



SUB-COMMITTEE ON SUBDIVISION,
STABILITY AND LOAD LINES -
26th session
Agenda item 14

IMCO

REPORT TO THE MARITIME SAFETY COMMITTEE

1 GENERAL

1.1 The Sub-Committee held its twenty-sixth session from 18 to 22 May 1981 under the Chairmanship of Mr. E.H. Middleton (United States).

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

ARGENTINA	LIBERIA
AUSTRALIA	NETHERLANDS
BELGIUM	NORWAY
CANADA	PANAMA
CHILE	PHILIPPINES
CHINA	PORTUGAL
DEM. LANK	ROMANIA
FINLAND	SPAIN
FRANCE	SWEDEN
GERMAN DEMOCRATIC REPUBLIC	THAILAND
GERMANY, FEDERAL REPUBLIC OF	TUNISIA
GREECE	USSR
INDIA	UNITED KINGDOM
ITALY	UNITED STATES
JAPAN	YUGOSLAVIA

an observer from the following inter-governmental organization:

LEAGUE OF ARAB STATES

and observers from the following non-governmental organizations:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS (IADC)
OIL INDUSTRY INTERNATIONAL EXPLORATION AND PRODUCTION FORUM (E and P FORUM)
ASSOCIATION OF WESTERN EUROPEAN SHIPBUILDERS (AWES)

1.3 The agenda adopted by the Sub-Committee, together with a list of documents issued for this session, is given at Annex 1.

1.4 The Sub-Committee re-elected unanimously Mr. F.H. Middleton (United States) and Mr. B. Sjöholm (Sweden) as Chairman and Vice-Chairman, respectively, for 1982.

1.5 The Norwegian delegation showed a film from the Ship in Rough Seas research project. The film showed three experiments in a model tank, the pure loss of stability with a wave crest amidships in following seas, capsizing in a breaking wave, and finally the possibility of righting a capsized vessel from a stable position by use of the main engine and rudder. The Sub-Committee appreciated the film as a valuable contribution to its work on intact stability.

2 IMPROVEMENTS OF THE 1966 LOAD LINE CONVENTION

Amendments to the Convention

2.1 The Sub-Committee had before it documents submitted by the United Kingdom (STAB XXVI/3/1), the United States (STAB XXVI/3/2), the USSR (STAB XXVI/3/3) and the Secretariat (STAB XXVI/3/4).

2.2 Having considered the proposal by the United Kingdom to amend Regulation 22 of the 1966 Load Line Convention and Regulation 21 of Chapter II-1 of the 1974 SOLAS Convention, as amended, the Sub-Committee agreed on amendments as set out in Annex 2. Bearing in mind that these amendments cannot be made effective for some years, the Sub-Committee agreed that these amendments should be circulated to Member Governments inviting them to apply them in advance. The draft IBC Circular agreed by the Sub-Committee is attached at Annex 3. The Secretariat was requested to bring Annexes 2 and 3 to the attention of the Sub-Committees on Fire Protection and on Ship Design and Equipment. Their comments should be submitted to the next session of this Sub-Committee.

2.3 Members were invited to consider the various amendments proposed to the 1966 Load Line Convention which are listed in STAB XXVI/3/4, items 1, 2, 3, 4, 7 and 8 and to submit their views by 1 December 1981. The Sub-Committee recalled that, at an earlier session, amendments to Regulation 44 in respect of timber deck lashings were considered (STAB XIX/MP.3), and recognized that this was a task for this Sub-Committee to take up under proposed amendments to the Load Line Convention. The Sub-Committee intends to consider these various amendments at its next session.

2.4 The Sub-Committee agreed that an item relating to a systematic review of the 1966 Load Line Convention, as proposed by the United States, including consideration of basic principles, should be included in its work programme.

In this connexion the Sub-Committee recalled the decisions of the Committee's forty-fourth session with respect to the timetable of future conferences. In particular note was taken of the inclusion in the Committee's long-term work programme of preparation for a unified international instrument, which might incorporate all requirements related to maritime safety and marine environmental protection.

2.5 The Sub-Committee envisaged completion of this review of the Load Line Convention in time for inclusion in the unified international instrument. The Committee is invited to concur with the above proposal.

2.6 In order to develop the outline of this proposal, the Sub-Committee intends to consider the matter at its next session. Members are invited to submit comments by 1 December 1981.

Interpretations of the Convention

2.7 The Sub-Committee agreed with modification to some of the interpretations presented by IACS in STAB XXVI/3. These, together with the interpretations agreed by the Sub-Committee at its twenty-fifth session, constitute the third set of interpretations of the 1966 Load Line Convention, as set out at Annex 4. The Committee is invited to approve these interpretations for circulation to Members of the Organization and Contracting Governments to the Load Line Convention.

2.8 Japan drew the attention of the Sub-Committee to the fact that the interpretation LL.46/Rev.1 regarding Regulations 18(2) and 23 conflicts with the provision of Regulation 13 which requires to treat raised quarterdeck as Position 1. Consequently, Japan reserved its position regarding interpretation LL.46/Rev.1.

2.9 The Sub-Committee agreed that interpretations LL.40/Rev.1 and LL.49 are not intended to be applied to existing ships and requested IACS to re-examine the interpretation LL.48.

Related matters

2.10 The Sub-Committee noted that in response to LL.3/Circ.30, only five countries provided information on action taken in respect of:

- .1 the Regulation Equivalent to Regulation 27 (resolution A.320(LX));
- .2 Unified Interpretation of the provision of the Convention (LL.3/Circ.20 and LL.3/Circ.22); and
- .3 Form of Record of Condition of Assignment of Load Lines (LL.3/Circ.19).

The Sub-Committee again urged its Members who have not yet taken action to submit information on the above circulars as soon as possible.

2.11 The delegation of Greece informed the Sub-Committee that its Administration was in the process of adopting the above recommendations.

3 INTACT STABILITY

3.1 The Sub-Committee referred to its ad hoc working group on intact stability for consideration:

- .1 documents concerning the weather criterion submitted by Australia (STAB XXVI/4/3), China (STAB XXVI/4/8), the German Democratic Republic (STAB XXVI/4/1), Japan (STAB/93), the Netherlands (STAB XXVI/4), Poland (STAB XXVI/4/11 and STAB XXVI/4/13), the USSR (STAB XXVI/4/5), the United Kingdom (STAB XXVI/4/4 and STAB/88) and the United States (STAB XXVI/4/12);
- .2 documents concerning improvement of resolution A.167(ES.IV) submitted by Australia (STAB XXVI/4/6), the German Democratic Republic and Poland (STAB XXVI/4/7), the Netherlands (STAB/91) and the United States (STAB XXVI/4/10); and
- .3 documents concerning stability of pontoons submitted by Australia (STAB XXVI/4/2) and the Netherlands (STAB XXVI/4/9).

3.2 The Sub-Committee noted that during the present session the working group considered the following subjects:

- .1 general philosophy of improvement of stability requirements;
- .2 improvement of stability requirements of resolution A.167(ES.IV);
- .3 stability of ships in ballast condition;
- .4 work programme for elaborating the calculation method for the weather criterion;
- .5 stability of pontoons.

