IMO SLF 53 Agenda Preview

The 53rd session of IMO SLF Sub-Committee will be held on 10 to 14 January 2011

17th December 2010

This publication, produced by Lloyd's Register, provides an overview of the agenda for SLF 53, and summarises all the documents submitted for discussion at this meeting.

It contains details of all papers submitted up to 16th December 2010.

Synopses have only been included for each agenda item.

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Introduction

The 53rd session of the IMO Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety will be held 10th to 14th January 2011 at the IMO Headquarters in London, the United Kingdom.

The subjects under discussion which are relevant to the work of Lloyd's Register are summarised below. Due attention should be made to the “Implication” and “Application” sections given under each subject.

Readers should note that regulations relating to SOLAS are generally, unless expressly provided otherwise, applicable to ships (cargo ships of 500 gross tonnage and above, and passenger ships irrespective of tonnage) engaged on international voyages. Similarly, Load Line regulations are applicable to ships over 24 metres in length which are engaged on international voyages.

Development of new generation intact stability criteria (agenda item 3)

Target completion date: 2012

Background: The SLF Sub-Committee has been working on intact stability criteria for the following phenomena:

- dead ship stability
- parametric rolling
- surf-riding and broaching; and
- pure loss of stability.

Three levels of assessment are to be proposed with each level becoming more complex, but more accurate. A pass at one level will mean that other levels will automatically be passed; so a ship complying with the simplest level (level 1) will not have to carry out difficult calculations at levels 2 or 3.

There is a proposal (SLF 53/3/2) that the work should be expanded to also cover excessive GM which, for certain ship types, is leading to excessive roll in conjunction with high acceleration.

Since the last session, an intersessional Correspondence Group has been trying to come up with some criteria for levels 1 and 2 for the identified stability issues (other than excessive GM). Details of the proposals can be found in document SLF 53/INF.10, a summary is given in SLF 53/3/1.

Further proposals and investigations relating to the subject are contained in other submissions on this topic.

The Sub-Committee is expected to establish a Working Group to discuss these matters in detail.

LR position: In general LR is supportive of the initiative to investigate excessive GM. The extent of the problem is not fully known as instances may not be reported and
investigated. LR will closely follow the development of the new criteria and will provide feedback on the usability of the proposed criteria where possible.

The level 1 criteria are meant to be very simple and therefore require very little work to demonstrate compliance. The idea of opening up judgement to Administrations reduces clarity and would increase inconsistency in application. LR would not support waiving criteria for selected ships.

LR appreciates the work done by the various members, but is concerned that there is little guidance on what to do with the numbers obtained from the equations. In LR's experience instructions on the use of formulae need to be clear, otherwise there is a danger that the purpose of the regulation will not be achieved.

**Implications:** When the work is complete there will be new intact stability criteria to be satisfied. This will require extra, potentially very complex, calculations to be done.

**Application:** To all new ships on which have to comply with SOLAS or Load Line from a date yet to be determined.

**(Documents submitted)**

**SLF 53/3 (Chairman of Working Group) - Report of the Working Group at SLF 52 (part 2)**
This document provides part 2 of the report of the Working Group on Intact Stability established at SLF 52.

**SLF 53/3/1 (Japan) - Report of the Correspondence Group on Intact Stability**
This document contains the report of the Correspondence Group on Intact Stability.

**SLF 53/3/2 (Germany) - Incorporation of excessive stability in the list of stability failure modes as separate item**
This document refers to the matrix containing the defined stability failure modes and the different levels for stability assessment and proposes to extend the matrix with regard to partial stability failures, i.e. large accelerations.

**SLF 53/3/3 (RINA) - Activities of the Dynamic Stability Task Group of the Society of Naval Architects and Marine Engineers**
This document provides information about ongoing activities of the Dynamic Stability Task Group established by the Society of Naval Architects and Marine Engineers, which is intended as a long-range, cross-disciplinary study of intact dynamic stability for vessels that operate in significant sea conditions, which will directly support the work of IMO.

