

SUB-COMMITTEE ON STABILITY AND  
LOAD LINES AND ON FISHING VESSELS  
SAFETY  
54th session  
Agenda item 17

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## REPORT TO THE MARITIME SAFETY COMMITTEE

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## 1 GENERAL

1.1 The Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF) held its fifty-fourth session from 16 to 20 January 2012 under the chairmanship of Mr. Z. Szozda (Poland). The Vice-Chairman, Mr. K. Hunter (United Kingdom), chaired the meeting from 17 to 20 January 2012 as acting Chairman, in accordance with rule 17 of the Rules of Procedures of the Committee, due to the unavoidable absence of the Chairman of the Sub-Committee.

1.2 The session was attended by delegations from the following Member States:

ALGERIA	KIRIBATI
ARGENTINA	LATVIA
AUSTRALIA	LIBERIA
BAHAMAS	LIBYA
BELGIUM	MALAYSIA
BELIZE	MALTA
BRAZIL	MARSHALL ISLANDS
CANADA	MEXICO
CHILE	MOROCCO
CHINA	NETHERLANDS
COLOMBIA	NIGERIA
COOK ISLANDS	NORWAY
CROATIA	PANAMA
CUBA	PERU
CYPRUS	PHILIPPINES
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	POLAND
DENMARK	REPUBLIC OF KOREA
EGYPT	RUSSIAN FEDERATION
FINLAND	SAINT KITTS AND NEVIS
FRANCE	SINGAPORE
GERMANY	SOUTH AFRICA
GREECE	SPAIN
ICELAND	SWEDEN
INDIA	SYRIAN ARAB REPUBLIC
INDONESIA	TURKEY
IRAN (ISLAMIC REPUBLIC OF)	TUVALU
IRAQ	UKRAINE
IRELAND	UNITED KINGDOM
ISRAEL	UNITED STATES
ITALY	VANUATU
JAPAN	VENEZUELA (BOLIVARIAN REPUBLIC OF)

and the following Associate Member of IMO:

HONG KONG, CHINA

1.3 The session was also attended by representatives from the following United Nations specialized agency:

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

by observers from the following intergovernmental organization:

EUROPEAN COMMISSION (EC)

and by observers from the following non-governmental organizations:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)  
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)  
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)  
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)  
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)  
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)  
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS  
(INTERTANKO)  
INTERNATIONAL GROUP OF P&I ASSOCIATIONS (P&I Clubs)  
SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL OPERATORS  
LIMITED (SIGTTO)  
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)  
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS  
(INTERCARGO)  
INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)  
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)  
INTERFERRY  
INTERNATIONAL TOWING TANK CONFERENCE (ITTC)  
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)  
THE NAUTICAL INSTITUTE (NI)  
SUPERYACHT BUILDERS ASSOCIATION (SYBAss)

### **Opening address**

1.4 The Secretary-General welcomed participants and informed the Sub-Committee of his vision of the direction of the Organization following his inauguration as the new holder of the office. With regard to the meeting, he mentioned in particular the development of second generation intact stability criteria (agenda item 3), the various outputs concerning the revision of SOLAS chapter II-1 (agenda items 4, 6, 7, 8 and 13) and the verification of damage stability requirements for tankers (agenda item 5), and wished the Sub-Committee all success in its deliberations.

### ***Expression of condolence***

1.5 The Secretary-General also informed the Sub-Committee of the sudden and unexpected death of a valued colleague who regularly and actively participated in all IMO meetings for many years, Mr. Norman Lemley, pointing out that he had been well known by all at IMO, first as a representative of the United States and later, following his retirement, supporting the Administration of Dominica with his vast knowledge and experience, and that his professionalism and technical knowledge, combined with a great sense of humour and integrity, had been widely recognized and acknowledged by his fellow delegates and the Secretariat alike. The Secretary-General asked the delegations of the United States and of Dominica to convey deep sympathy and heartfelt condolences to Norman's family, friends and colleagues on behalf of the IMO membership, the Secretariat and on his own behalf.

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### **Costa Concordia casualty**

1.6 The Secretary-General drew the Sub-Committee's attention to the news of the casualty to the cruise liner **Costa Concordia**, which ran aground off the coast of Tuscany in Italy on 13 January 2012. He informed the Sub-Committee that the strong rescue team of the Italian Coast Guard had rescued more than 4,000 passengers and crew from the listing ship; that six persons were confirmed dead and 17 still missing; and that the Italian Coast Guard was still searching for survivors with its divers' teams. In this context, the Secretary-General expressed his sincere condolences and sympathy to the victims of the accident and to their families and appreciated the work of the Italian Coast Guard with their rescue operation over the night of the accident and their continued effort, employing eight patrol boats, two tugs, five helicopters and three divers' teams, resulting in the successful rescue of the highest number of people in the history of the Coast Guard. He expressed praise for the Commandant of the Coast Guard, Admiral Marco Brusco, and asked the Italian delegation to convey this message.

The Secretary-General, stating that the causes of this accident were not yet established, that the outcome of the casualty investigation must be awaited and that there should be no pre-judgement or speculation at this stage, urged the flag State Administration to carry out the casualty investigation covering all aspects of this accident as soon as possible and to provide the findings to IMO, in accordance with the provisions of SOLAS.

In this connection, the Secretary-General recalled that, in the centenary year of the **Titanic**, the accident had once again reminded everyone of the dangers of maritime activities at sea, that each accident was different and that certainly the **Costa Concordia** was different from the **Titanic** in many aspects, such as location of the accident and availability of rescue services, but that a number of similarities existed, such as the breach of the ship's hull and immediate intake of water causing capsizing and the evacuation of large numbers of passengers and crew. He stated that, although most of the passengers and crew had escaped and were rescued, as the authoritative global safety standard setting body, IMO must not take this accident lightly; should seriously consider any lessons to be learnt; and re-examine IMO regulations on safety of large cruise passenger ships in the light of the findings of the casualty investigation.

The Secretary-General expressed his intention to seriously discuss with the Chairman of the Maritime Safety Committee how to proceed with the results of the casualty investigation, under the current mechanisms of IMO, and also to discuss with the Chairman of the Council any actions required in the wake of the accident. He also stated that it would be appreciated if the Sub-Committee could give some preliminary consideration to the circumstances of the accident, pending receipt of the casualty investigation report.

### **Statement by the delegation of Italy**

1.7 Following the remarks of the Secretary-General, the delegation of Italy informed the Sub-Committee that in the accident, which occurred on 13 January 2012, at around 22.00 hours local time, the cruise ship **Costa Concordia**, carrying 4,229 passengers and crew, ran aground on a reef off the Giglio Island, in the Tyrrhenian Sea, resulting in the death of at least five of the people on board (four passengers and one crew member), and 15 missing people (nine passengers and six crew members) had been reported. On behalf of the Italian Government, the delegation of Italy expressed the deepest condolences to the families of the victims and the solidarity to all passengers and crew who were on board. They advised that the Italian Coast Guard and other Italian military and civil authorities had worked incessantly at the rescue, deploying assets such as eight patrol boats, two tugs, five helicopters, three divers' teams and two ferries which were redirected on

scene and that during daylight fire-fighting speleologists were inspecting the emerged spaces of the ship and divers were inspecting the submerged parts. In this respect, the complexity of inspecting such empty huge spaces in a listing ship should be understood. Eighteen people were rescued by Italian Coast Guard helicopters, whereby the presence of children and disabled people made the rescue operation even more difficult. In this context, the delegation stated that 2,400 tonnes of bunker oil was on board, but that no pollution had been detected and that the unloading of the oil would be carried out as soon as possible; and that, as a precautionary measure, four anti-pollution boats and 1,300 metres anti-pollution booms had been deployed. Additionally, the delegation informed that a casualty investigation was being carried out by the Italian Coast Guard, the result of which would be submitted to IMO as soon as available. In this respect, the Italian delegation underlined that the black box had already been seized. Finally, the delegation pointed out that this operation had been considered to be one of the most important rescue operations at sea with regard to the number of passengers involved, with the highest percentage of the number of rescued people.

### **Statement by the observer from CLIA**

1.8 The observer from CLIA stated that CLIA and its members were deeply saddened by the tragedy of the **Costa Concordia** incident and that their thoughts and prayers were with the families of those deceased, those missing and all the victims of this event. The observer thanked the Italian Coast Guard, the local emergency services and the entire Italian Government, as well as operators of other ships and all others that assisted in the response, for their diligence and dedication in the rescue efforts. The observer assured the Secretary-General and all IMO Members of their continued commitment to ensuring the highest level of safety for all passengers and crew.

### **Chairman's remarks**

1.9 The Chairman, in thanking the Secretary-General, stated that his words of encouragement as well as his advice and requests would be given every consideration and that his helpful guidance on the subjects to be considered by the Sub-Committee was very much appreciated, in particular concerning the further work on the development of the second generation intact stability criteria, the comprehensive work related to subdivision and damage stability and the verification of damage stability requirements for tankers. He also expressed, on his own and on the Sub-Committee's behalf, his deep sympathy and condolences to the victims of the **Costa Concordia** casualty.

### **Adoption of the agenda**

1.10 The Sub-Committee adopted the agenda (SLF 54/1) and agreed, in general, to be guided in its work by the annotations to the provisional agenda contained in document SLF 54/1/1. The agenda, as adopted, with the list of documents considered under each agenda item, is set out in document SLF 54/INF.18.

## **2 DECISIONS OF OTHER IMO BODIES**

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by FSI 19, MSC 89 and DSC 16, as reported in documents SLF 54/2 and SLF 54/2/1 by the Secretariat, and took them into account in its deliberations when dealing with the relevant agenda items.

2.2 With regard to document SLF 54/2/2 (IACS) on the possible effect of excess water accumulated as a result of fire-fighting on intact stability and freeing-area requirements, the Sub-Committee decided to consider the matter under the agenda item "Any other business" (see paragraphs 16.8 to 16.10).

### **Draft Agreement on the implementation of the provisions of the 1993 Torremolinos Protocol**

2.3 The Sub-Committee noted that MSC 89 had unanimously agreed to proceed with the draft Agreement on the implementation of the provisions of the 1993 Torremolinos Protocol relating to the 1977 Torremolinos Convention on the Safety of Fishing Vessels, as prepared by SLF 53. With regard to the entry-into-force criteria, the Committee agreed to retain the square brackets in paragraphs (1) and (3) of article 4 of the draft Agreement, for a final decision on this matter at the time of its adoption. Subsequently, MSC 89 forwarded the three options for the adoption of the draft Agreement to C 106, for consideration and decision as appropriate.

2.4 In this context, C 106, having considered the three options proposed by MSC 89 regarding the adoption of the aforementioned Agreement, decided to pursue the matter by means of a Diplomatic Conference to be convened from 9 to 11 October 2012 in Cape Town, South Africa.

### **Outcome of A 27**

2.5 The Sub-Committee noted that the twenty-seventh regular session of the Assembly had adopted the *Strategic Plan for the Organization (for the six-year period 2012 to 2017)* (resolution A.1037(27)) and the *High-level Action Plan of the Organization and Priorities for the 2012-2013 Biennium* (resolution A.1038(27)) (see also paragraph 14.1).

## **3 DEVELOPMENT OF SECOND GENERATION INTACT STABILITY CRITERIA**

### **General**

3.1 The Sub-Committee recalled that SLF 53 re-established the Correspondence Group on Intact Stability (IS) (SLF 53/19, paragraph 3.34) to continue to work on the items contained in the updated plan of action for matters related to the second generation intact stability criteria (SLF 53/WP.4, annex 4).

### **Report (part 2) of the working group established at SLF 53**

3.2 The Sub-Committee considered part 2 of the report of the Working Group on Intact Stability established at SLF 53 (SLF 54/3/1) and, having approved it in general, noted that the group's report had been considered in detail by the IS Correspondence Group (SLF 54/3) established at SLF 53.

### **Report of the correspondence group and related submissions**

3.3 The Sub-Committee considered the report of the correspondence group (SLF 54/3, SLF 54/INF.12 and SLF 54/INF.13) and, having approved it in general, noted that the group had progressed the work on the second generation intact stability criteria considerably; however, a vast amount of work still remained.