3.3 The Sub-Committee received the report of the group at this session and approved it in general (STAB XXVI/MP.8).

3.4 The Sub-Committee noted that in some cases the weather criterion is treated as independent criterion which might substitute all requirements of resolution A.167(ES.IV). In view of this misunderstanding, the Sub-Committee

agreed that the weather criterion should be considered as an additional stability requirement for preventing capsizing in case of severe wind and rolling which had to be used in conjunction with other stability criteria and that the requirements of resolution A.167(ES.IV) could be improved by addition of this criterion.

3.5 In respect of loading conditions the Sub-Committee considered that the improved requirements need to be applied to all normal conditions of loading.

3.6 The Sub-Committee agreed that the group should undertake the following work programme:

- .1 defining internationally agreed numerical values and assumptions for the weather criterion under consideration; and
- .2 developing a draft IMCO recommendation on improved stability requirements for conventional cargo and passenger ships of unrestricted service on the basis of a combination of the weather criterion with the criteria of resolution A.167(ES.IV).

The following countries agreed to participate in the work programme:

Denmark	Norway
Germany, Federal Republic of	USSR
Greece	United Kingdom
Japan	United States
Netherlands	

3.7 The Sub-Committee concurred with the group's proposal by the working group, that in the present state of knowledge a safe minimum value of angle of vanishing stability θ_v could not be established but agreed that this angle should be as large as the design requirements of the ship permit. Some delegations expressed the view that this angle should preferably not be less than 60° .

3.8 The Sub-Committee urged the group to finalize the subject of stability of pontoons at the next session by producing an interim guideline.

3.9 The Sub-Committee concurred with the view of the group that the subject of stability in following waves should be retained as an agenda sub-item for future sessions and invited Members to submit comments on the proposal of the German Democratic Republic and Poland for ensuring positive stability in following waves (STAB XXVI/4/7) by 1 December 1981.

3.10 It was noted that in view of the joint meeting with the Sub-Committee on Safety of Fishing Vessels at the next session it might be likely that interested Members of that sub-committee may join the group. Members are requested to bring the ad hoc group's report (STAB XXVI/MP.8) to the attention of their delegates to the Sub-Committee on Safety of Fishing Vessels.

4 HARMONIZATION OF SUBDIVISION AND DAMAGE STABILITY REQUIREMENTS IN VARIOUS INSTRUMENTS

4.1 The Sub-Committee reviewed a proposal received from the Sub-Committee on Bulk Chemicals to amend the harmonized chapters on survival capability of the Bulk Chemical and Gas Carrier Codes. The Sub-Committee agreed that the calculations for loading and unloading are only necessary for gas carriers and that such requirements should not be included in the Bulk Chemical Code, with the understanding that by virtue of the design characteristics of chemical tankers with longitudinal subdivided cargo tanks the stability during cargo handling will not be endangered by the free surface effects in the tanks.

4.2 The Sub-Committee considered also the question of effectiveness of automatic non-return valves in chemical tankers, referred to it by the Committee. A new paragraph 2.3.3 to be included in the revised Bulk Chemical Code (BCN VIII/7), was agreed as follows:

"2.3.3 The automatic non-return valves referred to in 2.3.1.1 and 2.3.1.2 should be of a type acceptable to the Administration, which should be fully effective in preventing the admission of water into the ship, taking into account the sinkage, heel and trim in the survival requirements in 2.9."

4.3 Similar paragraphs should also be included in the Gas Carrier Code and in Regulation 25 of Annex I of the MARPOL Convention.

4.4 The Secretariat was requested to transmit the above paragraphs to the Sub-Committee on Bulk Chemicals and the Marine Environment Protection Committee which are invited to take appropriate steps for amending the two instruments. The Maritime Safety Committee is invited to take note of the action taken.

4.5 The Sub-Committee had before it a proposal by the United Kingdom to amend the Guidelines for Uniform Application of the Survival Requirements of the Bulk Chemical Code and the Gas Carrier Code (STAB XXVI/4/1) in respect of residual cargo conditions. The Sub-Committee agreed in principle that the degree of risk should determine the necessary degree of compliance with the survival capability specified in the Codes. The Sub-Committee on Bulk Chemicals was invited to identify or quantify the acceptable level of such risks in order to allow this Sub-Committee to determine requirements.

5 PROTECTIVE LOCATION OF BALLAST TANKS IN SEGREGATED BALLAST OIL TANKERS

5.1 The Sub-Committee noted that the Marine Environment Protection Committee at its fifteenth session amended paragraph 3 of the Unified Interpretation of Regulation 13B of the MARPOL Protocol, prepared by this Sub-Committee.

5.2 As no papers had been submitted to this session and in the absence of any request for further studies to be undertaken by the Sub-Committee it was decided to delete this item from its agenda for the next session but to retain it in its work programme with the emphasis on the probabilistic approach for the protective location of ballast tanks.

6 SUBDIVISION AND DAMAGE STABILITY OF DRY CARGO SHIPS INCLUDING RO/RO SHIPS
Information to the Master

6.1 The Sub-Committee reviewed comments on and proposals to the draft format of information on subdivision and damage stability to the master (STAB XXV/11, Annex 5) submitted by Australia (STAB XXVI/7/2), the German Democratic Republic (STAB XXVI/7), the United States (STAB XXVI/7/3) and the USSR (STAB XXVI/7/4).

6.2 An ad hoc group was formed to prepare a new draft format based on the comments of the Sub-Committee. The Sub-Committee concurred with the proposals of the working group, in particular that:

- .1 the survival requirements for dry cargo ships could not be developed at present, therefore only guidelines for information should be presented;
- .2 the aim of the Guidelines should be to provide the master with general information on the attitudes of the ship after the flooding of selected compartments;
- .3 the inclusion of general ship information was unnecessary because such information already exists in the intact stability booklet.

6.3 The Sub-Committee agreed that the draft "Guidelines" as set out in Annex 5 which supersedes Annex 5 of STAB XXV/11, forms a useful basis for further consideration. Members were invited to evaluate these draft guidelines and submit comments thereon by 1 December 1981.

6.4 The Sub-Committee agreed that guidance information should be attached to or located with the intact stability booklet, the form of presentation of which should be reviewed in this connexion.

Other matters

6.5 The Sub-Committee received a paper submitted by the German Democratic Republic (STAB XXVI/7/1) concerning calculation of floodable lengths curves and damage stability for cargo ships and a background paper submitted by the Netherlands (STAB/90).

6.6 The Sub-Committee agreed that these papers contain valuable information which should be evaluated at future sessions.

6.7 The Sub-Committee invited Members to pursue research on items of substance in relation to subdivision as referred to in 7.4 of STAB XXV/11 and submit results of such research when available for consideration by the Sub-Committee.