The criterion for the angle of heel in turns in the International Code on Intact Stability, 2008 (2008 IS Code), takes no account of the vessels' turning ability, and assumes a turning diameter that is double that recommended by the adopted Standards For Ship Manoeuvrability. In addition, the formula required to be employed is not valid for some hull types, and also this criterion conflicts with the requirements of the 2000 HSC Code. Furthermore, the present criterion guarantees no minimum stability margin in full-helm turns. To address these issues, a proposed amendment to the 2008 IS Code is put forward.
SLF 53/3/5 (Poland) - Comments on the structure of new generation intact stability criteria (report of the Correspondence Group)
This document contains a summary of the discussion made so far on the general approach to new generation intact stability criteria in terms of the structure of the criteria.

SLF 53/3/6 (Poland) - Comments on the report of the Working Group at SLF 52 (part 2)
This document contains comments by Poland on the report of the Working Group at SLF 52 (part 2) related to the dead ship condition.

SLF 53/3/7 (the United States) - Comments document SLF 53/INF.10
This document comments on proposed parametric roll level 1 vulnerability criteria and suggests refinements to this proposed criteria for this failure mode.

SLF 53/3/8 (Japan and the United States) - Comments document SLF 53/INF.10
This document comments on proposed surf-riding and broaching levels 1 and 2 vulnerability criteria and suggests refinements to this proposed criteria and draft specification for direct stability assessment for this failure mode.

SLF 53/3/9 (Italy) - Comments on documents SLF 53/3/1 and SLF 53/INF.10
This document provides comments related to the report of the Correspondence Group (SLF 53/3/1 and SLF 53/INF.10), in particular concerning first level vulnerability assessment methods for parametric roll.

SLF 53/INF.3 (Finland and Norway) - A procedure for determining a GM limit curve based on an alternative model test and numerical simulations
This document presents an alternative approach to the application of the weather criterion.

SLF 53/INF.8 (Sweden) - Sample calculations on the Level 2 vulnerability criteria for parametric roll
This document presents sample calculations on the proposed Level 2 criteria regarding parametric roll that was submitted by Japan and the United States to the Correspondence Group on Intact Stability.

SLF 53/INF.10 (Japan) - Information collected by the Correspondence Group on Intact Stability
This document contains information collected by the intersessional Correspondence Group on Intact Stability regarding new generation intact stability criteria.

Guidelines to enhance the safety of small fishing vessels (agenda item 4)

Target completion date: 2011

Background: Draft guidelines to assist Flag Administrations to implement the recommendations for decked fishing vessels of less than 12 metres length and undeked fishing vessels were agreed at the last session of SLF, and were sent to the FSI Sub-Committee for comment. The FSI Sub-Committee when it met in July 2010 had no substantial comments on the document and this session of SLF is expected to finalise the
text for submission to MSC 89 for approval. The Sub-Committee is expected to establish a Working Group to discuss this subject together with agenda item 11.

**LR position:** To monitor discussions.

**Implications:** The draft guidelines are meant to assist with the implementation of the previously agreed draft recommendations.

**Application:** Fishing vessels less than 12 metres length and undecked fishing vessels.

*(Document submitted)*

No documents have been submitted (as at 16 Dec 2010). The guidelines as agreed at the last session of SLF will be used as a base document which will be modified to include the FSI changes.

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**Guidelines to improve effect of the 1969 TM Convention on ship design and safety (agenda item 5)**

**Target completion date:** 2011

**Background:** A Correspondence Group was established at the last meeting of the SLF Sub-Committee to further discuss the options available to improve the safety of ships through the Tonnage Convention and to further assess the benefits and disadvantages of the previously identified options. These options were:

- review and update document TM.5/Circ.5;
- promote the use of net tonnage for calculating fees;
- establish a new tonnage parameter for adjusted net tonnage; and
- establish a new tonnage parameter for an adjusted gross tonnage.

The Correspondence Group was also tasked with identifying the extent to which the options would address the issues of accounting for deck cargo and encouraging more spacious crew accommodation.

The report of the Correspondence Group is provided in document SLF 53/5. The Correspondence Group is proposing that TM.5/Circ.5 should be reviewed and updated as necessary, with amendments to the Tonnage Convention clearly identified where these are considered to be essential.

