations for bulk carriers.

11.2 With regard to work on voyage data recorders the Sub-Committee noted decisions taken at the last two sessions of the DE Sub-Committee and that a draft MSC circular on the recommendations for the fitting of hull stress monitoring systems (HSMS) has been submitted to MSC 63 for approval and circulation.

11.3 The Sub-Committee further noted that MSC 62 endorsed the BC Sub-Committee's proposals concerning development of requirements for a loading/unloading manual and a plan for future activities concerning loading and unloading operations and decided to include in the work programme of the BC Sub-Committee a new item on loading and unloading of bulk carriers.

11.4 The Sub-Committee, noting that no documents have been submitted to this session, agreed that, given the state of the matters as outlined, only monitoring of the work of the BC Sub-Committee on loading and unloading of bulk carriers and on loading manuals was required. The Sub-Committee reiterated its readiness to contribute to the work in areas of its expertise as necessary. The Secretariat was requested to inform the BC Sub-Committee of the above with a view to having better co-ordination of the work on the subject between the two Sub-Committees.

12 REVIEW OF EXISTING SHIPS' SAFETY STANDARDS

12.1 The Sub-Committee noted that MSC 62, having received a comprehensive report on all sub-committees' responses to its respective request, agreed on the need to adopt a flexible approach to the problems described by the term "grandfather clause". However, the Committee reiterated its request to the sub-committees to consider, when discussing new requirements applicable to new ships, ways and means to improve the requirements for existing ships, with a view to reducing the safety gap between new and existing ships and by providing an equivalent level of safety. In this context, it was recalled that relevant measures were taken by the Sub-Committee to enhance the safety of existing ro-ro passenger ships.

12.2 The Sub-Committee was informed that the first joint session of the MSC and the MEPC considered a document by the Netherlands (MSC 62/20/2) on the "grandfather clause" which provided information on a study which had shown that the principle underlying the clause is a valuable one, which should be retained. The MSC and the MEPC agreed that guidelines should be developed for the harmonized and selective application of the "grandfather clause" to existing ships and the Netherlands agreed to co-ordinate an intersessional correspondence group which will produce a basic document for consideration at MSC 63.

12.3 The Sub-Committee recalled that, at its previous session, having reviewed a list of regulations of the 1974 SOLAS Convention (chapter II-1), the 1966 LL Convention and the 1969 Tonnage Convention containing the expression "at the discretion of the Administration" or similar wording, prepared by the Secretariat (SLF 37/16), it invited Members to consider whether amendments to any regulations in the list were felt necessary in order to achieve the desired uniform standard. However, no documents have been submitted to this session.

12.4 In this respect the Sub-Committee noted that DE 37, in also considering matters left to the discretion of the Administration, was offered a compilation of unified interpretations to chapter II-1, developed by IACS, to

further the work on the subject. The Sub-Committee noted also the information on the work of a correspondence group established by the FP Sub-Committee, which categorized the relevant expressions as follows:

- category 1 vague expressions which need unified interpretations;
- category 2 vague expressions which may be left to the discretion of the Administration;
- category 3 vague expressions which should be left to the discretion of the Administration.

12.5 The Sub-Committee, having noted the approach taken by DE 37 in developing unified interpretations of these terms, agreed to establish a correspondence group to be co-ordinated by IACS* and instructed it to prepare proposals for categorization of the expressions in, and any possible explicit requirements of, the SOLAS, LL and TM Conventions referred to in document SLF 37/16 and of any further proposals which may be submitted by Members for consideration by the correspondence group in this context.

12.6 The Sub-Committee invited Members to take account, when establishing future comments and proposals for new requirements, of the Committee's request referred to in paragraph 12.1.

13 REVIEW OF THE HYPOTHETICAL OIL OUTFLOW PARAMETERS

13.1 The Sub-Committee, in pursuing the Committee's instructions to review hypothetical oil outflow parameters in regulations 22 to 24 of Annex I to MARPOL 73/78, noted that the MEPC working group on the development of the guidelines under regulations 13F and 13G prepared draft guidelines under regulation 13F of Annex I to MARPOL 73/78, given in annex 1 to MEPC 34/WP.1, in which oil outflow parameters are based on the probabilistic concept. It was recalled that SLF 37 agreed that the probability-related part of the MEPC working group report should be taken into consideration in its work under this agenda item.

13.2 In view of the fact that the work on the hypothetical oil outflow parameters undertaken by the SLF Sub-Committee and the work on the development of the draft guidelines under regulation I/13F of MARPOL 73/78 carried out by the MEPC working group both include provisions for calculation of hypothetical oil outflow parameters, based on the probabilistic method, and are closely

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related, MEPC 35 (SLF 38/2/5) invited the SLF Sub-Committee to take into account the current development within the MEPC working group when reviewing the oil outflow parameters in regulations 22 and 24 of MARPOL Annex I.

13.3 In view of the above, the Sub-Committee, being informed that the MEPC working group would finalize the draft guidelines for regulation I/13F(5) at MEPC 36, agreed that Members should be informed of the outcome of MEPC 36 to be held in October/November 1994 immediately after the meeting, in order that the SLF Sub-Committee correspondence group on this item, which was agreed to be re-established, could use the oil outflow calculation method contained in the draft guidelines in the preparation of its proposals for the revision of oil outflow parameters in regulations 22 to 24. Members were invited to participate in the above MEPC working group and to contribute to its work as necessary.

14 ROLE OF THE HUMAN ELEMENT IN MARITIME CASUALTIES

14.1 The Sub-Committee recalled that, based on the recommendations of the Joint MSC/MEPC Working Group on the Role of the Human Element in Maritime Casualties, the Committee instructed all sub-committees to consider items contained in annexes 5 and 6 of the group's report (MSC 60/WP.9 and Add.1 as reproduced in SLF 37/2/15/Add.1) and to report their progress and plans for further work under each item to MSC 63. In this context and in line with the specific request by the MSC, an item in the Sub-Committee's work programme has been worded to include the subitems on improvement of general requirements in IMO instruments, review of SOLAS 74 and LL 1966 regarding language and format of stability information, application of computers in determining ship stability and guidelines for the use and application of on-board computers.

14.2 With regard to the work on the development of the guidelines for the use and application of on-board computers, the Sub-Committee noted the outcome of NAV 39, COM 39 and DE 37. The Sub-Committee also noted that IACS has under development standards in relation to this matter and that they may provide a basis for the preparation of appropriate sections of IMO guidelines for consideration by DE 38.

14.3 The Sub-Committee was of the opinion that the draft guidelines should also be considered by the SLF Sub-Committee in order to take account of specific aspects within the purview of the Sub-Committee (see also paragraph 3.13).

14.4 The United States, in their document SLF 38/14, drew the Sub-Committee's attention to human factor aspects of the Load Line Convention and referred to issues under consideration by several other sub-committees regarding inspection of the structure and machinery, procedures for dealing with structural damage and major and ongoing machinery malfunctions, reporting and correcting deficiencies and overall ship structural integrity information system.

14.5 The Sub-Committee agreed with the United States proposal that these issues should be addressed in the context of the revision of technical regulations of the 1966 LL Convention as appropriate and instructed the correspondence group established under agenda item 8 to take the above issues into consideration in developing the relevant revisions to the Convention.

14.6 The Sub-Committee recalled the instructions of the Committee to take account of the role of the human element in its work. In this respect, it noted the views expressed, that in the work of the correspondence group particular attention should be paid to the following tasks:

.1 review of SOLAS chapter II-1 in the context of human factors. Specifically, a review of SLF 37/16 to see which clauses may have human factor implications. Additionally, a review of SOLAS chapter II-1 should be made in a manner similar to that which is outlined in MSC 62/14/2;

.2 review of the outcome of the potentially dangerous operational restrictions of double hull tankers (section 3 above) and comments on the human factor issues relating to intact stability of double hull tankers as it pertains to the simplicity of operational restrictions; and

.3 review of the human factor implications of the guidlines for damage stability plans for cargo ships (SOLAS chapter II-1, part B-1).

14.7 The Sub-Committee, having considered the report of the correspondence group (SLF 38/14/1), jointly co-ordinated by Norway and the United States, outlining a number of issues to be addressed and indicating relevant documents to be reviewed in the course of the work on the matter, agreed to re-establish the correspondence group, under the joint co-ordination of Norway and the United States*, which should continue its work on issues referred to in paragraph 14.6 above in the light of comments made and views expressed at the session. Members were invited to participate in the group and contribute on general as well as specific issues.

14.8 The Sub-Committee noted that one delegation addressed the matter of training requirements being an integral part of placing new sophisticated computer hardware and equipment on board a ship. The Sub-Committee further noted that the draft new STCW Convention is being finalized, and that training is an important ongoing issue which should be addressed by each Administration's representatives now dealing with the revisions to the STCW Convention.

15 'EXCESSIVE' STABILITY (REVIEW OF RELEVANT CODES TO ACHIEVE CONSISTENCY)

15.1 The Sub-Committee recalled that MSC 62, having noted that on stability issues different wording is used in different codes, included an item in the work programme of this Sub-Committee, on the revision of relevant codes with a view to achieving consistent wording regarding 'excessive' stability and further instructed the SLF Sub-Committee to advise the BC Sub-Committee accordingly.

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15.2 As no documents have been submitted to this session, the Sub-Committee, after receiving advice from a small drafting group and reviewing the relevant texts, saw no compelling need for amending the Codes.

15.3 The respective wordings of the BC Code, Timber Deck Cargo Code, Safe Cargo Stowage and Security Code, Safety of Fishing Vessels Code, Offshore Supply Vessels Guidelines, resolutions A.167(ES.IV)/A.208(VIII) and the Intact Stability Code (resolution A.749(18)) were found to be clear and unequivocal, though different by the terms used. The Sub-Committee furthermore was of the opinion that the specific nature of the cargoes covered by those instruments did not permit, at any rate, identical wordings to be developed for all cases.

15.4 The Sub-Committee would only recommend that, should the individual instrument be revised in future, attempts should be made at that time to bring the wording of an excessive stability as closely to that used in resolution A.749(18) on Intact Stability Code as feasible.