6.8 The French delegation put forward an informal proposal that the Sub-Committee should also pursue development of empirical subdivision requirements for cargo ships on the basis that such requirements can be evaluated more quickly than more scientific methods. In their view calculations based on simple assumptions might be finalized in a comparatively short time. Members were invited to submit comments on this proposal by 1 December 1981.

7 SUBDIVISION, STABILITY AND LOAD LINES OF SPECIAL PURPOSE SHIPS

7.1 The Sub-Committee considered documents submitted by Australia (STAB XXVI/8/1) and the United States (STAB XXVI/8/2), together with a note by the Secretariat (STAB XXVI/8) conveying the answers given by the Sub-Committee on Ship Design and Equipment to the questions raised in the report of this Sub-Committee's last session.

7.2 As invited by the Sub-Committee, the chairman of the ad hoc group on special purpose ships of the Sub-Committee on Ship Design and Equipment Mr. H. Hornmann (Federal Republic of Germany) attended the meeting for this item. The Sub-Committee was appreciative of his contributions to the discussions which clarified previous areas of uncertainty.

7.3 After a lengthy discussion the Sub-Committee agreed on a revision, prepared by the USSR, of Section 2 - Subdivision and Damage Stability, of the Code of Safety for Special Purpose Ships as proposed by the USSR (STAB XXVI/MP.3). The Secretariat was requested to forward the reviewed section, set out at Annex 6, together with the remarks in 7.4 and 7.5, to the Sub-Committee on Ship Design and Equipment for inclusion in the draft Code.

7.4 It was reiterated that these requirements would apply only to the categories of special purpose ships described in 1.3.4.1.1 to 1.3.4.1.4 inclusive, in DE XXI/WP.5, and that the question of their application to the categories referred to in 1.3.4.1.5 should be left to the discretion of the Administration in each case.

7.5 Regarding intact stability, the Sub-Committee agreed that for special purpose ships of under 100 metres in length, the provisions in resolution A.167(ES.IV) should apply except that the alternative criteria given in 2.5.2 of the Guidelines for the Design and Construction of Offshore Supply Vessels may be used for ships of similar characteristics. For special purpose ships of 100 metres in length and above, the stability should be left to the satisfaction of the Administration.

8 AMENDMENTS TO THE 1974 SOLAS CONVENTION

Amendments to Chapter II-1

8.1 The Sub-Committee had before it the proposal put forward by India to the Maritime Safety Committee (MSC XLII/3/5) concerning peak and machinery bulkheads for cargo ships and a new regulation on double bottoms in cargo ships referred by the Committee to this Sub-Committee and comments thereon by Australia (STAB XXVI/9). Having briefly considered this proposal the Sub-Committee agreed to invite Members to submit further comments by 1 December 1981. It is intended to finalize this issue at the next session.

8.2 The Sub-Committee considered a proposal by France for a definition of the term "long forward superstructure" referred to it by the Committee and agreed that at the present stage the definition proposed cannot be accepted and should possibly be modified. Members were invited to submit comments by 1 December 1981 in order to enable the Sub-Committee to take a decision at the next session.

Inter-relationship between Lifeboatage and Subdivision

8.3 The Sub-Committee discussed the Committee's request to review the provisions in the draft revised Chapter III of the 1974 SOLAS Convention concerning the inter-relationship between reduced lifeboatage and increased subdivision (ISA XV/10/Add.1).

8.4 In this respect the Sub-Committee recalled that at its tenth session it had requested consideration of totally removing this inter-relationship, bearing in mind that in the requirements for subdivision based on the probability of

survival (resolution A.265(VIII)), this had already been done. At the same time it was stressed that revised requirements for life-saving appliances should be related to the density of persons and the size of the ship. The Committee at its twenty-second session decided, however, that no final decision should be made at that stage.

8.5 In view of the above, the Sub-Committee agreed that the term "or approved equivalent" should be deleted from the draft Regulation B II/1(a)(ii) and (iii). Furthermore, when these draft regulations are adopted, changes will be necessary in the present texts of Regulations 1(d), 4(d) and 5(e) of Chapter II-1 of the 1974 SOLAS Convention, which are set out at Annex 7. Furthermore, it was noted that the philosophy governing the inter-relationship between lifeboats and subdivision was reversed, i.e. that reduction of survival craft would be permissible if the subdivision standard of the ship complies with Regulation 5(e) of Chapter II-1. The Sub-Committee would however find the previous concept more logical, i.e. where in passenger ships on short international voyages it would not be practicable to fit the normal complement of survival craft along each side of the ship, a reduced number of craft would be permissible when the higher subdivision standards in Regulation 5(e) of Chapter II-1 are met.

8.6 The Sub-Committee, having considered the matter in detail, reiterated its recommendation that the inter-relationship of survival craft and subdivision should be discontinued at the earliest possible opportunity because this concept is unsound in principle and, since its introduction, other means equivalent to rigid lifeboats and liferafts have become available. If this is agreed by the Sub-Committee on Life-Saving Appliances, Regulations 1(d), 4(d) and 5(e) of Chapter II-1 and Regulation B II/1(a)(ii) and (iii) of draft Chapter III could be eliminated.

8.7 The Secretariat was requested to transmit this section and Annex 7 to the next session of the Sub-Committee on Life-Saving Appliances, which is invited to take account of this Sub-Committee's proposals. The Sub-Committee expressed its willingness to assist the Sub-Committee on Life-Saving Appliances in its consideration of the above question, bearing in mind that its next session will be after the 1982 session of the Sub-Committee on Life-Saving Appliances but prior to the Committee's forty-sixth session.

8.8 The Committee is invited to take note of these recommendations and to take appropriate action.

9 ANALYSIS OF INTACT STABILITY CASUALTY RECORDS

No papers were submitted to the Sub-Committee for this session. The Sub-Committee agreed that the items should be retained on the agenda, but as a sub-item under intact stability. Members were invited to submit completed forms and any suggestions for an analysis or other evaluation.

10 MATTERS RELATED TO THE 1969 TONNAGE CONVENTION

10.1 The Sub-Committee received documents submitted by Sweden (STAB XXVI/11), IACS (STAB XXVI/11/2) and a note by the Secretariat (STAB XXVI/11/1). The Sub-Committee also took into consideration the following documents: MSC XLIV/17 (France), MSC XLIV/17/1 and MSC XLIV/17/1/Corr.1 (Sweden), MSC XLIV/WP.10 (Working Group).

10.2 The Sub-Committee noted that the Committee at its forty-fourth session requested this Sub-Committee to consider problems related to the provisions of the 1969 Tonnage Convention and to forward any recommendations to the Spring session of the Committee in 1982, prior to the coming into force of the Convention.

10.3 The Sub-Committee approved interpretations related to Article 3(2)(b), Article 10(2) and Regulation 2(1) of the 1969 Tonnage Convention and an amended text of paragraph 8 of MSC/Circ.254, as proposed by the working group. These interpretations are included in Annex 8, which is a revision of MSC/Circ.254.

10.4 The Committee is invited to approve the revised circular on interpretation of and guidance on provisions of the 1969 Tonnage Convention for circulation to Member Governments and Contracting Governments to the 1969 Tonnage Measurement Convention.