During the work of the Correspondence Group further new tonnage parameters were proposed and assessed along with those previously identified.

The Sub-Committee will be invited to consider the report of the Correspondence Group (SLF 53/5), together with any relevant documents submitted to this session. The Sub-Committee will also be invited to establish a Drafting Group to draft an appropriate justification for a new work item for amending TM.5/Circ.5.

**LR position:** LR supports the proposal to review and update TM.5/Circ.5, and will closely monitor the discussions in plenary.
Implications: Implications are difficult to determine before the Sub-Committee has made a decision. Any amendments to TM.5/Circ.5 are not expected to be made retroactive and would apply to new ships only. Until the amendments are made it is not possible to identify how they will affect new designs. Some of the proposals for a new tonnage parameter will require a new tonnage calculation and new certification for all ships.

Application: Depends on the decision of the Sub-Committee. Currently there is no decision and no clearly identified application.

(Documents submitted)

SLF 53/5 (the United States) - Report of the Correspondence Group
This document provides the Correspondence Group's report on the work to further develop and finalize options to improve the effect on ship design and safety of the 1969 TM Convention.

SLF 53/5/1 (Norway and the United States) - Comment on the report of the Correspondence Group
This document provides the Correspondence Group's report on the work to further develop and finalize options to improve the effect on ship design and safety of the 1969 TM Convention.

Standards on time-dependant survivability of passenger ships in damaged condition (agenda item 6)

Target completion date: 2011

Background: The subject of the time taken for a passenger ship to sink was first discussed at SLF 48 (held in September 2005) following the decision (by MSC 78, May 2004) that a ship is to remain habitable for a minimum of 3 hours after a casualty to allow for safe and orderly abandonment. There is a need to be able to verify that computer simulations of the flooding of passenger ships in the damaged condition accurately predict the response of the ship after damage.

Two information documents have been submitted one containing the interim result of the EU FLOODSTAND project and the other reporting on an investigation into the direct calculations given in resolution MSC.245(83). In document SLF 53/INF.6 a physical model of a cross flooding duct is compared to a computer model and the results for various calculations compared.

The Sub-Committee will be invited to consider the matter, taking into account any relevant documents submitted to this session.

LR position: To monitor any developments.

Implications: To be determined when there is something substantial proposed.

Application: Passenger ships which need to analyse the time to flood and the characteristics of the vessels during flooding.
(Documents submitted)

SLF 53/INF.2 (Finland) - Research project on internal flooding and management of stability and crises
This document contains intermediate information on an ongoing research project FLOODSTAND, which stands for Integrated Flooding Control and Standard for Stability and Crises Management.

SLF 53/INF.2/Corr.1 (Finland) - Research project on internal flooding and management of stability and crises - Corrigendum
Figure 16, in annex 2 to document SLF 53/INF.2, is replaced.

SLF 53/INF.6 (Japan) - Research on the application of computational fluid dynamics (CFD) to an alternative to the evaluation method for cross-flooding arrangements
This document contains intermediate information on an ongoing research in Japan with regard to the application of computational fluid dynamics (CFD) as an alternative to the evaluation method for cross-flooding arrangements.

Stability and sea-keeping characteristics of damaged passenger ships in a seaway when returning to port by own power or under tow (agenda item 7)

Target completion date: 2011

Background: The “safe return to port” discussions will continue in the SLF Sub-Committee. The interim explanatory notes for the assessment of passenger ships system’s capabilities after a fire or flooding casualty have been published (SLF 53/7 refers). The intersessional Correspondence Group has further discussed the subject of information which should be available to the master to help him with the decision whether to try and return to port or abandon ship as required by SOLAS II-1/19.5, and their report is contained in document SLF 53/7/1.

The probabilistic damage stability calculations contained in SOLAS Chapter II-1, Part B-1 are based on three theoretical initial conditions. This may lead to the master making an incorrect decision in an emergency situation. There is a need, therefore, to have the ability to calculate stability based on the actual loading at the time of the incident. There will be discussion about whether this ability should be ship or shore based. Two alternative amendments to SOLAS II-1/19 are proposed (one requiring an onboard computer and one permitting shore based support) to mandate the provision of a stability computer.