15.5 The Sub-Committee agreed that there was no need for further action on the matter and decided to delete the item from its work programme. The Secretariat was requested to bring the above outcome to the attention of the BC Sub-Committee.

16 STABILITY ASPECTS OF ALTERNATIVE ARRANGEMENTS UNDER MARPOL 73/78 ANNEX I REGULATION 13G

16.1 The Sub-Committee noted that MSC 62 specified terms of reference for the various sub-committees concerned and an action plan for finalization of the guidelines for alternative arrangements for existing tankers under regulation I/13G(7) of MARPOL 73/78 before MEPC 36. Furthermore, MSC 62 instructed this Sub-Committee to improve the draft guidelines set out in document MEPC 34/8/1, as necessary, in respect of stability matters and human factors (operation and maintenance) relating to the hydrostatic balance loading and rapid emergency transfer of cargo and to report the outcome to BCH 24 and to other sub-committees as necessary. The Sub-Committee also noted that, in order to meet the target date, MSC 62 established an intersessional correspondence group co-ordinated by Japan, and instructed it to submit its report to DE 37 (DE 37/9/1).

16.2 The Sub-Committee was informed that DE 37, in considering the matter, agreed to advise the BCH, FP and SLF Sub-Committees that the rapid emergency transfer method is not recommended from the safety point of view and should not be further considered and also that, with regard to the hydrostatic balance loading method, DE 37, not being in a position to decide on figures regarding the range of frequencies of longitudinal oscillation of cargo oil, requested this Sub-Committee to consider the matter and decide as appropriate.

16.3 Having briefly reviewed documents submitted to this session, the Sub-Committee agreed to establish a drafting group and instructed it to deal with stability aspects of alternative arrangements under MARPOL regulation I/13G(7) and improve the draft guidelines given in document MEPC 34/8/1, including values for the range of frequencies of longitudinal oscillation of cargo oil.

16.4 Having received the report of the drafting group (SLF 38/WP.6) the Sub-Committee approved it in general and took action as outlined in the following paragraph.

16.5 The Sub-Committee noted the group's recommendations on stability matters of alternative arrangements under MARPOL 73/78 regulation I/13G, as given in SLF 38/WP.6, paragraphs 4 to 11, and instructed the Secretariat to communicate these to the DE, FP and BCH Sub-Committees for information and necessary action in the course of finalization of the safety aspects of alternative arrangements, and for inclusion, as necessary, in the draft guidelines to be approved by MEPC 36.

17 WORK PROGRAMME

17.1 The Sub-Committee revised its work programme, as reviewed by MSC 62 (SLF 38/2), taking into account progress made at this session, deleted items on which work had been completed and adjusted the target completion dates as necessary.

17.2 The proposed work programme and the list of items to be included in the agenda for the next session are shown in annexes 12 and 13 and the Committee is invited to approve the work programme as proposed by the Sub-Committee.

17.3 The Sub-Committee, taking account of the Note by the Chairmen of the MSC and the MEPC on working arrangements of the Committees and their subsidiary bodies (MEPC 35/19 and MSC 63/21/1), requested the leaders and participants of the correspondence groups established at this session to follow the guidelines on the organization and method of work of the MSC and the MEPC and their subsidiary bodies set out in annex 2 of that documents and, in particular, of the guidelines for correspondence groups attached in appendix 2.

Arrangements for the next session

17.4 The Sub-Committee agreed to establish, at its next session, working groups on the following items:

.1 intact stability;

.2 subdivision and damage stability; and

.3 revision of technical regulations of the 1966 LL Convention.

Date of the next session

17.5 The Sub-Committee noted that its thirty-ninth session has been tentatively scheduled from 13 to 17 March 1995.

18 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 1995

18.1 In accordance with rule 16 of the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected its Chairman, Mr. H. Hormann (Germany), and Vice-Chairman, Professor L. Kobylinski (Poland), for 1995.

Expression of appreciation

18.2 The Sub-Committee, noting that Mr. K.J. Klüver (Germany), Chairman of the group of tonnage experts over many years, would retire soon after the session, expressed its deep appreciation for his valuable contribution to the work of the Sub-Committee and wished him a long and happy retirement.

19 ANY OTHER BUSINESS

Status of implementation of IMO instruments related to the work of the Sub-Committee

19.1 The Sub-Committee noted an updated status of implementation by Member Governments of IMO instruments related to its work as provided by the Secretariat in document SLF 38/19. It was also noted that the summary provided in the annex to SLF 38/19 contained only data received by the Secretariat in written form, and that the absence of information in blank boxes may not necessarily indicate non-compliance.

19.2 The Sub-Committee requested the Secretariat, when updating the document on the status of implementation of IMO instruments, to:

.1 delete resolution A.48(III) - Approval of the recommendation of the MSC on treatment of shelterdeck and other "open" spaces, as obsolete in view of applying the 1969 Tonnage Convention to all existing ships by 18 July 1994;

.2 include resolution A.749(18) on the Code on intact stability for all types of ships covered by IMO instruments, and enter "PI" in relevant boxes for those countries that implemented resolutions A.167(ES.IV)/A.206(VII), A.168(ES.IV)/A.268(VIII) and A.562(14);

.3 retain in the list resolutions A.167(ES.IV)/A.206(VII), A.168(ES.IV)/A.268(VIII) and A.562(14); and

.4 with regard to IMO recommendations, which practical implementation is to be carried out by others outside the Administration, such as Guidance notes to the masters, make a new entry "CC" (circulated to all those concerned) if applicable.

19.3 The Sub-Committee urged Members to submit information on the implementation in their countries of the instruments listed in the annex to SLF 38/19 as modified in accordance with paragraph 19.2 above.

Reduction of secondary sources of pollution by minimizing the source of general flooding and by improving control of equipment vital to safe operation of the ship

19.4 The Sub-Committee noted that, with a view to reducing secondary sources of pollution, DE 36 considered draft amendments to SOLAS regulations II-1/17, 21, 26 and 31, as set out in annex 2 to DE 36/WP.2, and invited this Sub-Committee to comment on the draft amendments with regard to openings in the shell below the margin line and other related matters. Noting that comments requested from the NAV and SLF Sub-Committees were still outstanding, DE 37 agreed to reconsider the draft amendments at its next session.

19.5 The Sub-Committee requested the working group, established under agenda item 4, to review the draft amendments given in annex 2 to DE 36/WP.2. Having considered the outcome of the group (SLF 38/WP.1), the Sub-Committee agreed to the proposal to delete the word "passenger" and replace "margin line" by "bulkhead deck" in the title of regulation II-1/17, so that it reads "Openings in the shell plating of ships below the bulkhead deck". Pointing to the fact that the expression "margin line" appeared also elsewhere in the regulation,

the Sub-Committee decided to recommend that the amendments be made extensive to the whole text of the regulation. The Secretariat was requested to bring the above comments to the attention of the DE Sub-Committee.

Standardization of essential bridge and engine-room instrumentation

19.6 The Sub-Committee noted the Committee's instructions with regard to the scope of the guidelines on standardization of the layout of essential instrumentation on the bridge to be developed by the DE Sub-Committee, as the lead sub-committee, in co-operation with the COM, FP, LSR, NAV, SLF and STW Sub-Committees.

19.7 The Sub-Committee was informed that DE 37, having briefly reviewed the first draft standards on bridge layout and engine-room layout (DE 37/13), expressed views concerning application of standards, operational phases, possible inclusion of requirements for bridge layout in SOLAS chapter V, standardization of pipe colour coding in the engine-room etc., and instructed the Secretariat to bring to the attention of the COM, FP, LSR, NAV, SLF and STW Sub-Committees the above information and the text of draft standards on bridge layout and engine-room layout, given in the annex to SLF 38/2/4, as an interim advice of the DE Sub-Committee.

19.8 The Sub-Committee reviewed the draft standard layout and, having noted that a correspondence group established by the DE Sub-Committee will continue to develop the draft, agreed that no contribution needs to be made at this time. The Secretariat was requested to bring this view to the attention of the DE Sub-Committee while at the same time stating this Sub-Committee's readiness to respond to specific questions, as they may come up.

Outcome of the 1993 Torremolinos SFV-P Conference

19.9 The Sub-Committee noted the information provided by the Secretariat on the International Conference on Safety of Fishing Vessels which, upon the kind invitation of the Government of Spain, was held in Torremolinos from 22 March to 2 April 1993. The Sub-Committee further noted that, as a result of its deliberations, the Conference adopted the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977 (1993 Torremolinos Protocol) set forth in Attachment 1 to the Final Act of the Conference, which was open for signature on 1 July 1993 and will remain open until 30 June 1994 and that the Conference also adopted eleven resolutions and eight recommendations set forth, respectively, in Attachments 2 and 3 to the Final Act of the Conference.

Information by Denmark on the number of fishing vessels

19.10 The Sub-Committee noted information by Denmark (SLF 38/INF.2) on the number of fishing vessels registered in Denmark and that the information provided would be included in IMO statistics for the purposes of the 1993 Torremolinos Protocol.