3.4 In the context of the above, the Sub-Committee considered the following documents:

- .1 SLF 54/3/2 (China), providing an analysis of the effects on parametric roll by environmental and loading conditions through the numerical simulation of three containerships and one bulk carrier. The requirements of criteria of parametric rolling and excessive accelerations for ship motion prediction under wave conditions were considered to be almost identical resulting in conclusion that a common numerical model could be used to check these two Level 2 criteria (parametric rolling and excessive accelerations). Additionally, a proposal was made to adopt a draft model as a base for developing a common ship motion prediction model of these two criteria;
- .2 SLF 54/3/3 (United States), providing an overview of work performed to support the development of second generation intact stability criteria, which included a description of four stability failure modes, identified the position of the United States on the criteria for these failure modes, and discussed views on direct stability assessment. Proposals for Level 1 and Level 2 vulnerability criteria for three of the four stability failure modes, i.e. parametric roll, pure loss of stability and surf-riding/broaching were developed, and the draft criteria tested on a sample population of 17 vessels;
- .3 SLF 54/3/4 (China), describing the necessity, and recommending the development of a Level 1 criterion for excessive accelerations through the verification and analysis of nine containerships;
- .4 SLF 54/3/5 (China), presenting the outcome of the sample verification for five ro-ro passenger ships, seven containerships, five oil tankers and five bulk carriers, according to draft Level 1 criteria on parametric roll and pure loss of stability. The studies indicated that parametric roll and pure loss of stability had not yet happened on board the ships. It was found that it would be necessary to amend the draft Level 1 criteria proposed in annex 2 to document SLF 53/INF.10 and that the condition of waves considered for the above criteria seem not to be applicable to large and very large ships;
- .5 SLF 54/3/6 (Sweden), presenting an evaluation of Ikeda's simplified method for prediction of roll damping, which is proposed to be applied in the Level 2 vulnerability criteria for parametric roll. Roll damping derived from model and full-scale experiments with Panamax Pure Car Truck Carriers (PCTCs) were presented and compared with roll damping predicted with Ikeda's simplified method;
- .6 SLF 54/3/7 (Germany), recommending the development of procedures for each proposed criterion in order to improve understanding and acceptability of the criteria, as it has been demonstrated, through the workshop organized by Germany in 2011, directly after SLF 53, and several discussions with the industry, that there is no general understanding of the criteria;
- .7 SLF 54/3/8 (SYBAss), providing additional information on the Level 1 assessments of parametric roll by methods proposed by Japan, Italy and SYBAss (SLF 54/INF.13, annex 15) for three ships from the sample of superyachts analysed (SLF 54/INF.13, annex 14);



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- .8 SLF 54/INF.4 (United States), providing the technical basis for document SLF 54/3/3 and an overview of research to develop draft vulnerability criteria that reflect the physical phenomena of the four stability failure modes of parametric roll, pure loss of stability, surf-riding/broaching and dead ship condition; calculations on 17 sample ships to test the draft criteria were performed; and initial information on methods for direct stability assessment prepared. The report also provided the technical basis for proposed vulnerability criteria;
  - .9 SLF 54/INF.6 (Germany), providing results of discussions on the stability merits of ballast condition in conjunction with higher GM values, prepared by the German Federal Bureau of Maritime Casualty Investigation, supported by the University of Hamburg, after consideration of the incident on MV **Pacific Adventurer**;
  - .10 SLF 54/INF.7 (Germany), providing a background study on seakeeping behaviour of containerships in ballast condition that may be used for validation and verification of the draft second generation intact stability criteria, with the following basic findings: such intact stability problems may occur on any containership; may be observed regularly in ballast condition or nearby loading conditions; and it may occur more frequently at lower speeds. Incidents of this kind will result in strong roll motions based on large stability (GM) that are unpredictable by the ship's command;
  - .11 SLF 54/INF.9 (Germany), providing background on the application of the Revised Guidance to the master for avoiding dangerous situations in adverse weather and sea conditions (MSC.1/Circ.1228) that may be used when attempting to achieve validation and verification of the draft second generation intact stability criteria; and
  - .12 SLF 54/INF.10 (Germany), presenting the results of further investigations conducted by the German Federal Bureau of Maritime Casualty Investigation, emphasizing the need for a discussion of hazards associated with excessive stability, within the context of the work on the development of second generation intact stability criteria.

3.5 Following consideration of the above documents, the Sub-Committee noted, in particular, the following views:

- .1 the draft Level 2 proposed in document SLF 54/3/2 (see paragraph 3.4.1) were very complicated and the assessment required considerable time and effort;
- .2 there was strong support for the principles contained in document SLF 54/3/7 (see paragraph 3.4.6), as there is a clear need to improve understanding and acceptability of the criteria;
- .3 the draft Level 1 contained in document SLF 54/3/8 (see paragraph 3.4.7) should be considered only for ship types that have been validated;

- .4 the criterion for excessive acceleration should be as simple as possible, and should take into account the transversal components of gravity and synchronous rolling in for example beam seas, as a cause for generating lateral accelerations. In this context, the calculation method for this criterion should also be improved;
- .5 the weather criterion contained in the 2008 IS Code should be reconsidered, as it is almost 50 years old;
- .6 there is still a lack of sample ships (e.g. OSV) on the development of the criteria; and
- .7 the draft Level 1 does not seem applicable to very large ships; therefore, the use of this criterion should be restricted. In this context, further consideration is necessary.

## **Outcome of DSC 16**

### ***Measures to improve safe transport of solid bulk cargoes***

3.6 The Sub-Committee noted (SLF 54/2/1) that DSC 16, having considered the report of the Working Group on Amendments to the IMSBC Code (DSC 16/WP.3) with regard to the issue of developing alternative requirements for the prevention of accidents due to liquefaction through ship design, had invited SLF 54 to consider the above matter under its agenda item on intact stability, taking into account that liquefaction may lead to the sinking of ships due to a loss of positive stability, and advise MSC 90 accordingly on how best to proceed with this issue.

3.7 In considering the matter, the Sub-Committee, having noted views expressed that there was insufficient information to proceed with the matter and that it would be premature to start considering the issue, and also taking into account the heavy workload of the IS Working Group, agreed to wait for the outcome of DE 56, the DSC Sub-Committee's Editorial and Technical Group on the IMSBC Code (E&T 17) and DSC 17 and not to proceed with the work at this time. The Secretariat was requested to inform MSC 90 and DSC 17 accordingly.

### ***Guidance for ships carrying timber deck cargoes regarding increased weight of ice***

3.8 The Sub-Committee also noted (SLF 54/2/1) that DSC 16, having considered the report of the Working Group on Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011 (DSC 16/WP.5), in particular regarding proposals to use the calculation method used for fishing vessels to accommodate the increased weight of ice, recognizing the difference between large ships carrying timber deck cargoes and relatively small fishing vessels, had invited the Sub-Committee to develop guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code (part B, section 6.2).

3.9 In this connection, the Sub-Committee had for its consideration document SLF 54/16/1 (IACS), discussing aspects of any guidance for ships carrying timber deck cargoes regarding the increase in weight due to icing in accordance with section 6.2 of part B of the 2008 IS Code, and agreed to refer the matter to the IS Working Group for consideration and possible inclusion in the terms of reference for the IS Correspondence Group.

### **Review of the action plan for intact stability work**

3.10 The Sub-Committee further instructed the IS Working Group to review the plan of action for intact stability work (SLF 53/WP.4, annex 4) and prepare a revised plan, identifying the priorities, time frames and objectives for the work to be accomplished.

### **Establishment of the IS Working Group**

3.11 The Sub-Committee established the Intact Stability Working Group and instructed it, taking into account comments made and decisions taken in plenary, to:

- .1 further develop the second generation intact stability criteria on the basis of the report of the correspondence group (SLF 54/3, SLF 54/INF.12 and SLF 54/INF.13) and the second part of the report of the working group established at SLF 53 (SLF 54/3/1), taking into account documents SLF 54/3/2, SLF 54/3/3, SLF 54/3/4, SLF 54/3/5, SLF 54/3/6, SLF 54/3/7, SLF 54/3/8, SLF 54/INF.4, SLF 54/INF.6, SLF 54/INF.7, SLF 54/INF.9, SLF 54/INF.10 and SLF 53/INF.3;
- .2 consider the request of DSC 16 to develop guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code (part B, section 6.2), taking into account the relevant parts of documents SLF 54/2/1 and SLF 54/16/1, and advise the Sub-Committee on how best to proceed;
- .3 review the plan of action contained in annex 4 to document SLF 53/WP.4, taking into account the progress made during the session, and prepare a revised plan, identifying the priorities, time frames and objectives for the work to be accomplished;
- .4 consider whether it is necessary to re-establish a correspondence group and, if so, prepare terms of reference for consideration by the Sub-Committee; and
- .5 submit a written report (part 1) to plenary, and continue working through the week and submit part 2 of the report to SLF 55, as soon as possible after this session, so that it can be taken into account by the correspondence group, if established.

### **Report of the working group**

3.12 Having considered the report of the working group (part 1) (SLF 54/WP.3), the Sub-Committee approved it in general and took action as outlined hereunder.

### ***Second generation intact stability criteria***

#### *Draft vulnerability criteria*

3.13 The Sub-Committee noted the updated version (SLF 54/WP.3, annex 1) of the draft vulnerability criteria, Levels 1 and 2, for the failure modes righting level variation (pure loss of stability, parametric roll), resonant roll in dead ship condition, and broaching and manoeuvring-related phenomena (surf-riding) prepared by the group.

*Interim Guidelines for alternative assessment of the weather criterion*

3.14 The Sub-Committee endorsed the view of the group that a revision of the Interim Guidelines for alternative assessment of the weather criterion (MSC.1/Circ.1200) is necessary and is an integral part of the work under this output. In this context, the Sub-Committee invited Member Governments and international organizations to submit proposals on the revision of the Interim Guidelines to SLF 55.

*Draft vulnerability criteria for the failure mode of excessive accelerations*

3.15 The Sub-Committee agreed, in principle, to the updated version of the draft vulnerability criteria, Levels 1 and 2, for the failure mode of excessive accelerations (SLF 54/WP.3, annex 2).

*Standardized presentation of vulnerability criteria*

3.16 With regard to the standardized presentation of vulnerability criteria, the Sub-Committee endorsed the recommendation of the group regarding a standard format to improve understanding and acceptability of the criteria by developing application procedures.

*Application of the second generation intact stability criteria*

3.17 Concerning the application of the second generation intact stability criteria, the Sub-Committee agreed with the views of the group regarding the possible benefit of providing the option for the application of countermeasures that could be taken if, on one hand, the vulnerability criteria are not satisfied and, on the other hand, progressing to a higher level is not practical.

*Summary of the proposals considered for the stability failure modes*

3.18 The Sub-Committee noted the updated table prepared by the group (SLF 54/WP.3, annex 3) containing the summary of the proposals considered for the stability failure modes. In this context, the Sub-Committee encouraged all delegations to submit additional sample ships and ship types, including available experimental data, for more comprehensive sample testing and validation of the draft vulnerability criteria and direct stability assessment methods.

***Guidance for ships carrying timber deck cargoes regarding increased weight of ice***

3.19 The Sub-Committee endorsed the decision of the group to refer the issue of guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code (part B, section 6.2) to the IS Correspondence Group and included the matter in its terms of reference (see paragraph 3.21).

***Review of the plan of action***

3.20 The Sub-Committee agreed to the revised plan of action for this output (SLF 54/WP.3, annex 4) prepared by the group based on the progress made during the session.

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## Establishment of a correspondence group

3.21 The Sub-Committee, taking into account the progress made at this session, agreed to re-establish the Correspondence Group on Intact Stability, under the coordination of Japan\*, and instructed it to (see also paragraphs 16.3 and 16.9):

- .1 continue to work on the items contained in the updated plan of action for the second generation intact stability criteria, as set out in annex 3 to document SLF 54/WP.3, taking into account documents SLF 54/3, SLF 54/INF.12 and SLF 54/INF.13 and the second part of the report of the working group established at SLF 53 (SLF 54/3/1), also taking into account documents SLF 54/3/2, SLF 54/3/3, SLF 54/3/4, SLF 54/3/5, SLF 54/3/6, SLF 54/3/7, SLF 54/3/8, SLF 54/INF.4, SLF 54/INF.6, SLF 54/INF.7, SLF 54/INF.9, SLF 54/INF.10 and SLF 53/INF.3, as well as relevant documents from previous sessions;
- .2 verify and further refine draft vulnerability criteria (Levels 1 and 2) for each mode as listed in annex 3 to document SLF 54/WP.3 and, in doing so, expand the types and the number of ships for verification and validation;
- .3 review the framework for new generation intact stability criteria development and terminology and revise it, as appropriate;
- .4 develop, verify and further refine direct stability assessment procedures for the stability failure modes identified in annex 3 to document SLF 54/WP.3;
- .5 consider developing guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code (part B, section 6.2), taking into account the relevant parts of documents SLF 54/2/1 and SLF 54/16/1, and also bearing in mind that the sinking of a ship may be due to a loss of positive stability caused by excessive ice accretion; and
- .6 submit a report to SLF 55.

## 4 DEVELOPMENT OF GUIDELINES ON SAFE RETURN TO PORT FOR PASSENGER SHIPS

### General

4.1 The Sub-Committee recalled that SLF 53, having considered documents SLF 53/INF.2 and Corr.1 (Finland), providing intermediate information on the ongoing research project FLOODSTAND (Integrated Flooding Control and Standard for Stability and

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Crises Management), and SLF 53/INF.6 (Japan), containing intermediate information on ongoing research with regard to the application of computational fluid dynamics (CFD) as an alternative to the evaluation method for cross-flooding arrangements, noted that there may be a need for a revision of the Recommendation on a standard method for evaluating cross-flooding arrangements (resolution MSC.245(83)) (hereafter referred to as "the Recommendation"), after the final results of the above research has been made available, and invited the Committee to extend the target completion year for this output to 2013.

4.2 The Sub-Committee also recalled that SLF 53, in light of the above decision, invited Member Governments and international organizations to submit documents on the matter to this session.

4.3 The Sub-Committee noted that MSC 89 referred document MSC 89/9/4 (Germany), proposing to reopen the discussion on safe return to port and reiterating that the approval process of any investigation as well as the anticipated accuracy of damage stability modules needed to be further specified, to SLF 54 for consideration under this output (renamed by MSC 89 with the current title), with a view to advising MSC 90 accordingly.

### **Recommendation on a standard method for evaluating cross-flooding arrangements**

4.4 With regard to matters related to a standard method for evaluating cross-flooding arrangements, the Sub-Committee had for its consideration the following documents:

- .1 SLF 54/4 (Finland), containing information on model tests and CFD analysis of cross-flooding ducts, which revealed that the recommended method in the Recommendation may result in a significant underestimation of the cross-flooding time, and consequently proposing relevant changes to the Recommendation;
- .2 SLF 54/4/2 (Japan), containing findings, based on preliminary research (SLF 53/INF.6), on the verification of CFD and the standard method for evaluation of cross-flooding arrangements in the Recommendation, and proposing a revision of the Recommendation based on the findings;
- .3 SLF 54/INF.8 (Finland), providing a summary of full-scale tests of several non-watertight door types, such as various different A-class fire doors and B-class joiner doors, as well as cold room doors. Both single and double leaf as well as sliding doors were tested, whereby most of the tested door types were subjected to water pressure on both sides. The results provide further information on the structural deformation under floodwater pressure; and
- .4 SLF 54/INF.14 (Japan), presenting detailed information on the CFD tool, as applied to the Recommendation.