10.5 The Sub-Committee realized that the work could not be concluded at this session and that further work is needed in an ad hoc group at its next session, at which time additional interpretations and guidance may be forwarded to the Committee for inclusion in the revised circular.

10.6 In order to progress the work, the Sub-Committee agreed that a correspondence group should consider basic guidelines for a minimum number of sections and waterlines and any other proposals, interpretations and guidance which should be submitted by 1 October 1981. The United States delegation*

* Address of lead country: Mr. J.T. Lewis
Chief, Admeasurement Branch (G-MET-6)
Merchant Marine Technical Division
United States Coast Guard
2100 Second Street S.W.
Washington, D.C. 20593, U.S.A.

agreed to act as lead country and to provide a summary of this correspondence by 1 December 1981 for circulation to the next session. All correspondence on this matter should also be sent to the Secretariat.

10.7 The Norwegian delegation stressed that the 1969 Tonnage Convention clearly provides for the use of calculation methods generally adopted for hydrostatic, stability and capacity purposes, thus providing the flexibility necessary to cater adequately for the great variations of hull shapes. Consequently, any uniform method or guidance involving fixed positions of sections and waterlines will contravene the intention of the Convention.

11 ANY OTHER MATTERS

Resolution A.265(VIII)

11.1 The Sub-Committee recalled that in resolution A.265(VIII) the Assembly recommended that the Governments should exchange experience gained as a result of using equivalent regulations and the Committee was requested to consider comments submitted as a result of the application of these regulations with a view to their practical evaluation and determining their suitability and related necessary changes in Chapter II-1 of the 1974 SOLAS Convention. The Sub-Committee therefore invited Members to submit any relevant information concerning their experience with the application of equivalent regulations in resolution A.265(VIII).

11.2 The Sub-Committee noted a paper by Poland (STAB/89) which, in evaluating the p_i factor of the Equivalent Regulations, suggested that this factor is incorrect. In the absence of the Polish delegation the Sub-Committee was unable to consider the paper. Members who had previously been closely involved in the drafting of the Equivalent Requirements were invited to review the Polish paper in order that the Sub-Committee may be in a position to resolve the issue.

Second International Conference on Stability of Ships and Ocean Vehicles

11.3 The Sub-Committee was informed by the Japanese delegation that the above conference will be held in Tokyo in the week 24 to 29 October 1982 under the sponsorship of the Society of Naval Architects of Japan*.

* Enquiries should be directed to: Professor S. Motora
The Society of Naval Architects
15-16 Toranomon 1-chome, Minato-ku
Tokyo 105
Japan

11.4 The Sub-Committee noted the forthcoming conference with interest. It was expected that the outcome of that conference would contribute greatly to the work of the Sub-Committee and Members were invited to consider participation.

Arrangements for the Sub-Committee's next sessions

11.5 The Sub-Committee noted that the next session, tentatively scheduled for the week 8-12 February 1982 will be held concurrently with the twenty-fourth session of the Sub-Committee on Safety of Fishing Vessels. The Sub-Committee suggested that arrangements for this session should be discussed by the ~~chairmen~~ of the two sub-committees concerned and the Secretariat during the twelfth session of the Assembly. The outcome will be reported to both sub-committees.

11.6 The Sub-Committee agreed on agenda items for the twenty-seventh and twenty-eighth sessions indicating ad hoc groups to be established and common items to be considered jointly by both sub-committees, at the next session. These are set out at Annex 9.

11.7 The Sub-Committee did not propose any changes to its work programme.

11.8 Members were invited to notify the Secretariat by 1 October 1981 of their intention to submit papers for consideration at the next session under various items, in order to assist the Secretariat to prepare for the next session bearing in mind that this will be the session held concurrently with the Sub-Committee on Safety of Fishing Vessels.

12 DECISIONS TO BE TAKEN BY THE COMMITTEE

12.1 The Committee is invited to approve the report in general and in particular to take action as follows:

- .1 to concur with the proposal to include a systematic review of the 1966 Load Line Convention in the work programme of this Sub-Committee, as referred to in paragraphs 2.4 and 2.5;
- .2 to approve the third set of interpretations of the 1966 Load Line Convention as referred to in paragraph 2.7 and set out at Annex 4;
- .3 to take note of the action taken with regard to amendments to the Bulk Chemical Code, the Gas Carrier Code and the MARPOL Convention concerning provisions of automatic non-return valves, as referred to in paragraphs 4.2 to 4.4;

- .4 to take action as appropriate concerning recommendations on the inter-relationship between subdivision and lifeboatage, as referred to in paragraphs 8.1 to 8.8;
- .5 to approve the interpretation of and guidance on provisions of the 1969 Tonnage Convention as referred to in paragraph 10.4 and set out at Annex 8.

ANNEX 1AGENDA FOR THE TWENTY-SIXTH SESSION, INCLUDING
LIST OF DOCUMENTS CONSIDERED

1 Adoption of the agenda

STAB XXVI/1/Rev.1 Provisional agenda

2 Decisions by the Maritime Safety Committee

STAB XXVI/2 Secretariat
STAB XXVI/2/1 Secretariat

3 Improvement of the 1966 Load Line Convention

STAB XXVI/3	IACS	STAB XXV/11,	
STAB XXVI/3/1	United Kingdom	Annex 2	Sub-Committee
STAB XXVI/3/2	United States	LL.3/Circ.30	Secretariat
STAB XXVI/3/3	USSR	LL.3/Circ.31	Netherlands
STAB XXVI/3/4	Secretariat	LL.3/Circ.33	United Kingdom
STAB XXVI/WP.4	United Kingdom	LL.3/Circ.34	Australia
STAB XXVI/WP.9	Drafting Group	LL.3/Circ.35	Federal Republic of Germany
		LL.3/Circ.36	France

4 Intact stability

STAB XXVI/WP.8 Ad hoc group

.1 weather criterion

STAB XXVI/4	Netherlands	STAB/88	United Kingdom
STAB XXVI/4/1	German Democratic Republic	STAB/93	Japan
		PFV/219	Denmark
STAB XXVI/4/3	Australia		
STAB XXVI/4/4	United Kingdom		
STAB XXVI/4/5	USSR		
STAB XXVI/4/8	China		
STAB XXVI/4/11	Poland		
STAB XXVI/4/12	United States		
STAB XXVI/4/13	Poland		

.2 stability of ships in ballast condition

no documents

.3 improvements of stability requirements of resolution A.167(ES.IV)

STAB XXVI/4/6	Australia	STAB/91	Netherlands
STAB XXVI/4/7	German Democratic Republic, Poland	STAB/92	United States
		STAB/93	Japan
STAB XXVI/4/10	United States		

.4 stability of pontoons

STAB XXVI/4/2	Australia
STAB XXVI/4/9	Netherlands

5 Harmonization of subdivision and damage stability requirements in various instruments

STAB XXVI/5	Secretariat
STAB XXVI/5/1	United Kingdom

6 Protective location of ballast tanks in segregated ballast oil tankers

STAB XXVI/6	Secretariat
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7 Subdivision and damage stability of dry cargo ships, including Ro/Ro ships