20 ACTION REQUESTED OF THE COMMITTEES

Maritime Safety Committee

20.1 The Maritime Safety Committee is invited to:

.1 note the progress made in the work on intact stability of double hull tankers and other tanker designs under MARPOL 73/78 regulation I/13F (paragraphs 3.8 to 3.12 and 20.3.1);

.2 note action taken in respect of the revision of the draft MEPC resolution on oil tanker stability, operational safety and protection of the marine environment (paragraphs 3.6, 3.14 and 20.3.2 and annex 2);

.3 endorse the Sub-Committee's decision to deal with the application of the SOLAS 90 standard to existing passenger ships other than ro-ro passenger ships in its future work on the harmonization of damage stability requirements in IMO instruments (paragraphs 4.5 to 4.7);

.4 approve the draft MSC circular on interpretations of provisions of resolution MSC.26(60) and circular MSC/Circ.574 concerning damage stability of existing ro-ro passenger ships (paragraph 4.8 and annex 3);

.5 approve the draft amendments to SOLAS regulation II-1/8 regarding the minimum range of positive residual righting lever curve, for future adoption (paragraph 4.9 and annex 4);

.6 approve the draft amendments to SOLAS chapter II-1, part B-1 concerning subdivision and damage stability requirements for cargo ships over 80 m but under 100 m in length, for future adoption (paragraph 5.7 and annex 5);

.7 approve dissemination of the draft interpretation of alterations and modifications of a major character by an MSC circular (paragraph 5.19 and annex 6);

.8 approve the draft MSC circular on interpretations of regulations of SOLAS chapter II-1, part B-1, regarding subdivision and damage stability of cargo ships over 100 m in length (paragraph 5.22 and annex 7);

.9 approve the draft MSC circular on the application of the 1966 LL Convention to high speed craft (paragraph 8.5 and annex 8);

.10 approve the draft MSC circular on the simplified tonnage calculation for existing ships not having their gross tonnage determined in accordance with the 1969 Tonnage Convention (paragraph 10.10 and annex 9);

.11 approve the draft Assembly resolution on the application of the 1969 Tonnage Convention to existing ships for submission to the nineteenth Assembly for adoption (paragraphs 10.15 and 20.3.3 and annex 10);

.12 approve dissemination of the above draft Assembly resolution as an MSC circular for advance information and necessary action by Administrations (paragraph 10.16);

.13 note the Sub-Committee's comments on the draft MSC circular prepared by STW 25 in respect of the tonnage measurement of certain ships relevant to the 1978 STCW Convention (paragraphs 10.17 and 10.18);

.14 approve the draft interpretations of the provisions of the 1969 Tonnage Convention for dissemination by a TM.5 circular (paragraph 10.23 and annex 11);

.15 note the outcome of consideration of the issue on hypothetical oil outflow parameters (paragraphs 13.1 to 13.3 and 20.3.4);

.16 note the progress made in the work on stability aspects of alternative arrangements under MARPOL 73/78 regulation I/13G (paragraphs 16.5 and 20.3.5); and

.17 approve the report in general.

20.2 In reviewing the work programme of the Sub-Committee (annex 12), the Committee is invited to:

.1 note the replacement of the words "based on the probabilistic method for all types of ships" by "(probabilistic method)" in item 1;

.2 delete item 1.1 "Regulations for dry cargo ships including ro-ro ships of less than 100 m in length" as work for ships over 80 m but under 100 m in length has been completed (paragraph 5.7);

.3 extend the target completion date for item 1.2 "Explanatory notes for dry cargo ships including ro-ro ships of less than 100 m in length", to 1997;

.4 note the deletion, as being superfluous, of the words "based on a single probabilistic method for all types of ships" from item 1.5;

.5 include a new item 1.7 "Regulations for dry cargo ships including ro-ro ships of less than 80 m in length", with a target completion date of 1997 (paragraph 5.8);

.6 note the inclusion of the words "new" and "passenger" in, and extend the target completion date to 1995 for, item 2.1 "Maximum number of passengers permitted on new one-compartment passenger ships" (paragraphs 5.20 and 5.21);

.7 extend the target completion date of item 2.2 "Amendments to SOLAS regulations II-1/8 and II-1/20", to 1995;

.8 delete item 3.4 "Excessive stability (Review of relevant codes to achieve consistency)" from the Sub-Committee's work programme, as work on it has been completed;

.9 include a new item 3.5 "Intact stability of double hull tankers" in the Sub-Committee's work programme, with a target completion date of 1995 (paragraph 3.12);

.10 include a new item 3.6 "Guidance for avoiding dangerous situations in following and quartering seas" in the Sub-Committee's work programme, with a target completion date of 1996 (paragraph 3.18);

.11 delete item 5 "Analysis of casualty statistics of fishing vessels and fishermen" from the Sub-Committee's work programme, as the matter has been transferred to the FSI Sub-Committee (paragraphs 7.3 and 7.4);

.12 note the replacement, for editorial reasons, of the title of item 7 "Safety guidelines and safety training guidelines for fishermen of small fishing vessels" by "Small fishing vessel safety and training guidelines";

.13 delete item 9 "Amendments and interpretation of tonnage measurement requirements" from the Sub-Committee's work programme, as work on it has been completed;

.14 note the replacement of "(work co-ordinated by DE)" by "(in co-operation with DE and BC)" and the inclusion of subitems .1 and .2 in item 10 as follows:

.1 mandatory requirements for on-board loading manuals and/or loading instruments;

.2 loading and unloading of bulk carriers;

.15 extend the target completion date for item 12 "Review of hypothetical oil outflow parameters", to 1996 (paragraph 13.3);

.16 delete item 14 "Stability aspects of alternative arrangements under MARPOL 73/78 Annex I regulation 13(G)" from the Sub-Committee's work programme, as work on it has been completed; and

.17 approve the Sub-Committee's proposed revised work programme (annex 12).

Marine Environment Protection Committee

20.3 The Marine Environment Protection Committee is invited to:

.1 note the progress made in the work on intact stability of double hull tankers and other tanker designs under MARPOL 73/78 regulation I/13F (paragraphs 3.8 to 3.12);

.2 consider the revised version of the draft MEPC resolution on oil tanker stability, operational safety and protection of the marine environment and decide as appropriate (paragraphs 3.6 and 3.14 and annex 2);

.3 approve the draft Assembly resolution on the application of the 1969 Tonnage Convention to existing ships for submission to the nineteenth Assembly for adoption (paragraphs 10.15 and 20.1.11 and annex 10);

.4 note the outcome of consideration of the issue on the hypothetical oil outflow parameters (paragraphs 13.1 to 13.3 and 20.1.15); and

.5 note the progress made in the work on stability aspects of alternative arrangements under MARPOL 73/78 regulation I/13G (paragraphs 16.5 and 20.1.16).

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ANNEX 1

AGENDA FOR THE THIRTY-EIGHTH SESSION INCLUDING
A LIST OF DOCUMENTS

1 Adoption of the agenda

SLF 38/1/Rev.1	Secretariat
SLF 38/1/1	Secretariat

2 Decisions of other IMO bodies

SLF 38/2	Secretariat
SLF 38/2/1	Secretariat
SLF 38/2/2	Secretariat
SLF 38/2/3	Secretariat
SLF 38/2/4	Secretariat
SLF 38/2/5	Secretariat

3 Intact stability

SLF 38/3	Poland
SLF 38/3/1	Poland
SLF 38/3/2	Secretariat
SLF 38/3/3	Canada
SLF 38/3/4	United States
SLF 38/3/5	Japan
SLF 38/3/6	OCIMF
SLF 38/3/7	IACS
SLF 38/INF.4	Italy
SLF 38/INF.8	Canada
SLF 38/INF.10	Japan
MSC 62/4/1	Chile
MEPC 34/7/10	OCIMF
MEPC 35/8/2	Netherlands
SLF 38/WP.6	Drafting group

4 Subdivision and damage stability of passenger ships

SLF 38/4	Secretariat and Chairman of SDS WG
SLF 38/4/1	Secretariat and Chairman of SDS WG
SLF 38/4/2	Russian Federation
SLF 38/4/3	Germany
SLF 38/4/4	Sweden
SLF 38/4/5	United States
SLF 38/4/6	United Kingdom
SLF 38/4/7	Canada
SLF 38/4/8	Japan
SLF 38/4/9	IACS
SLF 38/INF.9	Canada
SLF 38/WP.1	Ad hoc working group

5 Harmonization of damage stability provisions in IMO instruments

SLF 38/5	Chairman of SDS WG
SLF 38/5/1	Russian Federation
SLF 38/5/2	Denmark, Finland, Sweden
SLF 38/5/3	United States
SLF 38/5/4	Croatia
SLF 38/5/5	United Kingdom
SLF 38/5/6	Poland
SLF 38/5/7	IACS
SLF 38/5/8	IACS
SLF 38/5/9	IACS
SLF 38/INF.5	Denmark, Finland, Sweden
SLF 38/WP.1	Ad hoc working group

6 Analysis of damage cards

SLF 38/6	Secretariat
SLF 38/INF.3	Secretariat

7 Analysis of fishing vessel and fishermen casualty statistics

No documents submitted to the session.

8 Revision of technical regulations of the 1966 LL Convention

SLF 38/8	Germany
SLF 38/8/1	United States
SLF 38/8/2	United Kindgom
SLF 38/8/3	IACS
SLF 38/INF.6	United States
SLF 38/INF.12	Canada
SLF 38/INF.13	United States
SLF 38/WP.4	Ad hoc working group

9 Small fishing vessel safety and training guidelines

SLF 38/9	Secretariat
SLF 38/9/1	Poland

10 Amendments to, and interpretation of, tonnage measurement requirements

SLF 38/10	Germany
SLF 38/10/1	Germany
SLF 38/INF.11	United Kingdom
MSC 62/INF.7	United Kingdom
SLF 38/WP.2 and Add.1	Drafting group

11 Hull structural integrity of tankers and bulk carriers

No documents submitted to the session.

12 Review of existing ships' safety standards

No documents submitted to the session.

13 Review of hypothetical oil outflow parameters

SLF 38/13	Netherlands
SLF 38/13/1	Netherlands
SLF 38/13/2	Poland
SLF 38/INF.7	Poland

14 Role of the human element in maritime casualties

SLF 38/14	United States
SLF 38/14/1	United States

15 'Excessive' stability (review of relevant codes to achieve consistency)

No documents submitted to the session.