4.5 Following a general discussion, the Sub-Committee agreed to refer the above documents to the SDS Working Group, established under agenda item 6 (Revision of the damage stability regulations for ro-ro passenger ships), for further consideration of a revision of the Recommendation on a standard method for evaluating cross-flooding arrangements (resolution MSC.245(83)), and to prepare terms of reference for a correspondence group on the matter (see paragraph 4.11).

### **Safe return to port**

4.6 The Sub-Committee had for its consideration document SLF 54/4/1 (IACS), providing comments on document MSC 89/9/4 (Germany) (see paragraph 4.3). IACS was of the view that the required scope of the damage module should be clearly established and defined; for example, the module should define the watertight compartments allowing the user to input which compartments are found with flooded water and/or which watertight boundaries have been damaged/breached. The input should be able to take full account of the actual disposition (open/closed) of all potential flooding points. However, IACS was of the opinion that the "minimum requirements" need only address the output required by these modules. Additionally, in its view, the Guidelines for the approval of stability instruments (MSC.1/Circ.1229), which already cover the required accuracy for damage stability calculations, should also be acceptable for "safe return to port" calculations, while strength assessments, which are likely to be of a technically complex nature, should be handled by a shore-based system.

### **Instructions to the SDS Working Group**

4.7 After an in-depth discussion, the Sub-Committee instructed the SDS Working Group to further consider the approval of damage stability modules for safe return to port, if time permitted, taking into account documents SLF 54/4/1 and MSC 89/9/4, and to prepare terms of reference for a correspondence group on the matter (see also paragraph 6.6).

### **Report of the SDS Working Group**

4.8 Having considered the part of the report of the SDS Working Group (SLF 54/WP.5) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

#### ***Safe return to port***

4.9 The Sub-Committee noted that the group had briefly considered the issue of damage stability modules for safe return to port and had agreed to include this matter in part 2 of the working group's report, which will be submitted to SLF 55 for consideration by the Sub-Committee. The Sub-Committee also agreed to include the issue in the terms of reference for the SDS Correspondence Group (see paragraph 4.11).

#### ***Recommendation on a standard method for evaluating cross-flooding arrangements***

4.10 The Sub-Committee agreed with the relevant terms of reference for the SDS Correspondence Group developed by the group (see paragraph 4.11).

## Establishment of the SDS Correspondence Group

4.11 The Sub-Committee agreed to re-establish the SDS Correspondence Group, under the coordination of the United Kingdom\*, and instructed the group, with regard to this agenda item, to (see also paragraphs 6.9 and 8.15):

- .1 finalize draft amendments to the Recommendation on a standard method for evaluating cross-flooding arrangements (resolution MSC.245(83)), taking into account documents SLF 54/4, SLF 54/4/1, SLF 54/4/2, SLF 54/INF.14, SLF 53/INF.2 and SLF 53/INF.6, and, in particular, to:
  - .1 review equations 2.4 and 2.5 of the annex to the Recommendation;
  - .2 review figures 13 and 14 of appendix 2 to the annex to the Recommendation; and
  - .3 consider the changes to the diagrams as set out in document SLF 53/WP.6, annex 5 (pages 73 to 76 of the English version);
- .2 further consider the development of guidelines for the approval of damage stability modules for safe return to port, taking into account part 2 of the report of the SDS Working Group at SLF 54; and
- .3 submit a report to SLF 55.

## 5 DEVELOPMENT OF GUIDELINES FOR VERIFICATION OF DAMAGE STABILITY REQUIREMENTS FOR TANKERS

### General

5.1 The Sub-Committee recalled that SLF 53 had established a Correspondence Group on Guidelines for Verification of Damage Stability Requirements for Tankers with terms of reference as set out in paragraph 8.5 of document SLF 53/19, and instructed the group to submit a report to this session.

### Report of the correspondence group and related submissions

5.2 The Sub-Committee considered the report of the correspondence group (SLF 54/5), in particular the list of existing IMO instruments and other relevant references relating to the issue of verification of damage stability requirements (annex 1); the proposed draft amendments to related mandatory instruments (annex 2); the draft Guidelines for verification of damage stability requirements for tankers (annex 3) (hereafter called "the Guidelines"); the alternative text for part 2 (Operational guidelines) of the draft Guidelines (annex 4); and the

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considerations in respect of loading "in accordance with" an approved loading condition (annex 5).

5.3 In this connection, the Sub-Committee also had for its consideration the following documents:

- .1 SLF 54/5/1 (China), providing comments on the verification of damage stability corresponding to the tropical load line for tankers with assigned tropical freeboard proposed in document SLF 53/8/3 (IACS), where it was noted that the requirements on damage stability corresponding to the tropical waterline were inconsistent in various IMO instruments regarding tropical load lines assigned to tankers;
- .2 SLF 54/5/2 (China), generalizing the damage stability calculation results for seven tankers and analysing the effects of the filling of an individual cargo/slop/ballast tank, the overall KG, the mean draught and trim on the damage stability of tankers. Additionally, a detailed proposal on the maximum permissible deviation is presented for the draft Guidelines (see paragraph 7 of the document);
- .3 SLF 54/5/3 (Germany), providing comments on the report of the correspondence group and specifically proposing that the volume of the draft Guidelines be downsized for practical use, as they contain extracts of relevant IMO instruments; and
- .4 SLF 54/5/4 (OCIMF, INTERTANKO), providing comments on document SLF 54/5/2 regarding proposals on the definition of the expression "loading in accordance with approved loading condition" and pointing out that the analysis contained in said document was carried out on only seven ships, one of which was an LNG ship, which in the co-sponsors' view was not a representative sample of the current fleet of tankers over 500 gross tonnage (approximately 27,000 ships).

5.4 Having considered the above documents, the Sub-Committee noted, in particular, the following views:

- .1 draft Interim Guidelines could be prepared at this stage, as further detailed technical considerations are still required, addressing issues such as:
  - .1 clarification of the intermediate stages of flooding and how to calculate them;
  - .2 variations of loading conditions; and
  - .3 definition of maximum angle of heel for free surfaces;
- .2 the work on this output should provide for the mandatory use of computer verification of damage stability, taking into account shore-based computers; and

- .3 in order to avoid ambiguities, the development of mandatory carriage requirements and performance standards for loading instruments is necessary, however, this is outside the scope of this output. Therefore, a justification for an expansion of the output should be prepared for submission to MSC 90 for approval.

### **Establishment of a working group**

5.5 Following discussion, and recalling its relevant decision at SLF 53, the Sub-Committee established a Working Group on Development of Guidelines for Verification of Damage Stability Requirements for Tankers and instructed it, taking into account the comments made in plenary, to:

- .1 further develop the draft Guidelines for verification of damage stability requirements for tankers, based on the report of the correspondence group (SLF 54/5, annexes 3 and 4), and taking into account documents SLF 54/5/1, SLF 54/5/2, SLF 54/5/3 and SLF 54/5/4;
- .2 decide which of the versions of the draft operational requirements, i.e. main or alternative (part 2 of the draft Guidelines in annex 3, or annex 4 to document SLF 54/5, respectively), or their combination, should be considered for the purposes of the Guidelines;
- .3 finalize related draft amendments to mandatory instruments, based on the report of the correspondence group (SLF 54/5, annex 2);
- .4 consider the proposal for mandatory carriage requirements of stability instruments on tankers and, if the need for carrying such instruments is clearly recognized, prepare a justification for the expansion of the existing output to include the development of performance standards for such stability instruments; and
- .5 if time permits, consider the matter of extending the draft Guidelines for verification of damage stability requirements to bulk carriers.

### **Report of the working group**

5.6 Having considered the report of the working group (SLF 54/WP.4), the Sub-Committee took action as outlined hereunder.

### ***Justification for the expansion of the existing output***

5.7 The Sub-Committee agreed to the justification for the expansion of the existing output (see paragraph 5.4.3), to develop requirements for the mandatory carriage of stability instruments on board tankers, as set out in annex 1, for submission to MSC 90 for approval.

### ***Draft Guidelines for verification of damage stability requirements for tankers***

5.8 The Sub-Committee agreed, in principle, to the draft Guidelines for verification of damage stability requirements for tankers (SLF 54/WP.4, annex 1), with a view to submission to the Committee for approval together with a package of draft amendments to IMO instruments regarding the mandatory carriage of stability instruments on board tankers, once the amendments have been finalized.

5.9 In this connection, one delegation was of the view that combining the draft Guidelines with the draft amendments in one package would be a reasonable step forward as, in particular, the draft Guidelines may need to be editorially modified to reflect the adoption of future amendments. In addition, development of amendments, as proposed by the Sub-Committee in the justification for the expansion of this output (see annex 1), is expected to be completed in the shortest period possible, i.e. in 2013, which justifies their linkage with the draft Guidelines, if such arrangement is approved by MSC 90.

5.10 Another delegation stated that, notwithstanding the agreement of the Sub-Committee on the package, and bearing in mind that no objections were made to the contents of the draft Guidelines to their application, they may be approved by MSC 90 as a stand-alone instrument and put forward irrespective of any decision yet to be made by the Committee regarding the draft amendments, and that the Committee's attention should be drawn to this option.

### ***Draft amendments to the 1988 Load Lines Protocol***

5.11 The Sub-Committee agreed to draft amendments to regulation 27 (Types of ships) of the International Convention on Load Lines, 1966, as modified by the Protocol of 1988 relating thereto, concerning initial condition of loading and condition of equilibrium, as set out in annex 2, for submission to MSC 90 for approval, with a view to subsequent adoption.

5.12 With regard to possible amendments to the 1966 Load Lines Convention, the Sub-Committee requested the Secretariat to verify whether such consequential amendments were needed. Consequently, having noted that regulation 27 of the 1966 Load Lines Convention did not contain requirements relating to the conditions of loading, the Sub-Committee agreed that there was no need for such consequential amendments.

### ***Tropical freeboards***

5.13 In light of the above decision, the delegation of China and the observer from IACS requested clarification in respect of the treatment of tropical freeboards when assessing the damage stability of tankers. They were of the opinion that the draft Guidelines may not be the most appropriate place in which to introduce such an important clarification. However, the Sub-Committee noted that the majority of the working group considered the relevant present mandatory instruments, i.e. MARPOL Annex I and the IBC and IGC Codes were clear on this matter. Reference was also made to the Guidelines on Interpretation of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) and the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) and Guidelines for the uniform application of the survival requirements of the IBC and IGC Codes (MSC/Circ.406/Rev.1), which clarifies this issue in paragraph 2.4.3, and MARPOL Annex I unified interpretation 46 which also provides clarification. In this context, the observer from IACS pointed out that MSC/Circ.406/Rev.1 was not available on the IMODOCS website. In response, the Secretariat took immediate action to make the circular available on the website.

### ***Methods of controlling limited deviations from approved loading conditions***

5.14 The Sub-Committee, having noted that the group could not reach consensus on the issue of methods of controlling limited deviations from approved loading conditions, was advised by the Chairman of the working group that they should be defined by each

Administration (SLF 54/WP.4, paragraphs 8 to 10) and invited Member Governments and international organizations to submit any further proposals and comments on the development of such methods to SLF 55.

### ***Damage stability verification for bulk carriers***

5.15 The Sub-Committee, having noted the view of the group that the issues discussed with regard to tanker damage stability were not directly relevant to bulk carriers, that no issues had been raised for consideration in the context of damage stability verification for bulk carriers, and that experience since has proved that it is no longer needed, agreed that no further work on bulk carrier damage stability was necessary at this time and that the output should therefore be deleted from the biennial agenda of the Sub-Committee. The Sub-Committee invited MSC 90 to endorse the above view.

5.16 In this context, the Sub-Committee noted that the delegation of Norway, having reassessed the need and the anticipated benefits of this planned output (MSC 83/25/16), proposed to delete the output 2.0.1.4 on "Development of guidelines for verification of damage stability requirements for bulk carriers" from the Sub-Committee's biennial agenda, as there was no longer a need for the development of such guidelines, taking into account the various measures related to stability information to the master both in the new SOLAS chapter II-1 and in the 2008 IS Code that had been adopted since the approval of the output by MSC 83 in 2007.

## **6 REVISION OF DAMAGE STABILITY REGULATIONS FOR RO-RO PASSENGER SHIPS**

### **General**

6.1 The Sub-Committee recalled that SLF 53 had instructed the SDS Correspondence Group to further consider the impact of the SOLAS 2009 amendments on ro-ro passenger ships, as compared to the SOLAS 1990 regulations in association with the Stockholm Agreement, taking into account document SLF 52/WP.3, and any research results in the matter as they become available, and to submit a report to this session.

6.2 The Sub-Committee also recalled that MSC 89 had considered a proposal by SLF 53 (MSC 89/9, paragraph 2.11) to expand the scope of the existing output "Review of damage stability regulations for ro-ro passenger ships" to include potential damage stability deficiencies of ro-ro passenger ships other than those related to water on deck only, in order to ensure an adequate level of safety and consistent implementation of the relevant IMO instruments, and had agreed to expand the scope of the output as requested.

### **Report of the correspondence group**

6.3 In considering the report of the correspondence group (SLF 54/6), the Sub-Committee noted that the work of the group was heavily reliant on the findings of the research projects EMSA(2), GOALDS, RP625 and FLOODSTAND and that the group had agreed that it was preferable to await the completion of all the projects relevant to its work before commencing the discussion/questionnaire phase. The Sub-Committee also noted that the group would need to consider the findings and scope of any proposed modifications to SOLAS globally, rather than dealing with each project or proposal individually.

6.4 Having approved the report in general, the Sub-Committee agreed that the following issues needed further consideration, as requested by the group (SLF 54/6, paragraphs 19 and 20):

- .1 the development of a new SOLAS regulation II-1/7-2.5.2.3 in an attempt to influence the attained index A by setting  $s = 0$  in all cases involving damage to the garage space and below, where the residual freeboard in way of the damage opening was less than [x] metres; and
- .2 the potential inconsistency between SOLAS regulations II-1/13-1.4 and II-1/17-1.1.2 concerning large ramps fitted to internally subdivide large cargo spaces.