STAB XXVI/WP.5	Ad hoc group
STAB XXVI/WP.5/Corr.1	Ad hoc group

.1 information to the master

STAB XXVI/7	German Democratic Republic
STAB XXVI/7/2	Australia
STAB XXVI/7/3	United States
STAB XXVI/7/4	USSR

.2 other matters

STAB XXVI/7/1	German Democratic Republic	STAB/90	Netherlands
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8 Subdivision, stability and load lines of special purpose ships

STAB XXVI/8	Secretariat	STAB XXV/6	USSR
STAB XXVI/8/1	Australia	DE XXI/WP.5	Ad hoc group
STAB XXVI/8/2	United States	DE XXIII/4	Ad hoc group
STAB XXVI/WP.2	United Kingdom		
STAB XXVI/WP.3	USSR		

9 Amendments to the 1974 SOLAS Convention

STAB XXVI/2/1	Secretariat	MSC XLII/3/5	India
STAB XXVI/3/1	United Kingdom		
STAB XXVI/9	Australia		

10 Analysis of intact stability casualty records

11 Matters related to the 1969 Tonnage Convention

STAB XXVI/11	Sweden	MSC XLIV/17	France
STAB XXVI/11/1	Secretariat	MSC XLIV/17/1	Sweden
STAB XXVI/11/2	IACS	MSC XLIV/17/1/Corr.1	Sweden
STAB XXVI/11/2/Corr.1	IACS	MSC XLIV/WP.10	Working
STAB XXVI/WP.6	Ad hoc group		group

12 Election of Chairman and Vice-Chairman for 1982

13 Any other matters

STAB XXVI/2/1	Secretariat	STAB/89	Poland
STAB XXVI/WP.1	Secretariat		

14 Report to the Maritime Safety Committee

STAB XXVI/WP.7	Secretariat
STAB XXVI/WP.7/Corr.1	Secretariat
STAB XXVI/WP.7/Add.1	Secretariat
STAB XXVI/14	Sub-Committee

ANNEX 2

PROPOSED AMENDMENTS TO THE 1966 LOAD LINE AND 1974 SOLAS CONVENTIONS

A. TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966

Regulation 22 - Scuppers, Inlets and Discharges

Paragraph (1)

Insert between "shall" and "be" in the 4th line the following:

" , except as provided in paragraph (2), "

New paragraph (2)

"Scuppers led through the shell from enclosed superstructures used for the carriage of cargo shall be permitted only where the edge of the freeboard deck is immersed when the ship heels more than 5 degrees either way. In other cases the drainage shall be led inboard in accordance with the requirements of the International Convention for the Safety of Life at Sea in force."

Paragraphs (2), (3), (4) and (5)

To be renumbered (3), (4), (5) and (6) and the reference in the present paragraph (3) to paragraph (1) to be amended to paragraph (2).

B. TO THE SAFETY OF LIFE AT SEA CONVENTION, 1974,
AS AMENDED (MSC XLV/4)

Chapter II-1 Regulation 21 - Bilge Pumping Arrangements

1 Passenger ships and cargo ships

Add new paragraph:

"1.6 Provision shall be made for the drainage of enclosed cargo spaces situated on the bulkhead deck of any ship provided that the Administration may permit the means of drainage to be dispensed with in any particular compartment of any ship or class of ship if it is satisfied that by reason of size or internal subdivision of those spaces the safety of the ship is not thereby impaired. Where the freeboard to the bulkhead deck is such that the deck edge is immersed when the ship heels more than 5 degrees either way the

required drainage shall be by means of a suitable number and size of scouppers discharging directly overboard fitted in accordance with the requirements of Regulation 1.7 in the case of a passenger ship and the requirements of the International Load Line Convention, in force, in the case of a cargo ship. Where the freeboard is such that the deck edge is immersed when the ship heels 5 degrees or less either way the drainage of the enclosed cargo spaces on the bulkhead deck shall be led to a suitable space, or spaces, of adequate capacity, having a high water level alarm and provided with suitable arrangements for discharge overboard."

In paragraph 2.9 the definition of "D" to be amended to read:

"D is the moulded depth of the ship to the bulkhead deck in metres provided that in a ship having an enclosed cargo space on the bulkhead deck which is internally drained in accordance with the requirements of 1.6 and which extends for the full length of the ship, D shall be measured to the next deck above the bulkhead deck. Where the enclosed cargo spaces cover a lesser length, D shall be taken as the moulded depth to the bulkhead deck plus lh/L where l and h are the aggregate length and height, respectively, of the enclosed cargo space in metres."

ANNEX 3

DRAFT MSC CIRCULAR

Drainage of Enclosed Cargo Spaces Situated on the Bulkhead Deck

At its [forty-sixth] session the Maritime Safety Committee agreed that at a suitable time the International Convention on Load Lines, 1966 and the International Convention for the Safety of Life at Sea, 1974 should be amended to make provision, under certain circumstances, for the internal drainage of the above-mentioned spaces.

This provision was considered necessary in view of the dangerous situation that could arise if loose water from leakage, fire-extinguishing water, etc., were present in such spaces except that Administrations may allow a dispensation where it was satisfied that the size or internal subdivision of the cargo space was such that the presence of this loose water would not endanger the ship.

The vehicle space situated on the bulkhead deck of a Ro/Ro ship which extends for a substantial proportion of the ship's length and which is not provided with internal subdivision is a typical example when the need for internal drainage has to be considered.

The amendments to both Conventions will allow the continued provision of the direct overboard drainage through suitable scuppers, valves, etc., in those cases where the freeboard to the bulkhead deck is such that the deck edge is not immersed unless the ship heels more than 5 degrees either way. In those cases where this deck edge immersion occurs at 5 degrees or less the resultant freeboard inhibits effective drainage directly overboard. Therefore drainage of the enclosed cargo space should be led internally to a suitable space, or spaces, of adequate capacity, having a high water level alarm and provided with suitable arrangements for discharge overboard.

In cases where drainage is arranged internally it will be necessary to ensure that:

- (a) the number, size and disposition of the scuppers are such as to prevent unreasonable accumulation of loose water;

- (b) the pumping capacity is adequate;
- (c) water contaminated with petrol or other dangerous substances is not led to machinery spaces or other spaces where sources of ignition may be present; and
- (d) where the vehicle space is protected by a CO₂ fire extinguishing system the deck scuppers are fitted with means to prevent the escape of the smothering gas.

Bearing in mind that casualty experience has demonstrated the need to amend both Conventions and having regard to the time required to implement these amendments the Committee invites Administrations to take note of the above with the view to implementing this provision for new ships as soon as possible.

ANNEX 4

DRAFT UNIFIED INTERPRETATIONS OF THE REGULATIONS
OF THE 1966 LOAD LINE CONVENTION
(Third set)

Security of Hatch Covers (Regulation 15(13))
(IACS interpretation LL.40/Rev.1)

This interpretation is not intended to be applied to existing ships.