The information which the proposed guidelines expect to be provided to the master currently includes the following:

- GM transverse in any loading and flooded condition;
- GZ range in any loading and flooded condition;
- area under the GZ curve in any loading and flooded condition;
- maximum and actual values of free surface moments of all tanks and spaces below the bulkhead deck;
- location of flooding level indicators;
- draughts forward, midship and aft;
- angles of heel and trim;
- the effect of flooding and heel and trim angles on:
  - operation of essential equipment;
  - escape routes and evacuation times; and
  - effective deployment of LSA;
- natural roll period;
- instruction on the measurement/estimation of wave period;
- instruction on the determination of wave period of encounter;
- any known sensitivity to synchronous and parametric rolling;
- profile areas of the ship, above and below the waterline, and means to establish their centres in order to estimate the effects of wind pressure;
- global bending moment and sheer forces;
- available pump capacities serving all spaces below the bulkhead deck;
- cross flooding arrangements and time for equalization;
- fuel consumption data accounting for estimates of increased resistance due to flooding;
- if intact stability has been calculated on an other than “normal” basis;
- arrangements for towing; and
- ship specific particulars as specified in MSC.1/Circ.1245.

This information will be further considered by the Sub-Committee.

The Sub-Committee will be invited to consider the outcome of FP 54 and MSC 87 (SLF 53/7) and the report of the Correspondence Group (SLF 53/7/1), together with any relevant documents submitted to this session. The Sub-Committee is expected to establish a Working Group to deal with this subject in conjunction with agenda items 10, 12 and 14.

**LR position**: LR favours the ability to provide stability information from a shore based location as well as on board (option 2 of Annex 1 to SLF 53/7/1). This gives flexibility to owners about how the information is provided. Computer systems provided on board ships will need to have crew trained in their use. The complexity of passenger ships means that this will not be a straight forward matter. It is noted that currently there is no provision for the approval of any computer stability system. This is of concern as a lack of approval could lead to doubts about the accuracy of the information provided.

**Implications**:
- **Builders/Designers**: An onboard stability computer, programmed with the ship data and able to provide the information requested in the guidelines will need to be provided. This will involve extra cost.
- **Owners**: Owners will need to ensure that crew are able to understand how to use the stability computer and what the results it produces means. Care will be needed when data is entered about the loading condition to ensure that it is correctly done.
- **Flag Administrations and ROs**: Flag Administrations and ROs will have to confirm that a stability computer is provided (or a shore based equivalent) and that the required information for the master is available.

**Application**: To passenger ships with a length greater than 120 metres or having 3 or more main fire zones. An application date for the proposed SOLAS amendment has not been determined.
(Documents submitted)

SLF 53/7 (Secretariat) - Outcome of FP 54 and MSC 87
This document provides the outcome of FP 54 and MSC 87 regarding the Explanatory Notes for the application of the safe return to port requirements, which is relevant to the agenda item.

SLF 53/7/1 (the United Kingdom) - Operational information for masters of passenger ships for safe return to port by own power or under tow - Report of the SDS Correspondence Group
This document provides the report of the SDS Correspondence Group on operational information for masters of passenger ships for safe return to port by own power or under tow.

Guidelines for verification of damage stability requirements for tankers and bulk carriers (agenda item 8)

Target completion date: 2012

Background: Under the requirements contained in SOLAS, MARPOL, IBC Code and IGC Code, tankers and bulk carriers are required to carry cargoes in accordance with approved loading conditions which have been assessed for compliance with the applicable damage stability criteria. There is some concern that this is not being done.

At its last session (SLF 52, January 2010) the Sub-Committee agreed that both “design” and “operational” guidelines would be developed. “Design” guidance would cover the approval procedure for damage stability assessment to be used at the time of construction, “operational” guidance would cover information for the ship’s crew on the need to confirm compliance with damage stability and how such confirmation could be obtained. Guidelines for tankers were to be developed first.