6.5 In this connection, the Sub-Committee noted that some delegations were of the opinion that there was no inconsistency between SOLAS regulations II-1/13-1.4 and II-1/17-1.1.2, as regulation II-1/13-1.4 applies to cargo ships and regulation II-1/17-1.1.2 applies to ro-ro passenger ships. The Sub-Committee also noted views that the matter had been extensively discussed at previous sessions and that the aforementioned research projects (see paragraph 6.3) were not yet completed; therefore, the matter could be considered at a later stage, taking into account the target completion year of 2013 for this output.

#### **Establishment of a working group**

6.6 Recalling its relevant decision at SLF 53, the Sub-Committee established the SDS Working Group and, taking into account the comments made in plenary, instructed it, time permitting and with a low priority, to further consider the development of a new SOLAS regulation II-1/7-2.5.2.3 (SLF 54/6, paragraph 19) and the potential inconsistency between SOLAS regulations II-1/13-1.4 and II-1/17-1.1.2 (SLF 54/6, paragraph 20) and advise the Sub-Committee as appropriate (see also paragraphs 4.8, 7.6, 8.6 and 13.4).

#### **Report of the SDS Working Group**

6.7 Having considered the part of the report of the SDS Working Group (SLF 54/WP.5) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

6.8 The Sub-Committee noted that the group had briefly considered the development of a new SOLAS regulation II-1/7-2.5.2.3 and the potential inconsistency between SOLAS regulations II-1/13-1.4 and II-1/17-1.1.2, and had agreed to include this matter in part 2 of the working group's report, which will be submitted to SLF 55 for consideration by the Sub-Committee. The Sub-Committee also agreed to include the issue in the terms of reference for the SDS Correspondence Group established under agenda item 4 (see paragraph 4.11).

#### **Instructions for the SDS Correspondence Group**

6.9 In light of the above decision, the Sub-Committee instructed the SDS Correspondence Group established under agenda item 4 (see also paragraphs 4.11 and 8.15) to:

- .1 further consider the development of a new SOLAS regulation II-1/7-2.5.2.3, as well as the potential inconsistency between SOLAS regulations II-1/13-1.4 and II-1/17-1.1.2, taking into account part 2 of the report of the SDS Working Group at SLF 54; and

- .2 further consider potential damage stability deficiencies on ro-ro passenger ships under SOLAS 2009 requirements and develop amendments as considered necessary.

## **7 DEVELOPMENT OF AMENDMENTS TO SOLAS CHAPTER II-1 SUBDIVISION STANDARDS FOR CARGO SHIPS**

### **General**

7.1 The Sub-Committee recalled that SLF 53 had re-established the SDS Correspondence Group with terms of reference as set out in paragraph 12.10 of document SLF 53/19 and instructed the group to submit a report to this session.

### **Report of the correspondence group and related submissions**

7.2 The Sub-Committee had for its consideration the report of the correspondence group (SLF 54/7), containing an assessment of the equivalence of the damage stability requirements of the Guidelines for the design and construction of offshore supply vessels, 2006 (resolution MSC.235(82)) (hereafter called "the OSV Guidelines") with SOLAS chapter II-1, part B-1, with a view to the possible removal of footnote .4 to regulation II-1/4.1. While the majority of the group had not considered the damage stability requirements of the OSV Guidelines to be equivalent to the requirements of SOLAS chapter II-1, part B-1, the group had not reached consensus on whether the footnote should be removed, so that the SOLAS 2009 amendments alone would provide the damage stability standard, or whether the footnote should be kept and the Guidelines be revised accordingly.

7.3 In the context of the above, the Sub-Committee also considered the following documents:

- .1 SLF 54/7/1 (United States), proposing to retain footnote .4 of SOLAS regulation II-1/4.1 and revise the OSV Guidelines in order to upgrade the damage stability standard for larger offshore supply vessels. The primary concerns are that the fixed 0.76 m transverse extent of damage in the Guidelines does not scale up with increasing OSV size, and that there are no specific requirements for subdivision inboard of this transverse extent of damage, except for the collision and afterpeak bulkheads and the machinery space bulkheads. The document also proposes a related damage stability standard for OSVs that carry limited amounts of hazardous and noxious liquid substances in bulk. The United States did not support the original proposal in document MSC 85/23/1 (United Kingdom) to delete footnote .4 to regulation II-1/4.1 and considered that the most appropriate course of action was to revise the Guidelines to upgrade the OSV damage stability standard; and
- .2 SLF 54/INF.2 (United States), providing the results of a comparative study that evaluated 20 existing, United States-flagged OSV built to their domestic OSV damage stability standard (which is generally equivalent to the OSV Guidelines) for compliance with the SOLAS chapter II-1 cargo ship probabilistic damage stability requirements.

7.4 The Sub-Committee noted that the matter was closely related to agenda item 13 (Development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships) and that the decisions made under the two items needed to be aligned.

7.5 The Sub-Committee also noted that the majority of delegations supported the retention of footnote .4 to SOLAS regulation II-1/4.1 and a revision of the OSV Guidelines in order to upgrade the damage stability standard for larger offshore supply vessels, as proposed in document SLF 54/7/1, which should also take into account the outcome of the BLG Sub-Committee's work on the development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels.

#### **Instructions to the SDS Working Group**

7.6 Subsequently, the Sub-Committee instructed the SDS Working Group, established under agenda item 6 (see paragraph 6.6), to further consider, in conjunction with the instructions given to the group under agenda item 13 (see paragraph 13.4), a possible revision of the OSV Guidelines, based on the report of the SDS Correspondence Group (SLF 54/7) and taking into account documents SLF 54/7/1 and SLF 54/INF.2 and the comments made in plenary, and advise the Sub-Committee accordingly.

#### **Report of the SDS Working Group**

7.7 Having considered the part of the report of the SDS Working Group (SLF 54/WP.5) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

#### ***Draft amendments to the Guidelines for the design and construction of offshore supply vessels***

7.8 The Sub-Committee noted that the group had prepared amendments to the OSV Guidelines for OSVs between 80 m and 100 m in length, which should apply to new ships as stipulated in paragraph 1.1.1 of the Guidelines, since applying the increased damage extents to existing vessels would not be practical in the context of paragraph 1.1.6. Consequently, the Sub-Committee agreed to the draft amendments to the Guidelines for the design and construction of offshore supply vessels (resolution MSC.235(82)), set out in annex 3, for submission to MSC 90 for adoption. In this context, the Sub-Committee requested the Secretariat to prepare a draft associated MSC resolution for the adoption of the draft amendments to the Guidelines.

#### ***Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels***

7.9 The Sub-Committee noted that the group had also considered the proposed damage stability standard for OSVs that carry limited amounts of hazardous and noxious liquid substances in bulk, contained in annex 2 of document SLF 54/7/1, bearing in mind the current work of the BLG Sub-Committee to develop an OSV Chemical Code. Having noted that the work on the OSV Chemical Code was at an early stage of development, the Sub-Committee agreed to await a request from the BLG Sub-Committee seeking advice on damage stability criteria for such ships.

#### **Completion of the work on the output**

7.10 The Sub-Committee invited the Committee to note that the work on the output had been completed.

## **8 REVISION OF SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS**

### **General**

8.1 The Sub-Committee recalled that SLF 53 had re-established the SDS Correspondence Group with terms of reference as set out in paragraph 14.10 of document SLF 53/19 and instructed the group to submit a report to this session.

### **Report (part 2) of the working group established at SLF 53**

8.2 The Sub-Committee considered part 2 of the report of the SDS Working Group established at SLF 53 (SLF 54/8) and, having approved it in general, noted that the group's report had been considered in detail by the SDS Correspondence Group (SLF 54/8/1) established at SLF 53.

### **Report of the correspondence group and related submissions**

8.3 The Sub-Committee considered the report of the correspondence group (SLF 54/8/1) and, having approved it in general, noted that the group had progressed the work on the revision of SOLAS chapter II-1 subdivision and damage stability regulations and the associated Explanatory Notes considerably, as set out in the annexes to the report; however, a vast amount of work still remained.

8.4 In this context, the Sub-Committee also considered the following documents:

- .1 SLF 54/8/2 (IACS), providing a review of IACS unified interpretations relevant to the revision of SOLAS chapter II-1 subdivision and damage stability regulations and the related Explanatory Notes and, in the annexes to the document, the latest versions of pertinent IACS UIs (UI SC 81 revision 1; UI SC 93 revision 1; and UI SC 220 revision 1);
- .2 SLF 54/8/3 (Republic of Korea), providing proposals for the revision of SOLAS regulation II-1/9.8 for cargo ships of less than 80 m in length (referred to as "smaller ships") and the Explanatory Notes, since it may be difficult to apply this regulation to smaller ships having no double bottom or unusual bottom arrangements, especially in the machinery space;
- .3 SLF 54/8/4 (Japan), proposing concepts of probabilistic bottom damage stability requirements, following the goal-based and risk-based approach for cargo ships, and a methodology for developing such probabilistic stability requirements based on the concepts suggested;
- .4 SLF 54/8/5 (United States), commenting on the report of the correspondence group and the draft SOLAS regulation II-1/4.1 regarding the general applicability of the requirements in SOLAS chapter II-1, parts B-1 to B-4 and annexing to the document proposed new text for regulation II-1/4 addressing their concerns;
- .5 SLF 54/8/6 (Germany), providing a proposed strategy to structure the further work on the revision of SOLAS chapter II-1 subdivision and damage stability regulations, and in particular the discussion at this session;



- .6 SLF 54/8/7 (Spain), providing comments on the report of the correspondence group on the application of double bottom requirements to small cargo ships (regulation II-1/9);
- .7 SLF 54/INF.15 (Japan), providing statistical analyses on grounding accidents, in order to extract a unique feature of such accidents, with an event tree regarding scenarios after a ship's bottom is damaged; and
- .8 SLF 54/INF.16 (Japan), providing a way to quantify the probability of safe beaching represented by factor Z, in order to reflect a unique feature of grounding accidents in bottom damage stability requirements.

8.5 Following an in-depth discussion, the Sub-Committee endorsed the draft amendments to SOLAS chapter II-1 and the associated Explanatory Notes as agreed by the correspondence group (SLF 54/8/1, paragraph 13 and annex 1), noting that further discussion was required on outstanding matters.

### **Instructions to the SDS Working Group**

8.6 In light of the above, the Sub-Committee instructed the SDS Working Group, established under agenda item 6 (see paragraph 6.6), to further develop the draft amendments to SOLAS chapter II-1 and the associated Explanatory Notes (resolution MSC.281(85)), based on the report of the correspondence group (SLF 54/8/1), and taking into account documents SLF 54/8/2, SLF 54/8/3, SLF 54/8/4, SLF 54/8/5, SLF 54/8/6, SLF 54/8/7, SLF 54/INF.15 and SLF 54/INF.16 and comments made and decisions taken in plenary.

### **Report of the SDS Working Group**

8.7 Having considered the part of the report of the SDS Working Group (SLF 54/WP.5) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

### ***Revision of SOLAS chapter II-1 subdivision and damage stability regulations***

8.8 The Sub-Committee, having endorsed the amendments to SOLAS regulations II-1/9.6 and 9.7 to exclude application of regulation 9.8 to cargo ships of less than 80 m in length, provided that alternative arrangements with a safety level satisfactory to the Administration are made available, agreed, in principle, to the proposed amendments to SOLAS chapter II-1 and its related Explanatory Notes (SLF 54/WP.5, annex 3) prepared by the group, taking into account that the SDS Correspondence Group (see paragraph 8.13) will further consider them.

8.9 In considering the issue of other wells, in particular lubricating oil wells under main engines, and the minimum double bottom height requirements of regulation 9.3, the Sub-Committee endorsed the group's decision that for other wells proof of equivalent protection should be provided according to regulation 9.8. The Sub-Committee also endorsed the decision of the group that for lubricating oil wells, alternatively, half of the required double bottom height could be accepted but not less than 500 mm above the keel line.

8.10 The Sub-Committee endorsed the group's decision to amend regulation 9.6 and 9.7 to exclude application of regulation 9.8 to cargo ships of less than 80 m in length, provided that alternative arrangements with a safety level satisfactory to the Administration are made available. The Sub-Committee also endorsed the group's decision to include examples of

levels of safety, such as the proposal contained in document SLF 54/8/3, for consideration by the SDS Correspondence Group, for possible inclusion in the Explanatory Notes.

8.11 The Sub-Committee endorsed the group's decision to continue working on amendments to SOLAS chapter II-1 and its related Explanatory Notes after finalization of part 1 of the group's report, with the results to be included in a part 2 of the report of the group, for consideration by the SDS Correspondence Group.

#### **Extension of target completion year**

8.12 The Sub-Committee noted that the group, during its deliberations, could not finalize all the outstanding issues related to the revision of SOLAS chapter II-1 subdivision and damage stability regulations and, having also acknowledged the need to take into account the outcome of ongoing related research projects, invited the Committee to extend the target completion year for this output to 2013.

#### **Proposal for an intersessional meeting of the SDS Working Group**

8.13 The Sub-Committee, having acknowledged that a substantial amount of work remained to be done in order to complete the comprehensive revision of SOLAS chapter II-1, considered the group's proposal to hold a consecutive three-day intersessional meeting of the working group prior to SLF 55.

8.14 While some delegations supported the proposal, especially taking into account the workload of the SDS Working Group at the next session, the majority of the delegations that spoke were of the view that no intersessional meeting was necessary. Consequently, the Sub-Committee did not agree to the group's proposal.