Acceptable equivalent means to steel bars should consist of devices and materials which could provide strength equivalent to, and elasticity not greater than that, of steel.

Steel wire ropes should not be regarded as satisfactory equivalent means.

Care should be taken to ensure that tarpaulins are adequately protected from the possibility of damage arising from the use of securing devices which do not provide a flat bearing surface.

Protection of Openings in Raised Quarterdecks
(Regulations 18(2) and 23)*
(IACS Interpretation LL.46/Rev.1)

When applying Regulation 23, deckhouses situated on a raised quarterdeck may be treated as being second tier as far as the provision of deadlights and side scuttles and windows is concerned, provided the height of the raised quarterdeck is equal to or greater than the standard quarterdeck height.

Regarding the requirement to protect openings in superstructures (Reg.18(2)), it is considered that openings in the top of a deckhouse on a raised quarterdeck having a height equal to or greater than a standard height raised quarterdeck are to be provided with an acceptable means of closing but need not be protected by an efficient deckhouse or companion-way provided the height of the deckhouse is at least the height of a full superstructure.

* See also interpretation of Reg.18(2) and (3) (IACS Interpretation LL.3) in the "Supplement relating to the International Convention on Load Lines, 1966" which was issued in 1981.

Air Pipes (Regulation 20)

In cases where air pipes are led through the side of superstructures, it is recommended that the height of their openings be more than 2.3 metres above the summer load waterline.

Air Pipe Closing Devices (Regulation 20)
(IACS Interpretation LL.49)

This interpretation is not intended to be applied to existing ships.

The means of closing air pipes should be weathertight and of an automatic type if the openings of the air pipes to which the devices are fitted would be submerged at an angle of less than 40° (or any lesser angle which may be needed to suit stability requirements) when the ship is floating at its summer load line draught. Pressure vacuum valves (P.V. valves) may be accepted on tankers.

Wooden plugs and trailing canvas hoses should not be accepted as closing devices for air pipes in positions 1 and 2.

Freeing Ports (Regulation 24(3))
(IACS Interpretation LL.44)

The effectiveness of the freeing area in bulwarks required by Regulation 24(1) and (2) depends on free flow across the deck of a ship. Where there is no free flow due to the presence of a continuous trunk or hatchway coaming, the freeing area in bulwarks is calculated in accordance with Regulation 24(3).

The free flow area on deck is the net area of gaps between hatchways, and between hatchways and superstructures and deckhouses up to the actual height of the bulwark.

The freeing port area in bulwarks should be assessed in relation to the net flow area as follows:

- .1 If the free flow area is not less than the freeing area calculated from Regulation 24(3) as if the hatchway coamings were continuous, then the minimum freeing port area calculated from Regulation 24(1) and (2) should be deemed sufficient.
- .2 If the free flow area is equal to, or less than the area calculated from Regulation 24(1) and (2), minimum freeing area in the bulwarks should be determined from Regulation 24(3).

- .3 If the free flow area is smaller than calculated from Regulation 24(3) but greater than calculated from Regulation 24(1) and (2), the minimum freeing area in the bulwark should be determined from the following formula:

$$F = F_1 + F_2 - f_p \text{ (m}^2\text{)}$$

where F_1 is the minimum freeing area calculated from Regulation 24(1) and (2).

F_2 is the minimum freeing area calculated from Regulation 24(3).

f_p is the total net area of passages and gaps between hatch ends and superstructures or deckhouses up to the actual height of bulwark.

Guardrails (Regulation 25(2) and (3))
(IACS Interpretation LL.47/Rev.1)

Fixed, removable or hinged stanchions should be fitted about 1.5 m apart.

At least every third stanchion should be supported by a bracket or stay.

Wire ropes should be accepted in lieu of guard rails in special circumstances and then only in limited lengths.

Lengths of chain should be accepted in lieu of guard rails if they are fitted between two fixed stanchions and/or bulwarks.

The openings between courses should be in accordance with Regulation 25(3) of the Convention.

Wires should be made taut by means of turnbuckles.

Removable or hinged stanchions should be capable of being locked in the upright position.

Access Openings on Barges (Regulation 27(11))
(IACS Interpretation LL.42)

In applying Regulation 27(11) only those openings which are less than 1.5 m² in area should be considered as "small access openings".

Access plates should be considered as being equivalent to an intact deck on unmanned barges, provided they are secured by closely spaced bolts, are properly gasketed and for all practical purposes have equivalent structural integrity and tightness as an intact deck.

Trunks (Regulations 29, 31, 35, 36, 37 and 38)
(IACS Interpretation LL.41)

Where the length of a trunk, corrected for breadth and height as may be appropriate, can be included in the effective length used for calculating the correction for superstructures in accordance with Regulation 37, it should not be taken into account for calculating the total length (S) for the purpose of sheer correction according to Regulation 38(13).

The effective length of superstructures (E) which is used for calculating the freeboard correction according to Regulation 29 should be determined excluding the length of trunks.

The inclusion of a trunk in the calculation of freeboard need not prohibit the fitting of openings in the bulkheads of adjacent superstructures such as poops, bridges or forecastles provided there is no direct communication between the superstructure and the trunk.

The sides of a trunk included in the calculation of freeboard should be intact. Side scuttles of the non-opening type and bolted manhole covers may be allowed.

Minimum Bow Height (Regulation 39)
(IACS Interpretation LL.43)

When applying Regulation 39 to ships which have been assigned timber freeboards the bow height should be measured from the summer load waterline and not from the timber summer load waterline.

ANNEX 5GUIDELINES FOR THE PREPARATION OF FLOODING EFFECT INFORMATION
TO BE PROVIDED TO MASTERS OF DRY CARGO SHIPS

- 1 The purpose of the flooding effect information provided is to be helpful to the Master in exercising his judgement in cases of serious flooding. It is not meant to replace his judgement and should be as clear and concise as possible.
- 2 As a minimum, conditions to be investigated and included in the booklet should be flooding of the engine room, the foremost and aftermost cargo spaces, and the largest cargo space. The conditions to be investigated for cargo ships with unusual compartmentation, such as ships with longitudinal bulkheads (unsymmetrical flooding) or abnormally deep double bottom spaces, may require special consideration.
- 3 Flooding of these compartments is to be considered singly and should assume complete flooding of the cargo space, ignoring decks within the space. In general, double bottom spaces should not be considered flooded except possibly when abnormally deep.
- 4 For these investigations the ship should be considered as floating on a level keel at two separate draughts, i.e. the summer load line draught and a mid draught which equates approximately to the mean of the summer and light ship draughts. In these investigations the centre of gravity of the ship should be taken as follows:
 - .1 when sailing at the summer load draught the KG equating to the homogeneously loaded condition and
 - .2 when sailing at the mid-draught the KG should be at a realistic figure for that displacement.
- 5 When considering flooding of the engine room, a permeability of 0.85 should be used and for flooding of cargo spaces three different permeabilities, such as 0.60, 0.80 and 0.95 should be examined.
- 6 The results of these flooding investigations should be presented as flooding data sheets for each flooding condition in the manner shown at Appendix. The tabular method of presentation shown is satisfactory for conditions involving only trim and for heeled conditions where stability is not critical. Where stability is critical, presentation of the stability data in graphic form should be considered. Critical factors revealed data should include consideration of at least the following factors:

- minimum freeboard including points of possible down-flooding;
- residual stability;
- propeller immersion.