16 Stability aspects of alternative arrangements under MARPOL 73/78 Annex I regulation 13G

SLF 38/16	Secretariat
MEPC 34/8/1	ICS
DE 37/9/1	Japan
DE 37/WP.4, paragraph 6	Drafting group
SLF 38/WP.6	Drafting group

17 Work programme

SLF 38/WP.3	Secretariat

18 Election of Chairman and Vice-Chairman for 1995

19 Any other business

SLF 38/19	Secretariat
SLF 38/2/4, section 13 and annex	Secretariat
SLF 38/INF.2	Denmark
DE 36/WP.2 and annex 2	Working group
SLF 38/WP.1	Ad hoc working group

20 Report to the Maritime Safety Committee

SLF 38/WP.5	Draft report to the Maritime Safety Committee
SLF 38/20	Report to the Maritime Safety Committee

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ANNEX 2

DRAFT MEPC RESOLUTION

OIL TANKER STABILITY, OPERATIONAL SAFETY AND PROTECTION OF THE MARINE ENVIRONMENT

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(c) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee,

NOTING with satisfaction the entry into force on 6 July 1993 of new regulations 13F and 13G of Annex I of MARPOL 73/78 which make the double hull or equivalent construction mandatory for new oil tankers and provide for upgrading of existing oil tankers,

RECOGNIZING the significant contribution which the implementation of these regulations would make to the protection of the marine environment,

RECALLING concern expressed during its thirty-fourth session regarding possible stability problems in the operation of tankers having cargo tanks without subdivision by longitudinal bulkheads,

BEING OF THE OPINION that the designs of oil tankers should not place an additional burden on the master and crew of such ships through difficulty of operation, e.g., during loading, discharging, ballasting, deballasting and sailing with partial loads,

1. RECOMMENDS that designers, builders and owners are encouraged to take this opinion into account in the process of the design, construction and commissioning of new tonnage;

2. INVITES Member Governments, when assessing the stability and other safety properties of oil tankers, to take due account of all relevant operational properties of such ships, in particular, those of importance during loading, discharging, ballasting, deballasting and sailing with partially filled tanks.

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ANNEX 3

DRAFT MSC CIRCULAR

INTERPRETATIONS OF PROVISIONS OF RESOLUTION MSC.26(60)
AND CIRCULAR MSC/CIRC.574

1 The Maritime Safety Committee, at its sixtieth session, introduced retroactive regulations in respect of residual stability standards for existing ro-ro passenger ships. This amendment to chapter II-1 of the 1974 SOLAS Convention was adopted by resolution MSC.26(60).

2 To ensure that this upgrading procedure should proceed in a logical and orderly manner, a calculation method had been agreed whereby a ratio, A/Amax, is used to establish a ranking order for the upgrading process. The annex to MSC/Circ.574 gives details of this calculation method, which is a simplified version of the probabilistic parts of resolution A.265(VIII).

3 Recognizing the need for consistent guidance, the Maritime Safety Committee, at its sixty-third session, adopted the interpretations of the provisions of resolution MSC.26(60) and circular MSC/Circ.574 developed by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety as set out in the annex.

4 Member Governments are invited to use these interpretations in applying amendments to the 1974 SOLAS Convention, adopted by resolution MSC.26(60), and the calculation procedure for assessing the survivability characteristics of existing ro-ro passenger ships set out in circular MSC/Circ.574.

ANNEX

INTERPRETATIONS OF PROVISIONS OF RESOLUTION MSC.26(60)
AND CIRCULAR MSC/CIRC.574

1 Residual righting lever curve
(paragraph 2.4, annex to MSC/Circ.574)

When determining the positive righting levers, GZ, of the residual stability curve, the displacement used should be that of the intact condition. That is, the constant displacement method of calculation should be used.

2 Potential downflooding openings
(resolution MSC.26(60))

2.1 Where the location of openings can lead to significant downflooding, they should be taken properly into account when carrying out the A/Amax calculations. Their status should be identified by an on-board survey and the details of such openings should be updated, if necessary, on the damage control plan.

2.2 When carrying out the calculations to establish the A/Amax ratio, such downflooding openings should be assumed closed watertight, or weathertight, as appropriate.

2.3 In order that a contribution to the 'A' value can be made, such downflooding openings should be closed to a credible degree of tightness. Where internal doors are shown to be situated above both the intermediate and final waterlines after assumed damage, they are not required to be strictly watertight.

3 Permeabilities to be used in the A/Amax calculation
(SOLAS regulation II-1/8.3 and MSC/Circ.574)

3.1 The Convention permeability of 60% for cargo spaces is too low for use with ro-ro cargo spaces. A value of 90% should be assumed for ro-ro cargo spaces above the bulkhead deck.

3.2 When spaces below the bulkhead deck are appropriated for the use of cargo, a permeability of 60% can be used only where it is demonstrated that such spaces regularly contain cargo, other than ro-ro cargo. Otherwise, a permeability of 95% should be assumed. That is, the space should be treated as a void space.

3.3 When spaces are appropriated for the carriage of liquids, a permeability value of 95% should be assumed, unless such spaces are to be permanently filled with ballast in the form of liquid. That is, the liquid should be used as "locked-in" ballast.

4 Assumed damage penetration in way of sponsons

If sponsons are fitted, it is necessary to establish the maximum assumed damage penetration (B/5) to be used when deciding on the various damage cases. For this purpose, the breadth 'B' in the way of such sponsons should be measured to the outside of the sponsons. Clear of any such sponsons, the breadth 'B' should be the midship breadth measured to the outside of the original shell. In other words, the assumed penetration of B/5 is the same as that which applied before the fitting of sponsons.

5 Calculation of the A/Amax ratio
(resolution MSC.26(60) and MSC/Circ.574)

5.1 Identical assumptions should be made regarding the extent of damage penetration when calculating the 'A' values for both the actual and notional ship KG values. This damage penetration extent should be no less than B/5, measured inboard from the ship side. However, contributions to these 'A' values may be included for damage cases involving penetration extents in excess of B/5.

5.2 Where there is a longitudinal bulkhead nearer to the ship side than B/5, it should be assumed to be penetrated. In such a case, there may be a further damage case to be considered within the same longitudinal damage zone. Both the 'A' values should be calculated accordingly.

5.3 Where a ship has been constructed to a two-compartment standard of subdivision, 'A' should be calculated using a notional ship KG appropriate to that for which all the 's' values calculated for the two-compartment damage cases are unity. In such a case, it may be assumed that all the s-values for the one-compartment damage cases are also unity. The corresponding A/Amax ratio is then given by the ratio:

$$\frac{A1 + A2}{Amax1 + Amax2}$$

where:

A1 is that part of the 'A' value calculated for the one-compartment damage cases, using the actual KG;

A2 is that part of the 'A' value calculated for the two-compartment damage cases, using the actual KG;

Amax1 is that part of the 'A' value calculated for the one-compartment damage cases, using the notional KG;

Amax2 is that part of the 'A' value calculated for the two-compartment damage cases, using the notional KG.

5.4 Where a ship has been constructed to a one-compartment standard of subdivision, 'A' should be calculated using a notional ship KG appropriate to that for which all the s-values calculated for the one-compartment damage cases are unity. For the purposes of future analysis, the A/Amax ratio should be calculated using the formula:

$$\frac{A1 + A2}{Amax1 + A2}$$

6 Acceptance of A/Amax calculations by the Administration (resolution MSC.26(60)

6.1 Where the A/Amax ratio, expressed as a percentage, for a ship is 95% or more, the Administration should accept that the requisite survivability standard for that ship has been achieved, and it should consequently be exempt from the upgrading process.

6.2 The survivability of a ship may be upgraded step by step, in accordance with the scale outlined in regulation II-1/8.9 of the SOLAS Convention adopted by resolution MSC.26(60). In such a case, a further A/Amax calculation should be performed, and then approved by the Administration, prior to the date specified by which the further upgrading should be completed.

6.3 The residual stability standard to be achieved after upgrading should correspond to the modified SOLAS 90 stability criteria as expressed in regulation II-1/8.2.3.5 of the SOLAS Convention, adopted by resolution MSC.26(60).

6.4 The Administration, on receiving the A/Amax calculation for a ship, should confirm that the calculation has been made according to the procedure outlined in MSC/Circ.574, together with any agreed interpretations, and, in particular, that specific approval is given for the A/Amax ratio.

7 Ships subject to modifications of a major character (resolution MSC.26(60) and regulation II-1/1.3.2 of the SOLAS Convention, as amended)

When alterations have been made to a ship which are intended solely to achieve a higher survivability standard, they should not be regarded as modifications of a major character.

8 Ships constructed to resolution A.265(VIII)

The subdivision and stability requirements of resolution A.265(VIII) should be regarded as fully equivalent to the subdivision and stability standards represented by the SOLAS 90 standard adopted by resolution MSC.12(56). Therefore, ships constructed, or modified, such that they are in full compliance with the provisions of resolution A.265(VIII), should be considered to have a survivability standard equal to that provided by the SOLAS 90 standard. As a consequence, such ships need not be subject to any upgrading process, and should not be considered as part of any A/Amax calculation exercise.

***

ANNEX 4

DRAFT AMENDMENTS TO SOLAS REGULATION II-1/8

1 At the end of paragraph 2.3.1, add the following:

"This range may be reduced to a minimum of 10°, in the case where the area under the righting lever curve is that specified in 2.3.2, increased by the ratio:

$$\frac{15}{\text{Range}}$$ where the range is expressed in degrees."

2 Paragraph 2.3.3 is modified by replacing the words "range specified in 2.3.1" with the words "range of positive stability".

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ANNEX 5

DRAFT AMENDMENTS TO SOLAS CHAPTER II-1, PART B-1

PART B-1 - SUBDIVISION AND DAMAGE STABILITY OF CARGO SHIPS

Regulation 25-1

Application

In paragraph 1, "100 m" is substituted by "80 m".

Regulation 25-3

Required subdivision index R

The following text is added at the beginning of paragraph 2:

"For cargo ships over 100 m in length (L_s),".

The following new paragraph 3 is added after paragraph 2:

"3 For cargo ships over 80 m but under 100 m in length (L_s), the degree of subdivision to be provided shall be determined by the required subdivision index R, as follows:

$$R = 1 - [1/(1 + \frac{L_s}{100} \cdot \frac{R_o}{1-R_o})]$$

where R_o is the value R as calculated in accordance with regulation 25-3.2 for length L_s."