#### **Instructions to the SDS Correspondence Group**

8.15 Consequently, the Sub-Committee instructed the SDS Correspondence Group established under agenda item 4 (see also paragraphs 4.11 and 6.9), taking into account comments made and decisions taken in plenary during SLF 54 and the outcome of the SDS Working Group (SLF 54/WP.5), to:

- .1 finalize the draft amendments to SOLAS chapter II-1 and the related Explanatory Notes;
- .2 develop an accompanying GM limit curve for the Trim Limit Diagram for the Explanatory Note to SOLAS regulation II-1/5-1.5 and explanatory text related to alternative KG limiting curves for different trim levels;
- .3 regarding the issue of double bottom in cargo ships with a length of less than 80 m, develop guidance in the Explanatory Notes on alternative design provisions that would demonstrate a safety level satisfactory to the Administration;
- .4 develop accompanying illustrations on lubricating oil wells under main engines and the minimum double bottom heights requirements of SOLAS regulation II-1/9.3; and
- .5 submit a report to SLF 55.

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## **9 DEVELOPMENT OF PROVISIONS TO ENSURE THE INTEGRITY AND UNIFORM IMPLEMENTATION OF THE 1969 TM CONVENTION**

### **General**

9.1 The Sub-Committee recalled that SLF 53, following the conclusion of its discussion on the output "Guidelines to improve the effect of the 1969 TM Convention on ship design and safety", had agreed to the justification for a new planned output on "Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention" (SLF 53/19, annex 2), for submission to MSC 89 for approval.

9.2 The Sub-Committee also recalled that MSC 89 had considered the above proposal (MSC 89/9, paragraph 2.5), together with documents MSC 89/9/5 (Germany) and MSC 89/9/8 (ILO), providing comments on the need to improve the effect on ship design and safety within the 1969 Tonnage Measurement Convention with regard to working and living conditions on board ships, and had included, in the 2012-2013 biennial agenda of the SLF Sub-Committee and in the provisional agenda for SLF 54, an output on "Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention", with a target completion year of 2014. In this regard, MSC 89 also forwarded the above two documents to SLF 54 for consideration under the new output.

### **Consideration of submissions**

9.3 The Sub-Committee had for its consideration the following documents:

- .1 SLF 54/9 (IACS), proposing solutions to the issues previously identified by the TM Correspondence Group as requiring further investigation to ensure the integrity and uniform implementation of the Convention (SLF 53/5, annex 4);
- .2 SLF 54/9/1 (Canada, France, Germany, Japan, Marshall Islands, Norway, Panama and United States), proposing a detailed action plan, including the establishment of a correspondence group, in order to develop draft revised and updated interpretations to the Convention, along with any recommended amendments and associated implementation approaches. In addition, the co-sponsors proposed to establish a working group at SLF 55 to finalize the interpretations and draft amendments, if any, so that they could be referred to the DE and STW Sub-Committees for consideration prior to finalization at SLF 56, with a view to submission to the Committee for approval;
- .3 SLF 54/9/2 (Italy), providing comments on document SLF 54/9 as well as suggested solutions to the matters raised by IACS, to ensure the integrity and uniform implementation of the Convention;
- .4 SLF 54/9/3 (IACS), providing comments on document MSC 89/9/5 and urging the Sub-Committee to consider the implications of undertaking tonnage recalculations and re-issuance of certificates. For existing ships, IACS was of the view that finding the information required would not be straightforward in all cases and recalculations would take time to be performed. It was assumed that the recalculation would be voluntary, however, clarity on this matter would also be necessary;

- .5 SLF 54/9/4 (ITF), containing proposals for the comprehensive review of the Convention to remain open and willing to assess additional proposals such as those contained in documents MSC 89/9/5 and MSC 89/9/8, as well as a comprehensive review of article 18 (Amendments). It was pointed out that the Convention has never been amended, despite major transformations in ship design and shipping structures, mainly due to the absence of tacit amendment procedures; and the importance of considering human element issues whilst reviewing the Convention was also recalled;
- .6 SLF 54/9/5 (Japan and Republic of Korea), providing a proposal to include a new unified interpretation on the calculation of volumes of spaces open to sea in the interpretations of the Convention. The co-sponsors were of the view that spaces open to the sea which are used for holding cargo and/or are contributing to buoyancy should not be excluded from the total volume of the ship;
- .7 SLF 54/INF.11 (United States), providing a comparison of the requirements in the Convention and associated interpretations related to ship alterations or modifications, along with historical information, and a ship comparison to help illustrate the tonnage impacts of such changes;
- .8 MSC 89/9/5 (Germany), proposing that a reduction for accommodation and crew spaces be covered under remarks on the last page of the TM Certificate and suggesting a procedure for the calculation of such reduction; and
- .9 MSC 89/9/8 (ILO), commenting and supporting document MSC 89/9/5 and informing the Sub-Committee of resolutions concerning tonnage measurement and the accommodation of crews, adopted by ILO's Joint Maritime Commission in 2001, and concerning tonnage measurement and accommodation, adopted by the 96th session of the International Labour Conference in 2007.

### **Tonnage measurement and crew accommodation**

9.4 As instructed by MSC 89, the Sub-Committee discussed the issue of the increase in gross tonnage caused by providing improved crew and accommodation spaces and that ship designers and owners should not be penalized for being more generous in this regard. While many delegations shared the relevant concerns expressed at MSC 89 by Germany and ILO and agreed that the issue should be taken into account, the Sub-Committee agreed at the same time that this would not mean that a comprehensive review of the TM Convention should be conducted, which was considered to be outside the scope of the output.

9.5 In this connection, the Sub-Committee recalled that the scope of the output, as proposed by SLF 53 and approved by MSC 89, included the identification of areas for improvement; the updating and revision of interpretations; and the preparation of recommendations and amendments that would ensure the integrity and uniform implementation of the existing measurement system of the Convention and/or would provide for improved safety or design (including crew accommodation) under this measurement system.

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## **Integrity and uniform implementation of the 1969 TM Convention**

9.6 The Sub-Committee supported the plan of action for the work to be carried out, as contained in annex 1 to document SLF 54/9/1; endorsed the suggested format for the revised/updated interpretations of the TM Convention, as presented in annex 2 to the above document; and agreed that a correspondence group should be established to progress the work intersessionally.

### **Establishment of a drafting group**

9.7 Having agreed on how best to proceed with the matter, the Sub-Committee established a drafting group and instructed it to prepare terms of reference for the aforementioned correspondence group.

### **Report of the drafting group**

9.8 Having considered the report of the drafting group (SLF 54/WP.6), the Sub-Committee agreed to establish the Correspondence Group on the Development of Provisions to Ensure the Integrity and Uniform Implementation of the 1969 TM Convention, under the coordination of the United States\*, and instructed it, taking into account documents SLF 54/9, SLF 54/9/1, SLF 54/9/2, SLF 54/9/3, SLF 54/9/4, SLF 54/9/5, SLF 54/INF.11, MSC 89/9/5 and MSC 89/9/8 and comments and proposals made at SLF 54, to:

- .1 review the rules and requirements of the 1969 TM Convention and associated interpretations, addressing issues raised in annex 3 to document SLF 54/9/1;
- .2 recommend and develop revised/updated interpretations of the 1969 TM Convention, as described in paragraph 4.1 of annex 1 to document SLF 54/9/1, using the format described in annex 2 to the above document;
- .3 identify areas for improvement of the 1969 TM Convention, including alternate approaches, as described in paragraphs 3.1 and 3.2 of annex 1 to document SLF 54/9/1;
- .4 recommend and develop draft amendments to the 1969 TM Convention, as appropriate, including those emanating from the discussion under the terms of reference in subparagraphs .1 to .3 above; and
- .5 submit a report to SLF 55.

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## **10 DEVELOPMENT OF AMENDMENTS TO PART B OF THE 2008 IS CODE ON TOWING AND ANCHOR HANDLING OPERATIONS**

### **General**

10.1 The Sub-Committee recalled that MSC 88 had considered document MSC 88/23/2 (Norway), proposing to develop unified stability criteria and operational guidance for vessels engaged in towing and anchor handling operations, for inclusion in part B of the 2008 IS Code, and included, in the post-biennial agenda of the Committee, an output on "Development of amendments to part B of the 2008 IS Code on towing and anchor operations", with a target completion year of 2014, assigning the SLF Sub-Committee as the coordinating organ, in cooperation with the DE Sub-Committee as necessary and if requested by the Sub-Committee, and instructing SLF 53 to include the item in the provisional agenda for SLF 54.

### **Proposed amendments to the 2008 IS Code**

10.2 The Sub-Committee had for its consideration the following documents:

- .1 SLF 54/10 (Norway), commenting on the conventional type of towline tripping criteria for ships engaged in traditional towing, as applied by many Administrations and recognized organizations, which is still relevant for certain operations. In the view of Norway, these criteria seem to be outdated with respect to a new generation of vessels intended for other types of towing operations. It was proposed that a certain minimum standard be established, but that the recommended criteria to be used should include the concept where each particular vessel's stability is analysed with respect to the intended modes of operation. Relevant proposed amendments to the 2008 IS Code were included in the annex to the document;
- .2 SLF 54/INF.5 (Norway), providing background information on the principles for unified stability criteria and operational guidance for vessels engaged in towing and anchor handling operations proposed to be incorporated into part B of the 2008 IS Code; and
- .3 SLF 54/INF.17 (Finland), providing information on intact stability requirements for tugboats used in Finland since 1 January 1986. The requirements are valid for conventional types of tugboat with one propeller (without nozzle) and with one rudder located in the aft part of the vessel, and also without any bow thrusters, and are based on the physics with heeling moments acting on the vessel during a situation when the vessel is perpendicular to the force from the towline.

10.3 Having considered the above documents, the Sub-Committee noted, in particular, the following views:

- .1 while the proposals for amendments to the 2008 IS Code, set out in the annex to document SLF 54/10, were supported in principle, further detailed consideration of those proposals was necessary;

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- .2 intact stability criteria for vessels engaged in towing operations had previously been discussed during SLF 34, SLF 49 and SLF 50, and the results of these discussions should be taken into account when considering this output;
  - .3 lifting criteria other than those lifting modes specified in document SLF 54/10 should be further considered;
  - .4 the proposed draft amendments should be supplemented by the information contained in document SLF 54/INF.5, whereby the sketches contained in the document needed further improvement; and
  - .5 more in-depth understanding of below-deck openings was required.

10.4 Having considered the above views, the Sub-Committee agreed to invite Member Governments and international organizations to submit comments and proposals, based on the draft amendments set out in the annex to document SLF 54/10, to SLF 55. The delegation of Norway offered to serve as a focal point for the coordination of any joint submissions on the matter.\*

## 11 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

### General

11.1 The Sub-Committee recalled that MSC 78 had instructed the sub-committees to consider any submitted IACS unified interpretations with a view to developing appropriate IMO interpretations, if deemed necessary.

### Guard rails

11.2 The Sub-Committee considered document SLF 54/11 (IACS), providing the latest version of IACS Unified Interpretation LL 47 regarding guard rails, as specified in regulation 25(2) and (3) of the 1966 Load Lines Convention and the 1988 Load Lines Protocol as amended by resolution MSC.143(77), which was prepared due to the fact that on some ships the fitting of brackets or stays in accordance with the above provisions may be impractical (e.g. on ships fitted with gantry cranes); may constitute trip hazards; or may otherwise impede progress in what may be restricted spaces. Following discussion, the Sub-Committee supported the proposed interpretations and requested the Secretariat to prepare a relevant draft LL.3 circular for its consideration.

11.3 Having considered document SLF 54/WP.7, the Sub-Committee agreed to a draft LL.3 circular on Unified interpretations of the 1966 LL Convention and the 1988 LL Protocol as amended by resolution MSC.143(77), as set out in annex 4, for submission to MSC 90 for approval.

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## **12 DEVELOPMENT OF AMENDMENTS TO THE CRITERION FOR MAXIMUM ANGLE OF HEEL IN TURNS OF THE 2008 IS CODE**

### **General**

12.1 The Sub-Committee recalled that SLF 53 had considered document SLF 53/3/4 (RINA), proposing amendments to the 2008 IS Code on matters related to the angle of heel in turns, under the agenda item "Development of new generation intact stability criteria", and, being of the view that the proposal was outside the scope of the item, had invited Member Governments and international organizations to submit a proposal for a relevant new planned output to MSC 89, in accordance with the Committees' Guidelines.

12.2 In this regard, the Sub-Committee also recalled that MSC 89 had considered document MSC 89/22/7 (United Kingdom), proposing to develop amendments to paragraph 3.1.2 of the 2008 IS Code to correct apparent discrepancies between the Code criterion for the maximum angle of heel in turns for passenger ships and the turning ability a ship is required to have under the Standards for ship manoeuvrability (resolution MSC.137(76)), taking into account the comments provided in document MSC 89/22/16 (RINA). Consequently, the Committee included, in the 2012-2013 biennial agenda of the SLF Sub-Committee and the provisional agenda for SLF 54, an output on "Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code", with a target completion year of 2013, and forwarded documents MSC 89/22/7 and MSC 89/22/16 to SLF 54 for consideration under this output.

### **Proposed amendments to the 2008 IS Code**

12.3 The Sub-Committee had for its consideration document SLF 54/12 (RINA), containing proposed amendments to chapter 3 of part A of the 2008 IS Code, based on the view that the criterion for the angle of heel in turns in the Code takes no account of the ship's turning ability and appears to assume a turning diameter that is double of that recommended by the Standards for ship manoeuvrability. In addition, in RINA's view, the formula required to be employed is not valid for some hull types, and the criterion also conflicts with the requirements of the 2000 HSC Code and guarantees no minimum stability margin in full-helm turns. In this context, the Sub-Committee noted that the main substance of document MSC 89/22/16 is included in document SLF 54/12.

12.4 While noting that the proposed amendments were supported in principle, the Sub-Committee, taking into account all of the above documents, was of the view that further thorough study of the matter was necessary, taking into account views that the proposed amendments were more relevant to small passenger ships; that the formula to be employed needs to be further considered, including the availability of required parameters at the early design stage; and that the development of operational guidance should also be taken into account.