Countermeasures to be considered should include at least the following:

- plug vents or air escapes;
- close or open valves;
- close watertight doors;
- close watertight hatches;
- special measures such as jettisoning deck cargoes, counter flooding, and reduction of free surface where specifically applicable to the ship and conditions in question.

7 A set of notes to the Master should be included with the flooding effect data sheets and they should include:

.1 Emphasis concerning the general nature of the data presented.

The Master should be advised to use the information as a means of assessing the likely effects of flooding and the remedial measures that might be taken. The information is not to be considered as instruction concerning measures to be taken in any specific case of flooding;

.2 Prior to any flooding incident the Master should:

- .2.1 examine piping plans so that counter flooding possibilities are understood;
- .2.2 have ready access to tank loading circumstances so that appropriate counter flooding measures may be sensibly considered.

.3 After discovering that flooding has occurred the Master should arrange to:

- .3.1 close all doors and hatches
- .3.2 close all air pipes and ventilators
- .3.3 close all bulkhead openings
- .3.4 sound spaces adjacent to flooded compartment
- .3.5 activate bilge system throughout the ship

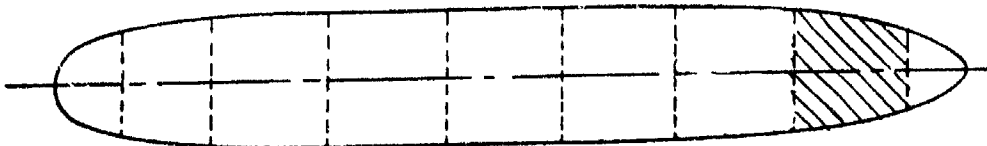
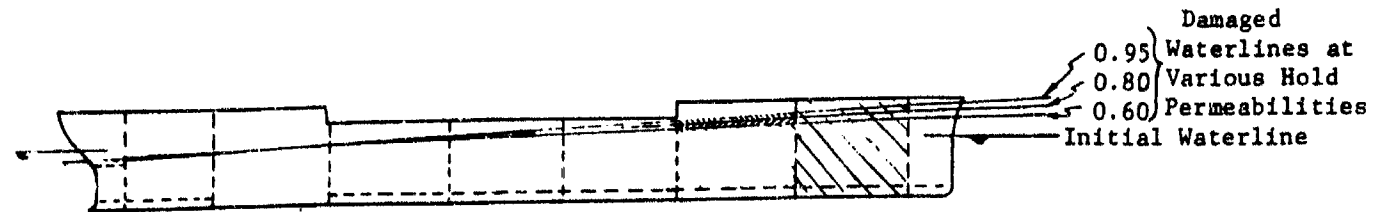
APPENDIX

SAMPLE FLOODING CONDITION

FULL LOAD - DEPARTURE 100% Consumables

Homogeneous Cargo

Condition (): HOLD #1 FLOODED



CONDITION FLOODED

	INITIAL	FLOODED		
PERMEABILITY		0.60	0.80	0.95
DRAUGHT FORWARD				
DRAUGHT AFT				
MEAN DRAUGHT				
MINIMUM FREEBOARD				
MINIMUM FREEBOARD AND LOCATION				
TRIM				
HEEL ANGLE				
METACENTRIC HEIGHT				
HEEL AT MAXIMUM RIGHTING ARM				
RANGE OF STABILITY				

CRITICAL FACTORS REVEALED - as applicable - suggested factors are listed in guidelines

COUNTERMEASURES - as applicable - suggested countermeasures are listed in guidelines

1.
2.
3.
4.

ANNEX 6REVISED TEXT OF SECTION 2 OF THE DRAFT CODE OF
SAFETY FOR SPECIAL PURPOSE SHIPS

2 Subdivision and damage stability

2.1 Subdivision and damage stability of ships mentioned in 1.3.4.1.1-1.3.4.1.4 of Chapter 1 should comply with the requirements specified in paragraph 2.4, after the side damage, the extent of which is given in paragraph 2.2, in the locations along the ship's length specified in 2.1.1, 2.1.2 and 2.1.3 for any condition of loading. The requirements of this section should govern the operating draught for any actual condition of loading. However in no case should such draught be greater than that corresponding to the minimum freeboard calculated in accordance with the International Convention on Load Lines, 1966.

2.1.1 A ship carrying not more than 50 special personnel should be capable of sustaining damage anywhere in her length except involving machinery space and transverse watertight bulkheads spaced at a distance not less than the longitudinal extent of side damage specified in 2.2.1. A special purpose ship of not more than 50 metres and carrying not more than 50 special personnel may be exempted from the subdivision requirements of this Code provided that it complies with the safety requirements which the Administration may deem appropriate for the area of operation.

2.1.2 A ship carrying more than 50 special personnel should be capable of sustaining damage anywhere in her length except involving transverse watertight bulkheads spaced at a distance not less than the longitudinal extent of side damage specified in 2.2.1. Ships of 100 metres in length and over should also be capable of sustaining damage of the specified longitudinal extent involving the forepeak bulkhead.

2.1.3 For ships carrying more than 200 special personnel the requirements of subdivision for passenger ships carrying equal number of passengers should be applied.

2.2 Subject to the provisions of this section the extent of damage should be assumed as follows:

2.2.1 Longitudinal extent: $\frac{1}{3}(L_s)^{2/3}$ or 14.5 metres, whichever is less.

2.2.2 Transverse extent: $B/5$ or 11.5 metres, whichever is less (measured inboard from the ship's side at right angles to the centre line at the level of the subdivision waterline).

2.2.3 Vertical extent: from the moulded line of the bottom shell plating at centre line upwards without limit.

2.2.4 If any damage of a lesser extent than specified in 2.2.1, 2.2.2 and/or 2.2.3 results in more severe conditions, such damage should be assumed.

2.2.5 If pipes, ducts or tunnels are situated within the assumed extent of damage, arrangements should be made so that progressive flooding cannot thereby extend to compartments other than those assumed to be flooded for each case of damage.

2.3 The requirements of 2.4 should be confirmed by calculations which take into consideration the design characteristics of the ship, the arrangements, configuration and contents of the damaged compartments; the distribution of dry cargo, the distribution, specific gravities and the free surface effect of liquids and should be based on the following provisions:

2.3.1 The permeability of spaces assumed to be damaged should be as follows:

Spaces	Permeabilities
Appropriated to cargo	by calculation, but not less than 0.60
Appropriated to stores	0.60
Occupied by accommodation	0.95
Occupied by machinery	0.85
Intended for voids	0.95

2.3.2 Wherever damage penetrates a tank, it should be assumed that the liquid therein, if any, is completely lost from that compartment and replaced by salt water up to the level of the final plane of equilibrium.