***

ANNEX 6

DRAFT INTERPRETATION OF ALTERATIONS AND MODIFICATIONS OF A MAJOR CHARACTER

Where an existing cargo ship is subject to any modification which affects the level of subdivision of that ship, it should be demonstrated that the A/R ratio calculated for the ship after such modification is not less than the A/R ratio calculated for the ship before the modification.

However, in those cases where the ship's A/R ratio before modification is equal to or greater than unity, it is only necessary to demonstrate that the ship after such modification has an 'A' value which is not less than 'R', calculated for the modified ship.

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ANNEX 7

DRAFT MSC CIRCULAR

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

Interpretations of regulations of part B-1 of SOLAS chapter II-1

1 The Maritime Safety Committee, at its fifty-eighth session, adopted by resolution MSC.19(58) the amendments to chapter II-1 of the 1974 SOLAS Convention, as amended, containing regulations which relate to standards of subdivision and damage stability for new cargo ships of 100 m in length and over.

2 Following the recent experience gained using these new regulations, there is a need to provide guidance to Administrations in order to ensure a uniform application of the regulations.

3 At the thirty-eighth session of the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF), certain aspects of these regulations were considered and interpretations thereof were developed.

4 Recognizing the need for consistent guidance on this matter, the Maritime Safety Committee, at its sixty-third session, adopted the interpretations of the regulations, as set out in the annex. Member Governments are invited to take account of the interpretations in applying the requirements of part B-1 of SOLAS chapter II-1.

ANNEX

INTERPRETATIONS OF REGULATIONS OF PART B-1
OF SOLAS CHAPTER II-1

1 Permeability values to be used for certain cargo spaces
(regulation 25-7)

The permeability value for cargo spaces is given in regulation 25-7.

Where a ship is fitted with significant quantities of cargo insulation, the permeabilities of the relevant cargo spaces and/or the void spaces surrounding such cargo spaces may be calculated, whilst giving consideration to the volume of insulation material in those spaces, provided that the insulating material is shown to comply with the following conditions:

.1 it is impermeable to water under hydrostatic pressure at least corresponding to the pressure caused by the assumed flooding;

.2 it will not crush or break up due to hydrostatic pressure at least corresponding to the pressure caused by the assumed flooding;

.3 it will not deteriorate or change its properties over the long term in the environment anticipated in the space it is installed;

.4 it is highly resistant to the action of hydrocarbons; and

.5 it will be adequately secured so that it will remain in position if subjected to collision damage and consequent displacement, distortion of its supporting and retaining structure, repeated rapid ingress and outflow of seawater and the buoyant forces caused by immersion following flooding.

2 Stability information supplied to the master
(regulation 25-8, paragraph 3)

Linear interpolation should be applied to the GM values only between the deepest subdivision load line and the partial load line, when developing the curve of minimum operational GMs or corresponding maximum allowable KGs.

3 The need for the provision of position indicators to certain doors which lead to main cargo spaces
(regulation 25-9, paragraph 4)

Those hinged, rolling and sliding watertight doors and ramps which are fitted to subdivide large cargo spaces, and are not required to be remotely controlled, but are to be secured closed whilst the ship is at sea and are recorded as such in the ship's log, should not be required to be fitted with a position indicator display at the bridge control position.

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ANNEX 8

DRAFT MSC CIRCULAR

APPLICATION OF THE 1966 LL CONVENTION TO HIGH SPEED CRAFT

1 The Maritime Safety Committee, at its sixty-third session, recognizing that the 1966 LL Convention is under review by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF), agreed that guidelines for Administrations are necessary regarding the application of the 1966 LL Convention to high speed craft to which the High Speed Craft (HSC) Code applies.

2 Member Governments, in applying the 1966 LL Convention to high speed craft, are recommended to implement the following interim measures, until the 1966 LL Convention is amended to include relevant provisions for such craft:

.1 to accept the necessary relaxations from the requirements for conditions of assignment of freeboard or any other requirement of the 1966 LL Convention, provided that the craft complies with the provisions of the HSC Code;

.2 to issue an International Load Line Exemption Certificate according to the provisions of articles 6(2) and 16(2) of the 1966 LL Convention; and

.3 to follow the procedure for exemption under the provisions of article 6 of the 1966 LL Convention.

3 The Committee further agreed that, when the Administration communicates to the Organization particulars for the exemption and reasons therefor, in accordance with the provisions of article 6(3) of the Convention, it is sufficient, with respect to the reason, to refer to compliance of the craft with the HSC Code.

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ANNEX 9

DRAFT MSC CIRCULAR

SIMPLIFIED TONNAGE CALCULATION FOR EXISTING SHIPS NOT HAVING THEIR GROSS TONNAGE DETERMINED IN ACCORDANCE WITH THE 1969 TONNAGE CONVENTION

1 A provisional gross tonnage (GTp) of ships not holding an International Tonnage Certificate (1969) or a preliminary document replacing the International Tonnage Certificate (1969) for a short period, on or after 18 July 1994, may be calculated by a Contracting Government to the 1969 Tonnage Convention according to the following simplified formula:

$$GT_p = V_E \times a$$

where:

V_E = L x B x H

L = length according to the International Load Line Certificate (1966), in metres;*

B = moulded breadth, in metres;*

H = height at side from the bottom up to the uppermost complete deck (upper deck), in metres;* and

a = f (V_E) to be determined by linear interpolation according to the following table:

V_E	a
up to 400	0.58
1,000	0.43
5,000	0.35
10,000	0.34
25,000	0.33
50,000	0.32
100,000	0.31
150,000	0.30
200,000	0.29
250,000 and over	0.28

2 If a net tonnage is required additionally, then a provisional net tonnage (NT_p) may be taken as:

$$NT_p = 0.6 \times GT_p$$

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* According to published registers or statutory documents on board the ship.

3 The provisional gross tonnage calculated according to the above simplified formula should only be valid for harbour and other dues. It may be used in lieu of the gross tonnage to be shown in an International Tonnage Certificate (1969) or a preliminary document replacing the International Tonnage Certificate (1969) for a short period.

4 As the above simplified formula shows good results only for normal cargo ships, special types of ships, e.g. car carriers, passenger ships, etc., that have large superstructures/erections should be considered individually at the discretion of the Administration.

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ANNEX 10

DRAFT ASSEMBLY RESOLUTION

APPLICATION OF THE INTERNATIONAL CONVENTION ON TONNAGE MEASUREMENT OF SHIPS, 1969 TO EXISTING SHIPS

THE ASSEMBLY,

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

NOTING that the International Convention on Tonnage Measurement of Ships, 1969 (1969 Tonnage Convention) shall apply to existing ships as from 18 July 1994, under the provisions of article 3(2)(d),

NOTING FURTHER that existing ships to which the Convention shall apply on or after 18 July 1994 shall retain their then existing tonnages for the purpose of the application to them of relevant requirements under other existing international conventions,

REALIZING that tonnages determined under the 1969 Tonnage Convention can be sufficiently different from those determined under the old national tonnage regulations to create confusion in connection with the application of:

- the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended,

- the International Convention on Standards of Training, Certification and Watchkeeping of Seafarers (STCW), 1978,

- the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78),

BEARING IN MIND that, although the International Convention for the Safety of Life at Sea, 1974 and the other international conventions do not specifically define the gross tonnage of ships, the gross tonnage determined in accordance with the 1969 Tonnage Convention should be used for application of the provisions of these Conventions,

BEARING IN MIND also resolution A.494(XII) on Revised interim scheme for tonnage measurement for certain ships, resolution A.540(13) on Tonnage measurement of certain ships relevant to the International Convention on Standards of Training, Certification and Watchkeeping of Seafarers, 1978 and resolution A.541(13) on Interim scheme for tonnage measurement for certain ships for the purposes of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at [its sixty-third session] and the Marine Environment Protection Committee at [its thirty-sixth session],

1. AGREES that for an existing ship, the keel of which was laid before 18 July 1982, having the gross tonnage, determined in accordance with national tonnage rules, which was valid prior to the coming into force of the 1969 Tonnage Convention and which is stated under the REMARKS column of the International Tonnage Certificate (1969) for such a ship, the appropriate box in the pertinent Ship Safety Certificate, the International Oil Pollution Prevention Certificate or other such official certificates issued by the Administration may show only that old gross tonnage with one of the following footnotes:

> "The above gross tonnage has been determined by the tonnage authorities of the Administration in accordance with the national tonnage rules which were in force prior to the coming into force of the International Convention on Tonnage Measurement of Ships, 1969"; or
>
> "See REMARKS column of the valid International Tonnage Certificate (1969)";

2. INVITES Member Governments and Governments of States parties to the aforementioned Conventions to take cognizance and to accept the use of this scheme for the purpose of application of the provisions of SOLAS 1974, MARPOL 73/78 and STCW 1978.

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ANNEX 11

DRAFT TM.5 CIRCULAR

INTERPRETATIONS OF THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON TONNAGE MEASUREMENT OF SHIPS, 1969

1 The Maritime Safety Committee, at its [sixty-third] session, agreed to a consolidated set of interpretations of the provisions of the 1969 Tonnage Convention, as set out in the annex, which supersede interpretations referred to in circulars TM.5/Circ.1, TM.5/Circ.1/Corr.1 and TM.5/Circ.3.

2 Member Governments are invited to use these interpretations in applying the provisions of the 1969 Tonnage Convention.

ANNEX

DRAFT INTERPRETATIONS OF THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON TONNAGE MEASUREMENT OF SHIPS, 1969

Definitions (article 2(8))

1 When establishing the length of a rudderless flat top barge, the length should be calculated at 96% of the total length of a waterline at 85% of the least moulded depth measured from the top of the keel.

2 Column-stabilized units such as semi-submersible drilling units should be considered novel types of craft. Because the length under article 2(8) or the moulded breadth under regulation 2(3) for such units is misleading, it would be appropriate for such units to use the overall length and breadth to the outside plating between fixed structures. The citation of the length (article 2(8)) and breadth (regulation 2(3)) in the respective boxes of the International Tonnage Certificate (1969) should be deleted and a notation in the REMARKS column should be made to identify the ship as, inter alia, a "semi-submersible drilling unit", etc.