12.5 Consequently, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals on the draft amendments set out in annex 1 to document SLF 54/12 to SLF 55.

## **13 DEVELOPMENT OF AMENDMENTS TO SOLAS REGULATION II-1/4 CONCERNING SUBDIVISION STANDARDS FOR CARGO SHIPS**

13.1 The Sub-Committee recalled that MSC 89, having considered document MSC 89/22/8 (Germany and United Kingdom), proposing to develop amendments to SOLAS regulation II-1/4 in order to clarify the application of SOLAS subdivision standards to cargo



ships which are complying with the subdivision standards of other IMO instruments, agreed to include, in the 2012-2013 biennial agenda of the SLF Sub-Committee and the provisional agenda for SLF 54, a planned output on "Development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships", with a target completion year of 2013.

13.2 The Sub-Committee noted that the matter was closely related to agenda item 7 (Development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships) and that the decisions made under the two items needed to be aligned (see paragraphs 7.4 and 7.5), and that the work carried out under agenda item 8 (Revision of SOLAS chapter II-1 subdivision and damage stability regulations) also needed to be taken into account since the final text of SOLAS regulation II-1/4 would ultimately be carried forward in the text of the draft revised SOLAS chapter II-1.

13.3 In considering the matter, the Sub-Committee agreed that the main issue was the clarification of the applicability of SOLAS regulation II-1/4 to cargo ships which are complying with the subdivision standards of other IMO instruments, as suggested in document MSC 89/22/8, and that the proposals for relevant amendments to the regulation, as set out in the annex to the document, should be further discussed.

#### **Instructions to the SDS Working Group**

13.4 Subsequently, the Sub-Committee, while noting that no documents had been submitted under the agenda item, instructed the SDS Working Group established under agenda item 6 (see paragraph 6.6), to further consider the draft amendments to SOLAS regulation II-1/4 set out in the annex to document MSC 89/22/8 and advise the Sub-Committee accordingly.

#### **Report of the SDS Working Group**

13.5 Having considered the part of the report of the working group (SLF 54/WP.5) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

13.6 The Sub-Committee agreed to abandon the concept of using footnotes in SOLAS regulation II-1/4 altogether and, based on the draft amendments to the regulation proposed in the annex to document SLF 54/8/5, included a draft text for a revised regulation II-1/4 in the draft amendments to SOLAS chapter II-1 (SLF 54/WP.5, annex 3) currently under consideration under agenda item 8 (see paragraphs 8.8 to 8.10), for further discussion.

13.7 The Sub-Committee noted that the group had also discussed whether the MODU Code should be considered as an alternative damage stability standard under SOLAS regulation II-1/4 and had noted that the Code should be considered in its entirety as an equivalent standard to the SOLAS Convention, as stipulated in the Preamble to the Code. The Sub-Committee, therefore, agreed not to include the MODU Code in the list of alternative damage stability standards in SOLAS regulation II-1/4.

13.8 The delegation of Norway did not agree with the proposed text for the chapeau of SOLAS regulation II-1/4, as it implied a mandatory application of voluntary guidelines and thus left Administrations with no option but to accept the guidelines as a standard.

## **Completion of the output**

13.9 The Sub-Committee invited the Committee to note that work on the output had been completed, since the relevant draft amendments to SOLAS regulation II-1/4 had been incorporated in the draft revised text of SOLAS chapter II-1 currently under consideration under agenda item 8.

## **14 BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR SLF 55**

### **General**

14.1 The Sub-Committee recalled that the Assembly, at its twenty-seventh session, approved the High-level Action Plan of the Organization and Priorities for the 2012-2013 Biennium (resolution A.1038(27)).

14.2 The Sub-Committee also recalled that MSC 89 and MEPC 62 approved the revised Guidelines on the organization and method of work of the MSC and the MEPC and their subsidiary bodies (MSC-MEPC.1/Circ.4) and urged all those concerned to strictly follow the revised Committees' Guidelines.

### **Biennial agenda, post-biennial agenda and provisional agenda for SLF 55**

14.3 Taking into account the progress made during this session and the decisions of MSC 89, the Sub-Committee prepared its updated biennial agenda for the 2012-2013 biennium (SLF 54/WP.2), including items on the Committee's post-biennial agenda under the purview of the Sub-Committee, as set out in annex 5, and the provisional agenda for SLF 55, based on the biennial agenda approved by MSC 89 (SLF 54/2, annex 2), as set out in annex 6, for approval by MSC 90.

### **Arrangements for the next session**

14.4 The Sub-Committee agreed to establish at its next session working groups on subjects to be selected from the following:

- .1 intact stability;
- .2 subdivision and damage stability;
- .3 guidelines for verification of damage stability requirements for tankers; and
- .4 development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention,

whereby the Chairman, taking into account the submissions received on the respective subjects, would advise the Sub-Committee well in time before SLF 55 on the final selection of such groups.

14.5 The Sub-Committee established correspondence groups on the following subjects, due to report to SLF 55:

- .1 intact stability;
- .2 development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention; and

- .3 subdivision and damage stability, including:
  - .1 revision of SOLAS chapter II-1 subdivision and damage stability regulations;
  - .2 revision of damage stability regulations for ro-ro passenger ships; and
  - .3 development of guidelines on safe return to port for passenger ships.

### **Status of planned outputs**

14.6 The Sub-Committee prepared the report on the status of planned outputs of the High-level Action Plan of the Organization and priorities for the 2012-2013 biennium relevant to the Sub-Committee, as set out in annex 7, and invited the Committee to note the status.

### **Date of the next session**

14.7 The Sub-Committee noted that the fifty-fifth session of the Sub-Committee has been tentatively scheduled to take place from 18 to 22 February 2013.

## **15 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2013**

15.1 The Sub-Committee decided to elect the Chairman and Vice-Chairman of the Sub-Committee for 2013 at the start of SLF 55.

## **16 ANY OTHER BUSINESS**

### **Casualty investigation report for *Chicago Express***

16.1 The Sub-Committee considered document SLF 54/16 (Secretariat), reporting on the outcome of FSI 19 on matters related to the investigation report on the very serious casualty on board the containership **Chicago Express**, where several crew experienced severe injuries and one fatality occurred when the ship underwent rolling during a typhoon, and noted that FSI 19 had agreed to refer the safety issues relating to the aforementioned casualty to the NAV, SLF, DE and STW Sub-Committees, for consideration and action as appropriate. It was noted that the full report of the investigation (Incident No.C0007636) and its analysis are also available in the GISIS module on Marine Casualties and Incidents.

16.2 Following a brief discussion, the Sub-Committee agreed to instruct the Intact Stability Working Group, established under agenda item 3 (see paragraph 3.11), to further consider the safety issues relating to the casualty, based on document SLF 54/16, and advise the Sub-Committee accordingly (see paragraph 3.11).

16.3 Having considered the part of the report of the IS Working Group (SLF 54/WP.3) related to this agenda item, the Sub-Committee, having noted that, due to time constraints, the group had not been able to consider the matter, agreed to instruct the Intact Stability Correspondence Group, established under agenda item 3 (see paragraph 3.21), to further consider the safety issues relating to the very serious casualty on board the containership **Chicago Express**, based on document SLF 54/16, and report to SLF 55. The Secretariat was requested to inform FSI 20 accordingly.

### **Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011**

16.4 The Sub-Committee considered the part of document SLF 54/2/1 (Secretariat) reporting on the outcome of DSC 16 on matters related to the revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes (TDC Code). The Sub-Committee noted that the new 2011 TDC Code had been adopted by the twenty-seventh session of the Assembly by resolution A.1048(27) and that DSC 16 had invited the Sub-Committee to consider updating the footnote to paragraph (6) of regulation 44 of the 1988 Load Lines Protocol, which refers to the previous Code (resolution A.715(17)).

16.5 Following a brief discussion, the Sub-Committee requested the Drafting Group on Tonnage Measurement (TM), established under agenda item 9 (see paragraph 9.7), to prepare an updated version of the footnote for its consideration.

16.6 Having considered the part of the report of the TM Drafting Group (SLF 54/WP.6, annex 2) related to this agenda item, the Sub-Committee agreed to the following updated version of the footnote to paragraph (6) of regulation 44 of the 1988 Load Lines Protocol:

"Reference is made to the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, adopted by the Organization by resolution A.715(17), as amended, or the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011 (2011 TDC Code), adopted by the Organization by resolution A.1048(27), as may be amended, as applicable."

and requested the Secretariat, pending endorsement by MSC 90 of the action taken, to include the updated version of the footnote in the IMO publication "Load Lines" and to inform DSC 17 of this outcome.

### **Technical review of the 1993 Torremolinos Protocol and the 1977 Torremolinos Convention**

16.7 The Sub-Committee noted information provided by South Africa (SLF 54/INF.3) on their intention to propose to the Committee an unplanned output for the Sub-Committee for a full technical review of the Annex to the 1993 Torremolinos Protocol and the 1977 Torremolinos International Convention for the Safety of Fishing Vessels, following the expected adoption of the Agreement on the implementation of the Protocol at the Diplomatic Conference scheduled to take place in Cape Town, South Africa, from 9 to 11 October 2012. In this context, the delegation of South Africa stated that, notwithstanding the above, they intended to propose at the Diplomatic Conference a resolution suggesting a full technical review of the Annex to the 1993 Torremolinos Protocol and the 1977 Torremolinos Convention.

### **Effect of excess fire-fighting water on intact stability**

16.8 Having considered document SLF 54/2/2 (IACS), on matters emanating from FP 55 with regard to the possible effect of excess water, accumulated as a result of fire-fighting, on intact stability and on freeing-area requirements, the Sub-Committee noted that the FP Sub-Committee had not yet finalized the relevant draft amendments to SOLAS chapter II-2. In this context, the Sub-Committee also noted that FP 56 was scheduled to take place before SLF 55.

16.9 After an in-depth discussion of the matter, the Sub-Committee agreed that there was a need to consider the adverse impact of accumulated fire-fighting water on ship stability in connection with the freeing port area and instructed the Intact Stability Correspondence Group, established under agenda item 3 (see paragraph 3.21), to consider the possible effect of excess water, accumulated as a result of fire-fighting, on intact stability and on freeing port area requirements, taking into account document SLF 54/2/2 and the Guidelines for the drainage of fire-fighting water from closed vehicle and ro-ro spaces and special category spaces of passenger and cargo ships (MSC.1/Circ.1320), and advise SLF 55 accordingly.

16.10 In this context, the Sub-Committee requested the Secretariat to inform FP 56 of the above outcome and agreed that the results of the considerations of the IS Correspondence Group in the matter should be referred to FP 56 in advance of their consideration by SLF 55, pending the approval of the report of the correspondence group by SLF 55.

### **Statement by the Islamic Republic of Iran**

16.11 The delegation of the Islamic Republic of Iran made a statement on a terrorist incident in Tehran. The text of the statement is reproduced in annex 8.

## **17 ACTION REQUESTED OF THE COMMITTEE**

17.1 The Maritime Safety Committee, at its ninetieth session, is invited to:

- .1 note that the Sub-Committee considered the issue of developing alternative requirements for the prevention of accidents due to liquefaction through ship design, referred to it by DSC 16, and agreed to await the outcome of DE 56, the seventeenth session of the Editorial and Technical Group on the IMSBC Code (E&T 17) and DSC 17 before proceeding with the work on the matter (paragraph 3.7);
- .2 note that the Sub-Committee included the issue of guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code, referred to it by DSC 16, in the terms of reference of the IS Correspondence Group (paragraph 3.19);
- .3 note that the Sub-Committee included the issue of approval of damage stability modules for safe return to port, referred to it by MSC 89, in the terms of reference of the SDS Correspondence Group (paragraph 4.9);
- .4 approve the justification to expand the scope of the output on "Development of guidelines for verification of damage stability requirements for tankers" to include the development of mandatory carriage requirements for stability instruments on board tankers, and extend the target completion year to 2013 (paragraph 5.7 and annex 1);
- .5 endorse the decision of the Sub-Committee to submit the principally agreed draft Guidelines for verification of damage stability requirements for tankers, together with the associated draft mandatory carriage requirements, for approval, once the latter have been completed (paragraph 5.8);

- .6 approve the draft amendments to regulation 27 of the International Convention on Load Lines, 1966, as modified by the Protocol of 1988 relating thereto, with a view to adoption at MSC 91 (paragraph 5.11 and annex 2);
- .7 endorse the agreement of the Sub-Committee that no further work is necessary regarding matters related to the verification of damage stability requirements for bulk carriers and note that the associated output was deleted from the Sub-Committee's biennial agenda (paragraph 5.15);
- .8 adopt the draft MSC resolution on Amendments to the Guidelines for the design and construction of offshore supply vessels (resolution MSC.235(82)) and note that the amendments apply to new ships as stipulated in paragraph 1.1.1 of the Guidelines (paragraph 7.8 and annex 3);
- .9 approve the draft LL.3 circular on Unified interpretations of the 1966 LL Convention and the 1988 LL Protocol as amended by resolution MSC.143(77) (paragraph 11.3 and annex 4);
- .10 approve the updated biennial agenda of the Sub-Committee for the 2012-2013 biennium and note the items on the Committee's post-biennial agenda that fall under the purview of the Sub-Committee, as amended (paragraph 14.3 and annex 5);
- .11 approve the draft provisional agenda for SLF 55 (paragraph 14.3 and annex 6);
- .12 note the report on the status of the Sub-Committee's planned outputs for the 2012-2013 biennium and take action as appropriate (paragraph 14.6 and annex 7);
- .13 note that matters related to the investigation report on the very serious casualty on board the containership **Chicago Express** were forwarded to the Correspondence Group on Intact Stability for further consideration (paragraph 16.3);
- .14 endorse the action taken by the Sub-Committee on updating the footnote to paragraph (6) of regulation 44 of the 1988 Load Lines Protocol (paragraph 16.6); and
- .15 approve the report in general.