2.4 The ship may be regarded as surviving flooding if the following conditions are met:

2.4.1 The damage waterline before the equalization and/or in the process thereof should be below the lower edge of any opening through which progressive flooding may take place. Such openings include air and ventilation pipes and those which are closed by means of weathertight doors or hatch covers and may exclude those openings closed by means of watertight manhole covers and flush scuttles, small watertight cargo tank hatch covers which maintain the high integrity of the deck, remotely operated watertight sliding doors and sidescuttles of the non-opening type.

2.4.2 The angle of heel due to unsymmetrical flooding should not exceed 20° prior to equalization and after the equalization it should not be in excess of:

- 7° - in case of one compartment flooding; and
- 12° - in case of simultaneous flooding of two or more adjacent compartments.

2.4.3 The initial metacentric height of a ship in the final stage of flooding for the static equilibrium position in case of symmetrical flooding and for the upright position in case of unsymmetrical flooding as calculated by the constant displacement method should be not less than 0.05 m before appropriate measures to increase the metacentric height have been taken.

2.4.4 The righting lever curve at the final stage of flooding should have a minimum range of 20° beyond the position of equilibrium in association with a maximum righting lever of at least 100 mm within this range.

Unprotected openings should not be immersed within this range of residual stability except where the space concerned is included in damage stability calculations as a floodable space. Within this range the immersion of all openings listed in 2.4.1 and other openings capable of being closed watertight may be permitted.

2.4.5 The Administration should be satisfied that the damage stability and trim are sufficient during intermediate stages of flooding.

2.5 Unsymmetrical flooding is to be kept to a minimum consistent with efficient arrangements. The means adopted for equalization of the ship should, where practicable, be self-acting, but in any case where controls to cross-flooding fittings are provided they should be operable from above the bulkhead deck. All such fittings and controls should be acceptable to the Administration.

2.6 The requirements of Regulations 9 to 25 of Part B of Chapter II-1 of SOLAS 1974 as amended relating to passenger ships should be met.

ANNEX 7

AMENDMENTS PROPOSED TO CHAPTER II-1 AND NEW CHAPTER III
OF THE 1974 SOLAS CONVENTION TO FACILITATE NEW
REGULATION B II/1(d)(ii) and (iii)
OF DRAFT CHAPTER III

- 1 Replace Regulation 5(e) of Chapter II-1 by:
"(e) Special subdivision standards for ships engaged in short international voyages to allow the carriage of lifeboats and liferafts under Regulation III/B II/1(a)(ii)."
(i) and (ii) unaltered.
"(iii) The special provisions regarding permeability given in Regulation 4(d) shall be employed when calculating the floodable length curves.
(iv) Where the Administration is satisfied that, having regard to the nature and conditions of the intended voyages compliance with the other provisions of this Chapter and of Chapter II-2 is sufficient, the requirements of this paragraph need not be complied with."
- 2 Delete Regulation 1(d) of Chapter II-1.
- 3 Amend Regulation 4(d) of Chapter II-1 to read:
"(d) In the case of special subdivision required in Regulation 5(e), the uniform average permeability throughout the portion of the ship before (or abaft) the machinery space shall be 95 - 35 b/v
where:
....."
Rest of (d) unaltered.
- 4 Delete in sub-paragraphs (a)(ii) and (iii) of Regulation B II/1 of draft Chapter III (ISA XV/10):
"or an (its) approved equivalent".

ANNEX 8

PROPOSED INTERPRETATION OF AND GUIDANCE ON PROVISIONS
OF THE INTERNATIONAL CONVENTION ON TONNAGE
MEASUREMENT OF SHIPS, 1969

Article 3(2)(b)

1 In the case of major conversions (Article 3(2)(b)) the 1969 Tonnage Convention applies when the conversion is started on or after 18 July 1982.

In cases where several sister ships are to be substantially altered and the additional steel work is prefabricated before 18 July 1982 but work on the individual ship started on or after that date, the application of the 1969 Tonnage Convention in such cases should be left to individual Administrations who should bear in mind the circumstances of each case but at the same time resist any misuse of such prefabrication measures which might prevent the application of the 1969 Tonnage Convention to ships converted after 18 July 1982.

2 The term "substantial variation" in Article 3(2)(b) needs no interpretation as the continued use of tonnage values found by applying existing national measurement systems to determine the applicability of the Regulations of the SOLAS Convention to an altered existing ship until 1985, reduces or eliminates the urgency of developing a common interpretation. Reference is made to MSC/Circ.253 regarding existing ships which regularly alter load line and tonnage marks in order to change from higher to lower tonnage and vice versa.

Article 10(2)

The term "certificate" in Article 10(2) refers to the International Tonnage Certificate (1969) and existing ships need not be measured under the 1969 Tonnage Convention on change of flag but may be measured under national rules existing prior to the coming into force of the Convention.

Regulation 2(1)

The term "watertight" in this regulation should be decided by the Administration with the view that a special definition for tonnage purposes is not needed.

Regulation 2(3)

The term "amidships" as in Regulation 2(3) should be considered as the mid-point of the length as defined in Article 2(8) where the forward terminal of that length shall coincide with the fore side of the stem.

Regulation 2(4)

Regulation 2(4) is not ambiguous and no contradiction exists between the definition of closed spaces as being "bounded by the ship's hull, by fixed or movable partitions ..." and "... where the absence of a partition shall preclude a space from being included in the enclosed space".

Regulation 2(7)

Dual purpose spaces such as those used for both ballast and cargo should always be considered as cargo spaces.

Regulation 2(8)

Hatchways of sea-going barges on international voyages should be considered as closed by virtue of the requirements of the International Convention on Load Lines, 1966.

Regulations 3 and 4

Final tonnage figures as prescribed in Regulations 3 and 4 in the presentation of results of tonnage measurement should be given in rounded down figures without decimals.

Regulation 6(2)

Inaccessible masts, kingpost, air trunks and similar erections outside of and separated on all their sides from enclosed spaces and having cross-sectional areas not exceeding one square metre should not be measured; other similarly independent enclosed spaces of a volume not exceeding one cubic metre should not be measured.

Regulation 7

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 standard form, a model of which is shown in the Appendix, 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 standard form.

Regulation 7(2)

Administrations should decide on the degree of accuracy of the tonnage calculations.

APPENDIX

STANDARD FORM GIVING PARTICULARS
OF UNIFORM TONNAGE CALCULATION

GROSS TONNAGE

Item No.	Name of Space	Location	Length	Moulded Volume Enclosed Spaces (V)
	Underdeck Poop Bridge Forecastle Roundhouses Hatches, etc.			
		Total Volume (V_1)		
NET TONNAGE				
	No. 1 Hold No. 2 Hold, etc. No. 1 Tween Decks No. 2 Tween Decks, etc. Hatches, etc.			
		Total Volume (V_2)		