Application (article 3(2)(d))

The term "alterations or modifications which affect its tonnage" in resolution A.758(18) means increase or decrease of more than 1% in either existing gross tonnage or gross tonnage calculated in accordance with the 1969 Tonnage Convention.

Form of certificate (article 9(2))

1 The "Date" shown on the front of the International Tonnage Certificate (1969) refers to the year when the keel was laid or the ship was at a similar stage of construction (article 2(6)) or the ship underwent alterations or modifications as defined in article 3(2)(b) but when the year of construction or alteration or modification is 1982 or 1994, the month and day should also be described.

2 Information inserted in the "location" columns on the reverse of the International Tonnage Certificate (1969) should not be detailed.

3 The phrase "Date and place of original measurement" should refer to the issue of the original International Tonnage Certificate (1969) and should have no reference to measurement under pre-existing national systems.

4 The phrase "Date and place of last previous remeasurement" should refer to the date and place of issue of the last International Tonnage Certificate (1969).

Cancellation of certificate (article 10(2))

Ships holding an International Tonnage Certificate (1969), which do not comply with agreed interpretations of the provisions of the Convention, should be remeasured. The new characteristics should be determined and applied without delay.

Inspection (article 12)

A copy of the tonnage calculations may be provided together with the International Tonnage Certificate (1969) to the ship's master. Although not a requirement, nothing in the Convention would prevent Administrations from providing these calculations to ships flying their flag.

Definition of terms used in the Annexes (regulation 2)

The following interpretations apply to the terms given in the paragraphs of regulation 2:

1 "Upper deck"

1.1 A discontinuity in the upper deck which extends over the full breadth of the ship and is in excess of 1 m in length should be treated as a step as defined in regulation 2(1) (see figure 1 in appendix 1).

1.2 Steps situated outside the "length" (article 2(8)) should not be considered.

1.3 A discontinuity in the upper deck which does not extend to the side of the ship should be treated as a recess under the upper deck level (see figure 2 in appendix 1).

1.4 In a ship having openings in the side of the ship below the uppermost deck, which are not closed but limited inboard by weathertight bulkheads and decks, the deck below such openings should be considered the upper deck (see figure 3 in appendix 1).

2 "Watertight"

The Administration may decide on this term as a special definition for tonnage purposes is not needed.

3 "Amidships"

This term should be considered as the midpoint of the length as defined in article 2(8) where the forward terminal of that length coincides with the fore side of the stem.

4 "Enclosed Spaces"

4.1 In regulation 2(4) there is no contradiction between the definition of enclosed spaces as being "bounded by the ship's hull, by fixed or portable partitions ..." and "... nor the absence of a partition shall preclude a space from being included in the enclosed space".

4.2 Space located within the boundaries of "permanent or movable awnings" should be subject to treatment under regulation 2(5).

4.3 Tanks, permanently located on the upper deck, provided with removable pipe connections to the cargo system or the vent (de-airing) lines of the ship, should be included in V_c.

4.4 The volume of weathertight steel pontoon covers on hatchway coamings should be included in the calculations of the total volume (V) of the ship. If such covers are open on the underside, their volume should also be included in V_c.

4.5 Multipurpose ships which have the facility to trade with cargo hatches open or closed should always be measured with the hatch covers considered to be closed.

4.6 Masts, kingposts, cranes, crane and container support structures, which are completely inaccessible and above the upper deck, separated on all their sides from other enclosed spaces should not be included in the total volume of all enclosed spaces. Air trunks having a cross-sectional area not exceeding 1 m^2 may also be excluded under the before-mentioned conditions. All mobile cranes should be exempted.

5 "Excluded spaces"

5.1 The space between the side longitudinal bulkhead of a deckhouse and the bulwark below a deck extending from side to side supported by stanchions or vertical plates connected to the bulwarks, should be treated as an excluded space in accordance with regulation 2(5)(b) and (c) (see figure 4 in appendix 1).

5.2 In the case of a ro-ro ship, for example, where the space at the end of an erection is fitted with means for securing cargo, the space should be included in V in accordance with the first condition of regulation 2(5).

6 "Passenger"

N_1 and N_2 should be obtained from the Administration's maritime safety authority.

7 "Cargo Spaces"

7.1 The volumes of the segregated ballast tanks should not be included in V_c provided they are not to be used for cargo.

7.2 The volumes of clean ballast tanks in oil tankers should be included in V_c when the ship is fitted with a crude oil washing system which would permit dual purpose cargo/clean ballast tank use of these tanks.

7.3 The volumes of dedicated clean ballast tanks should not be included in V_c provided that:

.1 the tanks are not used for cargo;

.2 the ship carries a single IOPP Certificate which indicates it is operating with dedicated clean ballast tanks in accordance with regulation 13A, Annex I, MARPOL 73/78;

.3 the following notation is inserted in the REMARKS column on the International Tonnage Certificate (1969):

"This ship carries an IOPP Certificate in conformity with regulation 13A, Annex I, MARPOL 73/78. The following tanks are dedicated solely to the carriage of clean ballast water: _____."

7.4 The volumes of slop tanks for cargo residues should be included in V_c.

7.5 In fishing vessels, the volumes of fish processing spaces for fishmeal, liver oil and canning, tanks for re-cooling fish, wet fish bunkers, stores for salt, spices, oil and tare should be included in V_c. Fishing gear stores should not be included in V_c.

7.6 The volume of refrigerating machinery used for refrigerating cargoes and situated within the boundaries of the cargo spaces should be included in V_c.

7.7 The volumes of mail rooms, baggage compartments separate from passenger accommodation, and bonded stores for passengers should be included in V_c. The volume of provision rooms for crew or passengers and bonded stores for crew should not be included in V_c.

7.8 On combination carriers, where the owners request to have the dual purpose oil/ballast tanks converted to ballast tanks and excluded from V_c, the ballast tanks should be required to be permanently disconnected from the oil cargo system and not used for the carriage of cargo. The ship should then be remeasured in accordance with regulation 5(3). Any ballast tanks not to be included in V_c should be solely allocated to ballast, connected to an independent ballast system, and not used to carry cargo.

7.9 When determining the volumes of cargo spaces, no account should be taken of insulation, sparring or ceiling which is fitted within the boundaries of the space concerned. For ships which have permanent independent cargo tanks constructed within the ship, e.g. gas tankers, the volume to be included in V_c should be calculated to the structural boundary of such tanks, irrespective of insulation which may be fitted on the inside or outside of the tank boundary.

7.10 The volumes of dual purpose spaces such as those used for both ballast and cargo should be included in V_c.

7.11 Spaces allocated to passenger automobiles should be included in V_c.

Gross and net tonnage (regulations 3 and 4)

1 The K_1 and K_2 coefficients used in the gross and net tonnage calculations may be derived from either the table in appendix 2 of the Convention or from the formula in regulation 3 or 4 respectively at the discretion of the Administration.

2 The final tonnage figures determined in accordance with regulations 3 and 4 and stated in the tonnage certificate should be given in rounded down figures without decimals.

Calculation of volumes (regulation 6)

1 Bulbs, fairwaters, propeller shaft bossings or other structures should be treated as appendages.

2 Hawse pipes, sea-valve recesses, thruster tunnels, stern chutes in fishing vessels, dredging wells in dredgers and other similar spaces fitted in the ship's hull should be dealt with as spaces open to the sea.

3 Enclosed spaces above the upper deck, appendages and spaces open to the sea not exceeding 1 m^3 should not be measured.

4 Volumes within the hulls of ships, such as split-hull barges and dredgers, should be retained in V and V_c notwithstanding that the space within the hull is temporarily opened to the sea when discharging cargo (see figure 5 in appendix 1).

Measurement and calculation (regulation 7)

1 When a tonnage certificate and a copy of the calculations of the tonnages are transmitted to another Government in accordance with article 8(2) or 10(3) of the Convention, they should be accompanied by a form as shown in appendix 2, showing the main particulars of the tonnage calculations for easy reference. When listing underdeck volumes, the volumes may be combined (e.g. underdeck/extended forecastle, etc.) on the form.

2 Administrations should decide on the degree of accuracy required for the tonnage calculations.

Special types of ships

1 Livestock carriers

1.1 Livestock carriers are most often converted ships. Above the existing upper deck, one or more decks are constructed. Between these decks, the livestock corrals and their associated spaces are arranged, separated by, for example, railings, fences or gangways. The corrals are open to the air.

1.2 Stanchions, fences and railings to keep livestock in the corrals are "other means for securing cargo" according to regulation 2(5).

1.3 In applying the provisions of the 1969 Tonnage Convention, livestock structures should be included in the gross tonnage.

2 Dockships

2.1 A dockship may include in its main structural characteristics the absence of hatch covers above the cargo space but may have a dock deck above the moulded draught together with side erections (see figure 6 in appendix 1).

2.2 The dockships considered are described as:

.1 a dockship open-ended at the stern (see figure 7 in appendix 1);

.2 a dockship fitted with a stern door or a grill stern door (see figure 8 in appendix 1).

2.3 The space above the dock deck, bounded on at least three sides by erections and intended for the carriage of cargo should be included.

2.4 In this context, an erection is defined as being an enclosed space bounded by bulkheads and a deck above.

3 Open-top containerships

3.1 An open-top containership, for the purpose of application of the 1969 Tonnage Convention, means a ship which is designed for the carriage of containers and is constructed like an open "U", with a double bottom and above this high-sided erections without hatch covers on the upper deck and without a complete deck above the moulded draught (figure 9 in appendix 1), and needs to be regarded as a ship of a novel type as referred to in regulation 1(3).

3.2 The provisions of the 1969 Tonnage Convention should be applied to open-top containerships subject to the following unified interpretations.

.1 Upper deck (regulation 2(1))

In a ship which is exempted by the Administration from the requirements to fit weathertight hatch covers on the uppermost deck exposed to weather and sea, as in an open-top containership, the upper deck should be taken as that deck which would have been determined by regulation 2(1) as if such hatch covers had been fitted.