\*\*\*

## ANNEX 1

### JUSTIFICATION FOR THE EXPANSION OF THE OUTPUT "DEVELOPMENT OF GUIDELINES FOR VERIFICATION OF DAMAGE STABILITY REQUIREMENTS FOR TANKERS"

#### The issue

1 Whenever a current loading condition of oil or chemical tankers or gas carriers deviates from their approved loading conditions, the operator and crew have to ascertain that the actual state of loading of the ship meets damage stability requirements, or needs to be modified in order to be brought into compliance. Insufficient provision of information and assistance to ships' crews undertaking this verification have been reported to IMO in the course of the past six years.

#### Scope of the proposal

2 The proposal for mandatory provision of stability instruments is to cover tankers that are subject to the requirements of MARPOL Annex I and the IBC and IGC Codes. The analysis to be conducted within the scope of the proposed new output should consider defining circumstances under which ships may be exempted from mandatory carriage requirements of stability instruments either by virtue of their trade patterns, or specific design features, etc.

#### Compelling need

3 Documents submitted to IMO in the course of the preceding six years repeatedly identified the complex issues and problems related to the ability of ships to demonstrate compliance with current mandatory instruments.

4 The concentrated inspection campaigns on tanker damage stability in 2010 identified lack of verification with the said mandatory instruments.

5 There is a need for consistency of application and verification of damage stability requirements for benefit of all interested parties.

6 The SLF Sub-Committee, through the work of the Correspondence Group on Development of Guidelines for Verification of Damage Stability Requirements for Tankers, and the working group established at SLF 54, concluded that the complexity of the problem determined that there was a compelling need to expand the existing output to include mandatory carriage of stability instruments on board tankers.

#### Analysis of the issues

7 Minimal associated legislative and administrative burden for Administrations would be caused by the planned amendments.

8 The additional cost of provision of mandatory stability instruments to ensure verification of compliance with current mandatory instruments will be less than the cost associated with limitations in loading which may be otherwise imposed.

9 Rapid and accurate evaluation of loading conditions will reduce the burden on the ship's Master.

### **Benefit that would accrue from the proposal**

- 10 The following benefits for tankers would accrue from this proposal:
- .1 it will ensure that a commonly agreed international performance standard will be applied on a worldwide basis;
  - .2 it is expected to provide greater assurance of verification of damage stability requirements contained within current mandatory instruments;
  - .3 it will maximize the flexibility in the trade of oil and chemical tankers and gas carriers; and
  - .4 it will ease the burden on the ship's Master to verify the stability compliance during operation of the ship.

### **Priority and target completion date**

11 The proposal aims at improving safety of tankers, and therefore should be assigned a high-priority. A target completion year of 2013 is proposed.

### **Is the subject within the scope of IMO's objectives?**

12 The substantive part of the proposal is already subject of output 2.0.1.3 "Development of guidelines for verification of damage stability requirements for tankers" in the High-level Action Plan of IMO (resolution A.1038(27)).

### **Relation to the Strategic Plan for the Organization and the High-level Action Plan**

13 The proposal aims to contribute to:

Strategic Direction	2
High-level Action	2.0.1.3

### **Does adequate industry standard exist?**

14 Several commonly accepted standards are currently in use, e.g., IACS UR L5 Rev.2 Corr.1, November 2006, "On board Computers for Stability Calculations", ISO 16155 Standard and possibly others, however they are not controlled by any current IMO instrument.

15 Despite that the former of the above-mentioned standards has been already adopted as a basis for the current IMO guidance (chapter 4 of part B of the IS Code), the current situation necessitates development of a uniform standard to be adopted on an international basis.

### **Do the benefits justify the proposed action?**

16 The Sub-Committee is of the view that the benefits listed in paragraph 9 above justify the proposed action in an exhaustive way.

### **The achievability in the number of sessions**

17 Completion of this output may require one session.

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## ANNEX 2

### DRAFT AMENDMENTS TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966, AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO

#### ANNEX I

#### Regulations for determining load lines

#### Chapter III Freeboards

#### Regulation 27 – Types of ships

##### *Regulation 27(11) – Initial condition of loading*

1 The first sentence of paragraph (b)(iv) is replaced by the following:

"50% of the ships' total capacity of tanks and spaces fitted to contain each type of consumables and stores is allowed for".

2 After the existing paragraph (b)(iv), a new paragraph (b)(v) is inserted as follows:

"(v) Ballast water tanks shall normally be considered to be empty and no free surface correction shall be made for them.",

and the existing paragraphs (b)(v) and (b)(vi) are re-numbered as (b)(vi) and (b)(vii), accordingly.

3 The renumbered paragraph (b)(vi) is replaced by the following:

"(vi) Alternative treatment for free surface may be considered when developing the final condition for application of damage specified in regulation 27(12):

(aa) Method 1 (appropriate to virtual corrections). The virtual centre of gravity for the initial condition is determined as follows:

- i. the loading condition shall be developed in accordance with paragraphs (i) to (iv);
- ii. the correction for the free surfaces is added to the vertical centre of gravity;
- iii. one virtual initial condition with all compartments empty is generated on summer load line draught with level trim, using the vertical centre of gravity from the above loading condition; and
- iv. the damage cases will be checked for compliance with the damage stability criteria using the above initial condition.

- (bb) Method 2 (appropriate to the use of actual free surface moments according to the assumed tank fillings for damage case). The virtual centre of gravity for the initial condition is determined as follows:
- i. the loading condition shall be developed in accordance with paragraphs (i) to (iv);
  - ii. one virtual initial condition for each damage case with liquid filled compartments may be generated on summer load line draught with level trim, using the initial virtual condition with filled compartments generated on summer load line draught with level trim. Using the vertical centre of gravity and free surface correction from the above loading condition separate calculations for each damage case are performed, only the liquid filled compartments to be damaged are left empty before damage; and
  - iii. the damage cases will be checked for compliance with the damage stability criteria using above initial conditions (one initial condition for each damage case)."

***Regulation 27(13) – Condition of equilibrium***

4 A new paragraph (g) is added after the existing paragraph (f), as follows:

- "(g) Compliance with the residual stability criteria specified in paragraphs (a), (c), (d) and (e) above is not required to be demonstrated in service loading conditions using a stability instrument, stability software or other approved method."

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**ANNEX 3**

**DRAFT MSC RESOLUTION\***

**ADOPTION OF AMENDMENTS TO THE GUIDELINES FOR THE DESIGN AND  
CONSTRUCTION OF OFFSHORE SUPPLY VESSELS, 2006  
(RESOLUTION MSC.235(82))**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.469(XII) by which the Assembly adopted the Guidelines for the design and construction of offshore supply vessels (OSV Guidelines),

RECALLING FURTHER resolution MSC.235(82), by which the Committee, at its eighty-second session, adopted the Guidelines for the design and construction of offshore supply vessels, 2006 (2006 OSV Guidelines), superseding the OSV Guidelines adopted by resolution A.469(XII),

RECOGNIZING the need to upgrade the damage stability standard for larger offshore supply vessels,

HAVING CONSIDERED, at its [ninetieth session], amendments to the 2006 OSV Guidelines, proposed by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its fifty-fourth session,

1. ADOPTS amendments to the Guidelines for the design and construction of offshore supply vessels, 2006, the text of which is set out in the Annex to the present resolution;
2. INVITES Governments to take appropriate steps to give effect to the annexed amendments to the 2006 OSV Guidelines.

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\* The covering draft MSC resolution was prepared by the Secretariat following the request of the Sub-Committee (see paragraph 7.8).

ANNEX

**AMENDMENTS TO THE GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF  
OFFSHORE SUPPLY VESSELS, 2006 (RESOLUTION MSC.235(82))**

**Section 1.2 Definitions**

1 In paragraph 1.2.4, the words ""breadth (B) of a vessel," are inserted after the words ""length (L) of a vessel",."

**Section 3.2 Damage assumptions**

2 Paragraphs 3.2.2 and 3.2.3 are replaced by the following:

"3.2.2 The assumed extent of damage should be as follows:

.1 longitudinal extent:

for vessels with length (L) not greater than 43 m: 10% of L  
for vessels with length (L) greater than 43 m and less than 80 m: 3 m plus 3% of L  
for vessels with length (L) from 80 m to 100 m:  $1/3L^{2/3}$

.2 transverse extent:

for vessels with length (L) less than 80 m: 760 mm  
for vessels with length (L) from 80 m to 100 m: B/20, but not less than 760 mm

The transverse extent should be measured inboard from the side of the vessel perpendicularly to the centreline at the level of the summer load waterline.

.3 vertical extent:

from the underside of the cargo deck, or the continuation thereof, for the full depth of the vessel.

3.2.3 For vessels with length (L) less than 80 m, a transverse watertight bulkhead extending from the vessel's side to a distance inboard of 760 mm or more at the level of the summer load line joining longitudinal watertight bulkheads may be considered as a transverse watertight bulkhead for the purpose of the damage calculations. For vessels with length (L) from 80 m to 100 m, a transverse watertight bulkhead extending from the vessel's side to a distance inboard of B/20 or more (but not less than 760 mm) at the level of the summer load line joining longitudinal watertight bulkheads may be considered as a transverse watertight bulkhead for the purpose of the damage calculations."

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**ANNEX 4**

**DRAFT LL.3 CIRCULAR**

**UNIFIED INTERPRETATIONS OF THE 1966 LOAD LINE CONVENTION AND  
THE 1988 LOAD LINE PROTOCOL AS MODIFIED BY RESOLUTION MSC.143(77)**

1 The Maritime Safety Committee, at its [ninetieth session (16 to 25 May 2012)], approved unified interpretations of the 1966 LL Convention, as set out in annex 1, and the 1988 LL Protocol as modified by resolution MSC.143(77), as set out in annex 2, with a view to providing more specific guidance for the application of requirements concerning guard rails of the 1966 LL Convention and the 1988 LL Protocol, prepared by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its fifty-fourth session.

2 Member Governments are invited to use the annexed unified interpretations as guidance when applying relevant provisions of the 1966 LL Convention and the 1988 LL Protocol as modified by resolution MSC.143(77), [on or after *date of approval of the circular*] and to bring the interpretations to the attention of all parties concerned.

3 The attached interpretations revise the unified interpretations of regulation 25(2) and (3) of the 1966 LL Convention as contained in LL.3/Circ.69.

\* \* \*

ANNEX 1

UNIFIED INTERPRETATIONS OF THE 1966 LL CONVENTION

Regulation 25(2) and (3) – Protection of the crew

- 1 Fixed, removable or hinged stanchions should be fitted about 1.5 m apart.
- 2 At least every third stanchion should be supported by a bracket or stay. In lieu of this, flat steel stanchions should be of increased breadth as given in figure 1, and aligned with member below deck, unless the deck plating thickness exceeds 20 mm.
- 3 Wire ropes may only be accepted in lieu of guard rails in special circumstances and then only in limited lengths.
- 4 Lengths of chain may only be accepted in lieu of guard rails if they are fitted between two fixed stanchions and/or bulwarks.
- 5 The openings between courses should be in accordance with regulation 25(3) of the Convention.
- 6 Wires should be made taut by means of turnbuckles.
- 7 Removable or hinged stanchions should be capable of being locked in upright position.