.2 Enclosed spaces (regulation 2(4))

In open-top containerships, an opening in a deck such as the absence of hatch covers should not preclude a space from being included in the enclosed space.

.3 Shelter above containerstacks

In the case of open-top containerships having movable non-load-bearing covers (shelter) of light construction resting on the containerguides, the space above the hatch coamings up to the covers does not qualify as an excluded space according to regulation 2(5). For this particular design, however, an exception can be made in accordance with regulation 1(3). The space can be excluded provided that this type of ship meets the requirements of an open-top containership without such covers.

APPENDIX 1

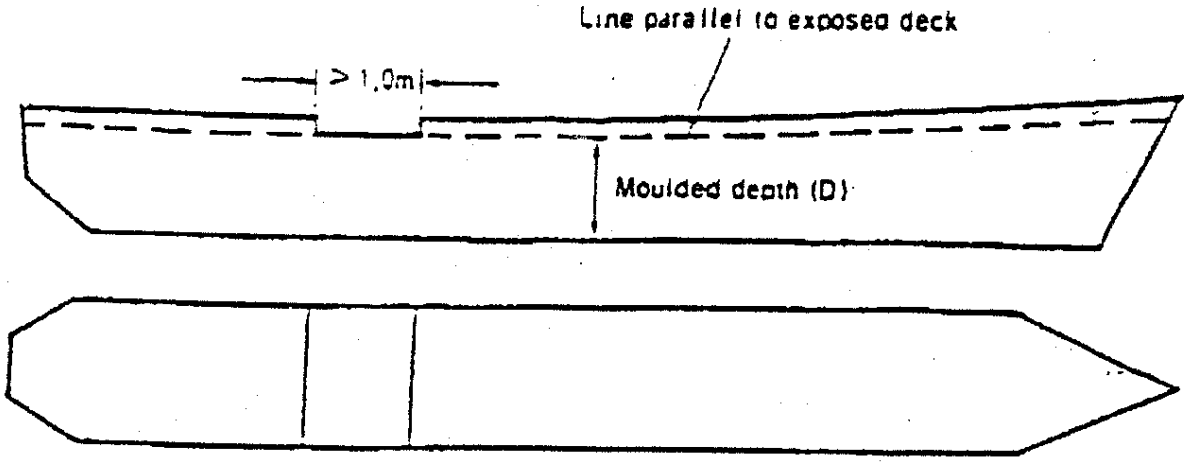


Figure 1

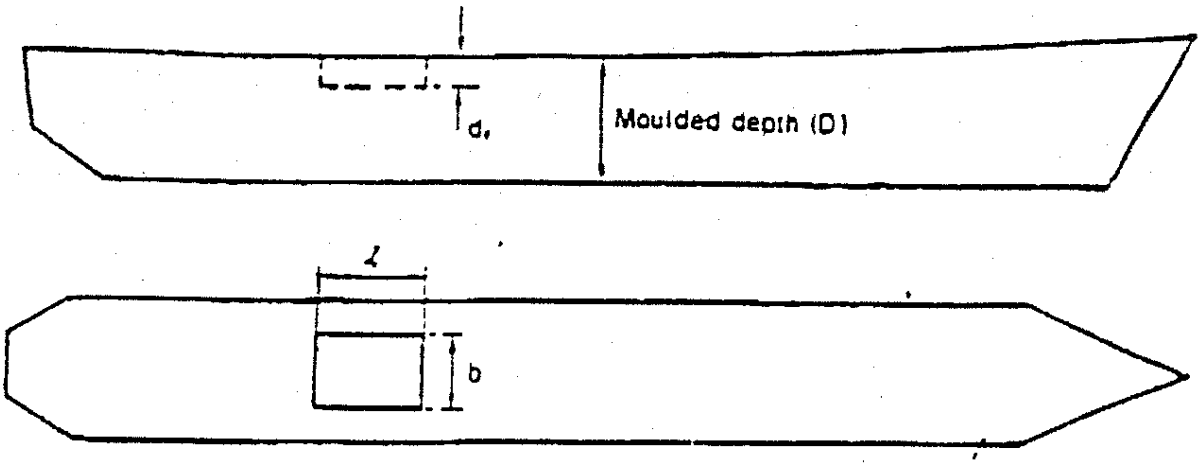


Figure 2

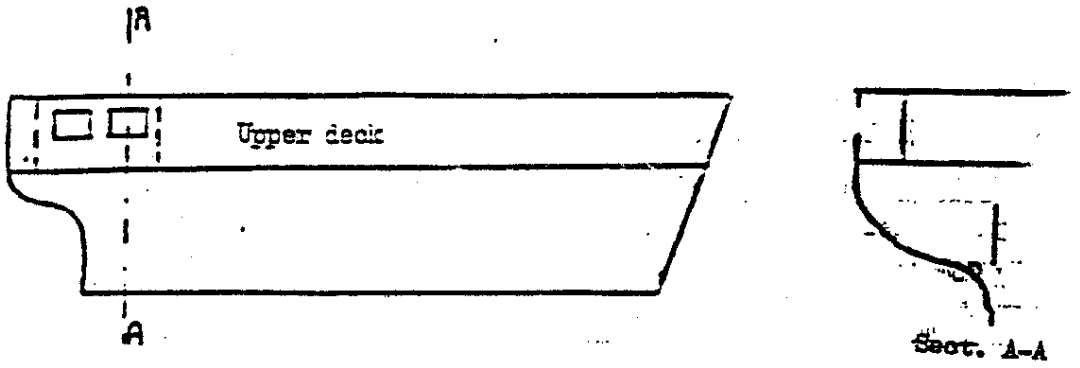


Figure 3

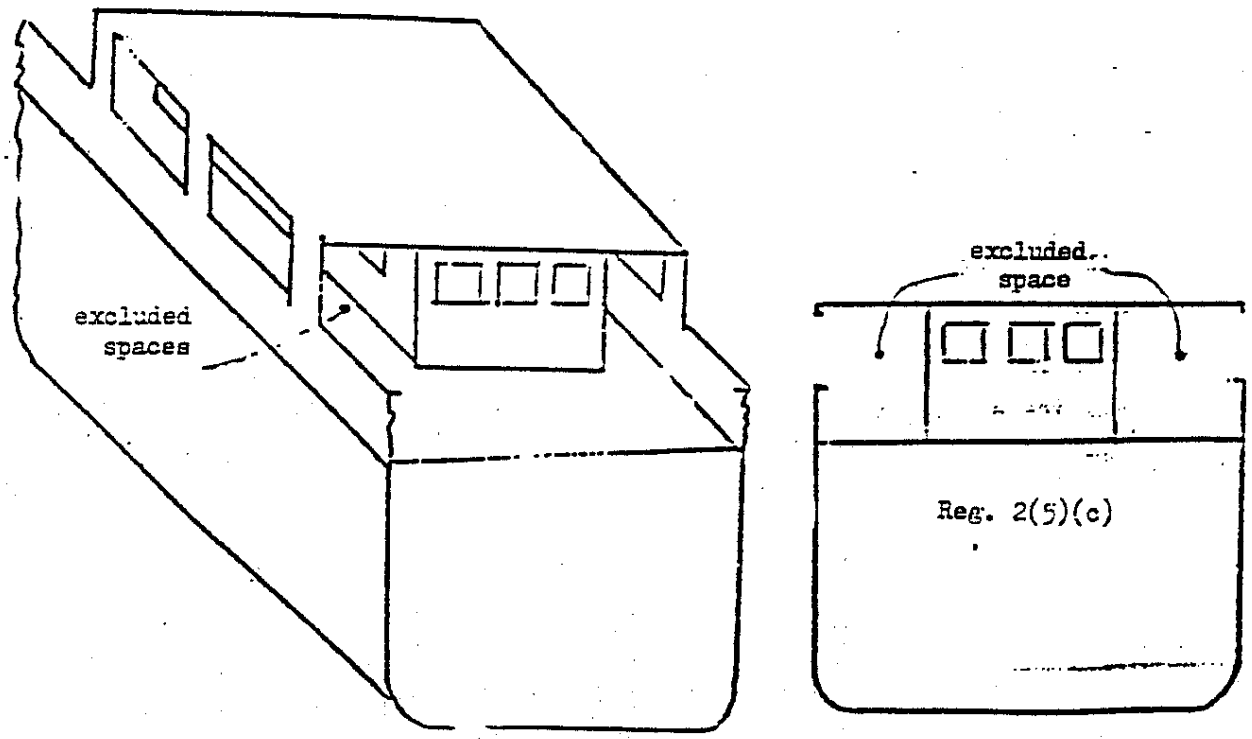
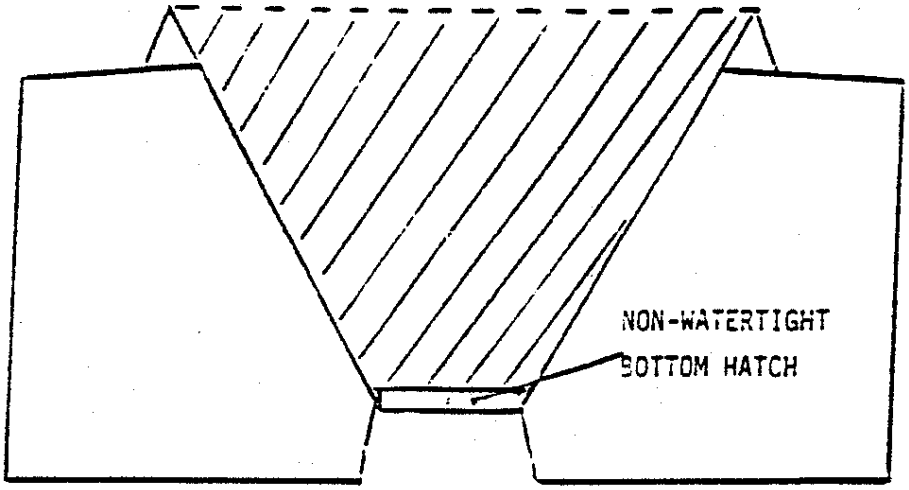


Figure 4



Shaded volumes included in V and V_c

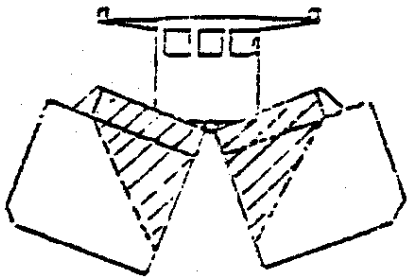


Figure 5

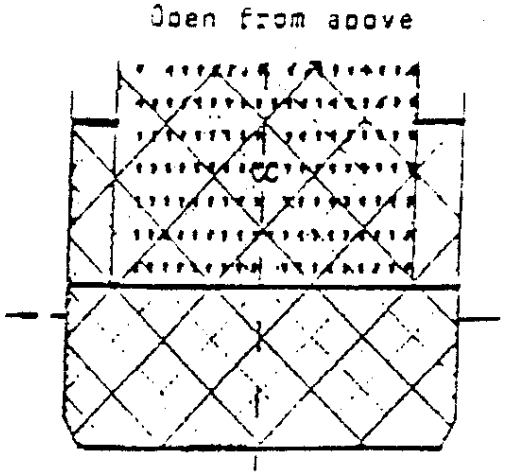
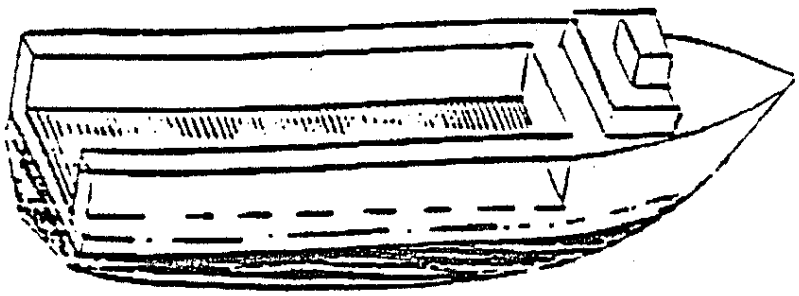
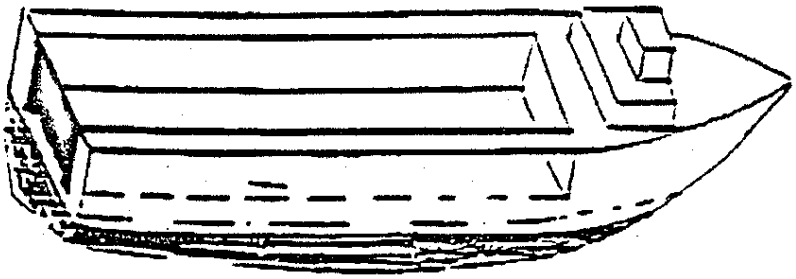


Figure 6



(1) type of dock ship (aft end open)

Figure 7



(2) equipped with stern flap or aft bulkhead

Figure 8

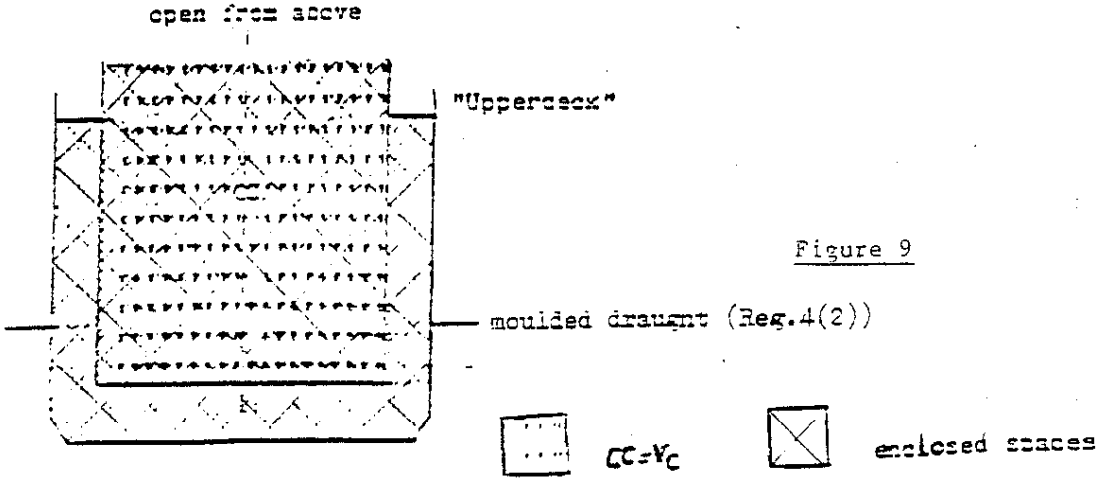


Figure 9

APPENDIX 2

FORM GIVING PARTICULARS OF UNIFORM TONNAGE CALCULATION

GROSS TONNAGE

Item No.	Name of space	Location	Length	Moulded volume
	Underdeck Poop Bridge Forecastle Deckhouses Hatches, etc.			
		Total volume		

NET TONNAGE

	No. 1 hold No. 2 hold, etc. No. 1 tween decks No. 2 tween decks, etc. Hatches, etc.			
		Total volume		

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ANNEX 12

REVISED WORK PROGRAMME OF THE SUB-COMMITTEE

	Target completion date	Reference in the report
1 Harmonization of damage stability provisions in IMO instruments (probabilistic method)		
[.1 Regulations for dry cargo ships including ro-ro ships of less than 100 m in length	1994][1/]	Paragraph 5.7
.2 Explanatory notes for dry cargo ships including ro-ro ships of less than 100 m in length	[1997][1/]	
.3 Review of resolution A.265(VIII) including deterministic requirements (regulation 5)	1995	
.4 Explanatory notes to resolution A.265(VIII) as revised	1995	
.5 Development of new SOLAS chapter II-1, parts A, B and B-1	1996	
.6 Harmonization of damage stability provisions in other IMO instruments, including the 1993 Torremolinos Protocol	1997	
[.7 Regulations for dry cargo ships including ro-ro ships of less than 80 m in length	1997][1/]	Paragraph 5.8
2 Subdivision and damage stability of passenger ships (deterministic requirements)		
.1 Maximum number of passengers permitted on new one-compartment passenger ships	[1995][1/]	Paragraphs 5.20 and 5.21
.2 Amendments to SOLAS regulations II-1/8 and II-1/20	[1995][1/]	
3 Intact stability		
.1 Review of the Code of intact stability for all types of ships covered by IMO instruments	1995	Paragraphs 3.20 and 3.21
.2 Improved stability criteria and systematic model tests	Continuous	

		Target completion date	Reference in the report
	.3 Collection and analysis of intact stability casualty records	Continuous	
	[.4 'Excessive' stability (Review of relevant codes to achieve consistency)	1994][2/]	Section 15
	[.5 Intact stability of double hull tankers	1995][1/]	Paragraph 3.12
	[.6 Guidance for avoiding dangerous situations in following and quartering seas	1996][1/]	Paragraph 3.18
4	Analysis of damage cards	Continuous	
[5	Analysis of fishing vessel and fishermen casualty statistics	Continuous][3/]	Section 7
6	Revision of technical regulations of the 1966 LL Convention	1996	Section 8
7	Small fishing vessel safety and training guidelines (in co-operation with STW)	1996	Section 9
8	Revision of the alternative intact and damage stability criteria for MODUs	1995	
[9	Amendments to, and interpretation of, tonnage measurement requirements	1994][2/]	Section 10
10	Hull structural integrity of tankers and bulk carriers (in co-operation with DE, BC)	1995	Section 11
	[.1 mandatory requirements for on-board loading manuals and/or loading instruments		
	.2 loading and unloading of bulk carriers][1/]		
11	Review of existing ships' safety standards	Continuous	Section 12
12	Review of hypothetical oil outflow parameters	[1996][1/]	Paragraph 13.3

	Target completion date	Reference in the report
13 Role of the human element in maritime casualties	Continuous	Section 14
.1 Improvement of general requirements in IMO instruments		
.2 Review of SOLAS 74 and LL 66 regarding language and format of stability information		
.3 Application of computers in determining ship stability		
.4 Guidelines for the use and application of on-board computers (work co-ordinated by DE)	1995	
[14 Stability aspects of alternative arrangements under MARPOL 73/78 Annex I regulation 13(G)	1994]2/	Section 16

1/ Subject to approval at MSC 63.

2/ To be deleted as work completed.

3/ To be deleted as the matter has been transferred to the FSI Sub-Committee.

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ANNEX 13

ITEMS TO BE INCLUDED IN THE AGENDA FOR THE THIRTY-NINTH SESSION OF THE SUB-COMMITTEE

1 Subdivision and damage stability of passenger ships

.1 maximum number of passengers permitted on new one-compartment passenger ships

.2 amendments to SOLAS regulations II-1/8 and II-1/20

2 Harmonization of damage stability provisions in IMO instruments

.1 regulations for dry cargo ships including ro-ro ships of less than 80 m in length

.2 explanatory notes for dry cargo ships including ro-ro ships of less than 100 m in length

.3 review of resolution A.265(VIII) and explanatory notes thereto

.4 development of new SOLAS chapter II-1, parts A, B and B-1

3 Intact stability

.1 review of the Code of intact stability for all types of ships covered by IMO instruments

.2 guidance for avoiding dangerous situations in following and quartering seas

.3 intact stability of double hull tankers

4 Analysis of damage cards

5 Revision of technical regulations of the 1966 LL Convention

6 Small fishing vessel safety and training guidelines

7 Hull structural integrity of tankers and bulk carriers

.1 mandatory requirements for on-board loading manual and/or loading instrument

.2 loading and unloading of bulk carriers

8 Review of existing ships' safety standards

9 Review of hypothetical oil outflow parameters

10 Role of the human element in maritime casualties

.1 improvement of general requirements in IMO instruments

.2 guidelines for the use and application of on-board computers

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