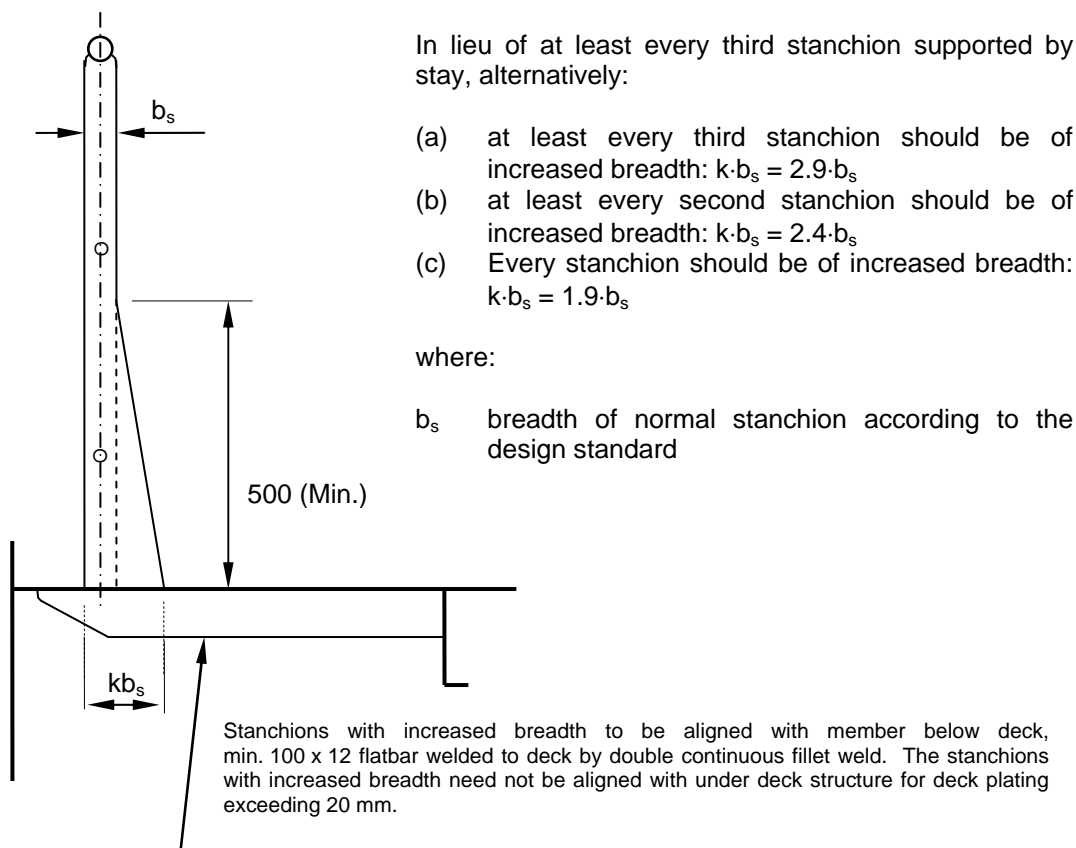


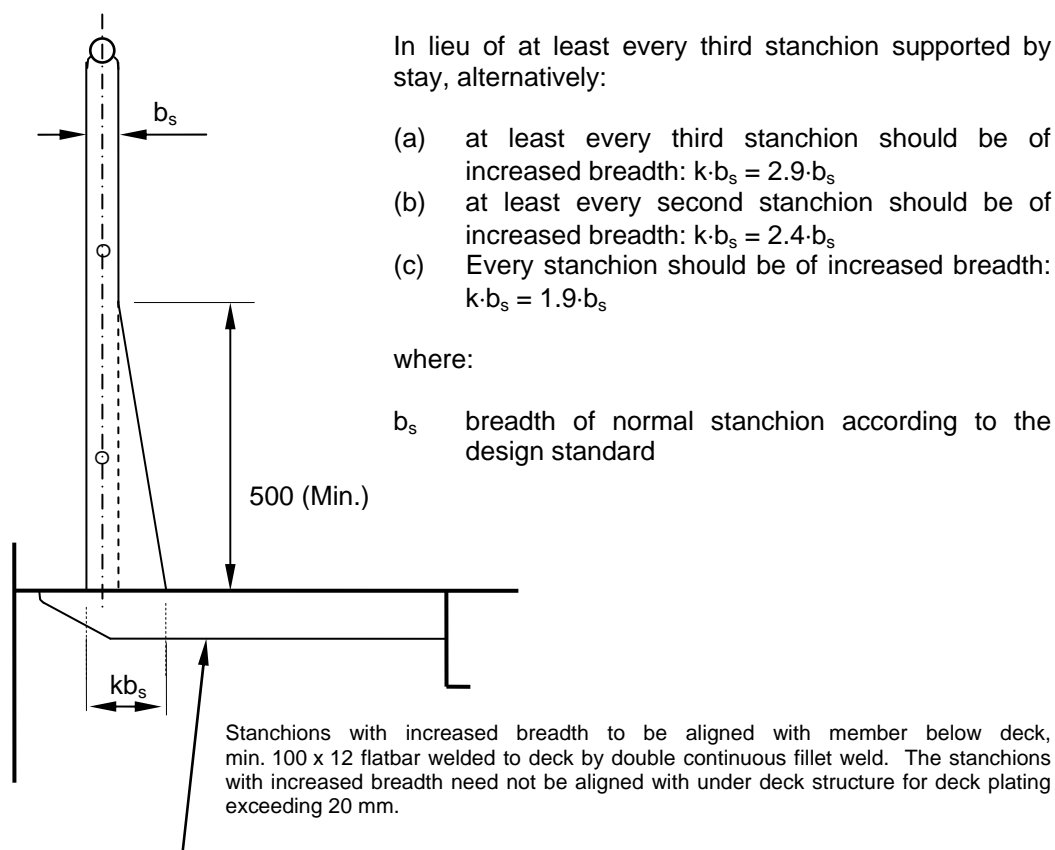
Figure 1 – Guard rail stanchion of increased breadth, welded to deck with double continuous fillet weld with leg size of minimum 7 mm or as specified by the design standard

ANNEX 2

**UNIFIED INTERPRETATIONS OF THE 1988 LL PROTOCOL  
AS MODIFIED BY RESOLUTION MSC.143(77)**

**Regulation 25(2) and (3) – Protection of the crew**

- 1 Fixed, removable or hinged stanchions should be fitted about 1.5 m apart.
- 2 At least every third stanchion should be supported by a bracket or stay. In lieu of this, flat steel stanchions should be of increased breadth as given in figure 1, and aligned with member below deck, unless the deck plating thickness exceeds 20 mm.
- 3 Wire ropes may only be accepted in lieu of guard rails in special circumstances and then only in limited lengths.
- 4 Lengths of chain may only be accepted in lieu of guard rails if they are fitted between two fixed stanchions and/or bulwarks.
- 5 The openings between courses should be in accordance with regulation 25(3) of the Convention.
- 6 Wires should be made taut by means of turnbuckles.
- 7 Removable or hinged stanchions should be capable of being locked in upright position.



**Figure 1 – Guard rail stanchion of increased breadth, welded to deck with double continuous fillet weld with leg size of minimum 7 mm or as specified by the design standard**

**Regulation 25(3)(b) – Protection of the crew**

As alternate arrangements, flat steel stanchions should be of increased breadth, as given in figure 1, and aligned with member below deck unless the deck plating thickness exceeds 20 mm.

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ANNEX 5

BIENNIAL AGENDA FOR THE 2012-2013 BIENNIUM AND ITEMS ON THE COMMITTEE'S POST-BIENNIAL AGENDA THAT FALL UNDER THE PURVIEW OF THE SUB-COMMITTEE

SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)*					
PLANNED OUTPUTS 2012-2013 (resolution A.1038(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number**	Description				
1.1.2.2	<b>Consideration of IACS unified interpretations</b>	MSC		SLF	Ongoing
2.0.1.3	<b>Development of guidelines for verification of damage stability requirements for tankers</b>	MSC	SLF	DE STW	<del>2012</del> 2013
<del>2.0.1.4</del>	<del>Development of guidelines for verification of damage stability requirements for bulk carriers</del>	<del>MSC</del>	<del>SLF</del>	<del>DE STW</del>	<del>2013</del>
2.0.1.5	<b>Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention</b>	MSC	SLF	DE STW	2013
5.1.1.1	<b>Development of guidelines on safe return to port passenger ships</b>	MSC	SLF		2013
5.1.1.2	<b><del>Revision</del> <del>Review</del> of the damage stability regulations for ro-ro passenger ships***</b>	MSC	SLF		2013
5.2.1.1	<b>Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code</b>	MSC	SLF		2013
<del>5.2.1.5</del>	<del>Development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships</del>	<del>MSC</del>	<del>SLF</del>		<del>2013</del>

\* Items printed in bold have been selected for the draft provisional agenda for SLF 55, as shown in annex 6. Struck-out text indicates proposed deletions and shaded text indicates proposed changes. Deleted outputs will be maintained in the report on the status of planned outputs.

\*\* Numbers refer to the planned outputs for the 2012-2013 biennium, as set out in resolution A.1038(27).

\*\*\* Modification decided by A 27 (see resolution A.1038(27)).

<b>SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)*</b>					
<b>PLANNED OUTPUTS 2012-2013 (resolution A.1038(27))</b>		<b>Parent organ(s)</b>	<b>Coordinating organ(s)</b>	<b>Involved organ(s)</b>	<b>Target completion year</b>
<b>Number**</b>	<b>Description</b>				
5.2.1.14	<b>Development of second generation intact stability criteria</b>	MSC	SLF		2012 2013
5.2.1.15	<b>Revision of SOLAS chapter II-1 subdivision and damage stability regulations</b>	MSC	SLF		2012 2013
5.2.1.16	<b>Development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships</b>	MSC	SLF		2012
5.2.1.26	<b>Development of amendments to part B of the 2008 IS Code on towing and anchor handling operations</b>	MSC	SLF		2013

ITEMS ON THE COMMITTEE'S POST-BIENNIAL AGENDA THAT FALL UNDER THE PURVIEW OF THE SUB-COMMITTEE\*

MARITIME SAFETY COMMITTEE								
ACCEPTED POST-BIENNIAL OUTPUTS				Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Timescale (sessions)	Remarks
No.	Reference to Strategic Directions	Reference to High-level Actions	Description					
1	5.2.1	5.2.1.14	Development Finalization of second generation intact stability criteria	MSC	SLF		2014	SLF 53/19, paragraph 3.33
2	2.0.1	2.0.1.5	Development Finalization of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention	MSC	SLF		2014	MSC 89/25, paragraph 22.34
4	5.2.1	5.2.1.26	Development Finalization of amendments to part B of the 2008 IS Code on towing and anchor operations	MSC	SLF		2014	MSC 88/26, paragraph 23.36

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\* The target completion year of the items on the Committee's post-biennial agenda is beyond the 2012-2013 biennium.



**ANNEX 6**

**DRAFT PROVISIONAL AGENDA FOR SLF 55**

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Development of second generation intact stability criteria
  - 4 Development of guidelines on safe return to port for passenger ships
  - 5 Development of guidelines for verification of damage stability requirements for tankers
  - 6 Review of the damage stability regulations for ro-ro passenger ships
  - 7 Revision of SOLAS chapter II-1 subdivision and damage stability regulations
  - 8 Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention
  - 9 Development of amendments to part B of the 2008 IS Code on towing and anchor handling operations
  - 10 Consideration of IACS unified interpretations
  - 11 Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code
  - 12 Biennial agenda and provisional agenda for SLF 56
  - 13 Election of Chairman and Vice-Chairman for 2014
  - 14 Any other business
  - 15 Report to the Maritime Safety Committee

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**ANNEX 7**

**REPORT ON THE STATUS OF PLANNED OUTPUTS FOR THE 2012-2013 BIENNIUM**

Planned output number in the High-level Action Plan for 2012-2013	Description	Target completion year	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
1.1.2.2	Consideration of IACS unified interpretations	Continuous	MSC		SLF	Ongoing		MSC 78/26, paragraph 22.12; SLF 54/17, section 11
2.0.1.3	Development of guidelines for verification of damage stability requirements for tankers	2012 2013	MSC	SLF	DE STW	In progress		MSC 83/28, paragraphs 25.50 to 25.52; SLF 54/17, section 5
2.0.1.4	Guidelines for verification of damage stability requirements for bulk carriers	2013	MSC	SLF	DE STW	Completed		MSC 83/28, paragraphs 25.50 to 25.52; SLF 53/19, section 8
2.0.1.5	Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention	2014 (for SLF) 2014 (for MSC)	MSC	SLF	DE STW	In progress		MSC 89/25, paragraph 22.34; SLF 54/17, section 9
5.1.1.1	Development of guidelines on safe return to port passenger ships	2013	MSC	SLF		In progress		MSC 81/25, paragraph 23.54; SLF 54/17, section 4

Planned output number in the High-level Action Plan for 2012-2013	Description	Target completion year	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
5.1.1.2	Review of damage stability regulations for ro-ro passenger ships	2013	MSC	SLF		In progress		MSC 84/24, paragraph 22.59; SLF 54/17, section 6
5.2.1.1	Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code	2013	MSC	SLF		In progress		MSC 89/25, paragraph 22.32; SLF 54/17, section 12
5.2.1.5	Development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships	2013	MSC	SLF		Completed		MSC 89/25, paragraph 22.33; SLF 54/17, section 13
5.2.1.14	Development of second generation intact stability criteria	2014	MSC	SLF		In progress		MSC 85/26, paragraph 12.7; SLF 54/17, section 3
5.2.1.15	Revision of SOLAS chapter II-1 subdivision and damage stability regulations	<del>2012</del> 2013	MSC	SLF		In progress		MSC 85/26, paragraph 23.35; SLF 54/17, section 8
5.2.1.16	Development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships	2012	MSC	SLF		Completed		MSC 85/26, paragraph 23.32; SLF 54/17, section 7
5.2.1.26	Development of amendments to part B of the 2008 IS Code on towing and anchor handling operations	2014	MSC	SLF		In progress		MSC 88/26, paragraph 23.36; SLF 54/17, section 10

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## ANNEX 8

### STATEMENT BY THE DELEGATION OF THE ISLAMIC REPUBLIC OF IRAN

"Thank you Mr. Chairman

"Mr Chairman, distinguished delegates,

I would like to inform the distinguished delegates and IMO's Secretariat present at the SLF Sub-Committee's fifty-fourth session that, a sad terrorist incident has happened on 11 January 2012 in Tehran. Unfortunately, in this blind attack another prominent Iranian scientist, Mr. Mostafa Ahamdi Roshan, along with another colleague were innocently killed and one other was seriously injured.

As you all may be aware, this is not the first time that the Iranian scientists came under malicious terrorist attacks. Previously, assassination attempts were also carried out separately against two Iranian prominent physicists and Professors of the universities, Mr. Majid Shahriari and Mr. Fereydoun Abbasi Davani on 29 November 2010, as a result of which Mr. Shahriari was martyred and Mr. Abbasi Davani and his wife were seriously injured. In the same series of terrorist attacks, another Iranian scientist and Professor of Tehran University, Mr. Massoud Ali Mohammadi, was martyred in front of his house on 12 January 2010.

We remember that, at some technical IMO meetings, terrorist attacks in some countries targeting the innocent people have been truly condemned, even though they have occurred in land and no at sea. That is true that, terrorism in all its forms and manifestations constitutes one of the most serious threats to international peace and security, and it has to be condemned in the strongest terms by all States and international organizations. If the IMO's mandate is to promote safety and security for peaceful international maritime trade, then we could understand why the Member States of this organization should be very regretful and sensitive about all other forms of terrorism on land, in the air or at sea, and it doesn't matter where they have happened and continue to happen, whether in the Russian Federation, or India in 2011, or in Iran since 2010.

In line with H.E Ban Ki moon, the Secretary General of UN and many States, the Islamic Republic of Iran condemns in strongest terms such unacceptable dirty terrorisms in all forms and manifestations happening everywhere in the world and would seek for all possible legal and political actions to suppress such unlawful acts against the human being and international peace. It should also be noted that the nation of the Islamic Republic of Iran found their ways and proudly continues to be independently developed in all aspects. Surely, in this regard, killing innocent citizens, including the academic scientists, could not stop and deprive them from pursuing their legitimate rights and peaceful activities in various fields.

Thank you Mr Chairman"

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