Proposals covering both “design” and “operational” guidelines have been developed and submitted to this session of SLF. “Design” is, in general, covered by IACS Recommendation 110, which has been updated and submitted as document SLF 53/INF.9. On the “operational” side, proposals have been submitted by both flag and industry.

Clarification is sought on how damage stability should be treated under Load Line (regulation 27), whether conditions to the Tropical draught should be included, and on what is actually meant by the phrases “significant deviation” and “in accordance with”.

Documents have also been submitted concerning the use of computers on board ships, and the complexity of limiting GM/KG curves.

The Sub-Committee will be invited to consider these matters, taking into account the documents submitted to this session.

LR position: LR has been deeply involved in the development of the IACS Recommendation 110, which reflects LR standard practice for the approval of damage stability.
Document SLF 53/8 proposes that masters should contact the ship’s Classification Society if he is unable to demonstrate compliance with damage stability regulations. It should be noted that not all Flag Administrations delegate the calculation of damage stability to the Classification Society and in these circumstances the master will need to approach the Flag Administration directly for assistance.

LR considers that the Certificate of Fitness should simply include a further clause which identifies that approval has been granted for use of an approved loading instrument where one is present. The actual loading instrument details should be noted in the stability book/loading manual. In the event of an update or replacement of the instrument, the stability book can then be annotated accordingly by an attending surveyor without the need to re-issue a new Certificate of Fitness.

It should be noted that at this time the instrument may be Class approved, Administration approved or both. It is also not confirmed as to which Administrations will accept systems only approved by Class for this function, and so it is felt necessary for it to be clearly noted that transfer to another Flag Administration would not permit use of a Class approved loading instrument for this purpose until they had confirmed it in writing. Suggested wording for such a note in the Certificate of Fitness is as follows:

“Where it is required to load the ship other than in accordance with the loading conditions (or the curves of limiting KG), the Administration authorises the (Class) approved Loading Instrument referred to in the Stability Book to be used to verify compliance of the proposed loading condition using Type 3 (direct damage) functionality. Were the vessel to change Flag then the receiving Administration would need to confirm their acceptance of the above in writing.”

Regarding the evidence of stability compliance, LR considers that one sequentially page-numbered comprehensive report should be produced, covering the scope specified in the 2008 Intact Stability Code, part B, section 4, to avoid the possibility of collation of inappropriate data and to fully identify the loaded condition, resulting floating condition and stability compliance.

Vague phrases such as “in accordance with” and “significant deviation” should be avoided to ensure consistency in application.

Implications:

Builders/Designers: For some vessels the number of conditions contained in the stability booklet will have to be reviewed and probably extended to cover all possible alternative loading conditions if an approved stability computer is not provided. This may result in further work at the design stage in the preparation of the stability manual. Builders/Designers may now need to look more extensively at damage stability aspects. If they follow the proposed design guidelines there should be fewer non-compliances as all parties should be following the same procedure.

Owners: Owners will need to ensure that masters are aware of the need to confirm damage stability compliance before sailing. If new stability computers are provided then adequate training in their use will be required.

Flag Administrations and ROs: Flag Administrations and ROs may see an increase in the number of loading conditions needing short notice approval from damage stability aspects until alternative arrangements can be made. If owners decide to install new stability computers on existing ships there may be a large increase in work load to get them approved.
Application: All new and existing tankers (oil tankers, and chemical tankers) at this stage which have to comply with MARPOL, the IBC Code or the IGC Codes, from a date yet to be determined. Guidelines for bulk carriers will be developed after those for tankers have been agreed.

(Documents submitted)

SLF 53/8 (OCIMF and SIGTTO) - Draft Operational guidance for the verification of damage stability criteria for tankers
In response to the request from SLF 52, this document provides draft text for the further consideration by the Sub-Committee with regard to operational guidance on verification of damage stability for tankers.

SLF 53/8/1 (China) - Proposal on the guidelines for verification of damage stability requirements for tankers
This document provides information on outcomes of the investigation on loading and damage stability verification for tankers and makes proposals on the development of guidelines for damage stability verification.

SLF 53/8/2 (Norway and the United Kingdom) - Development of guidelines for the verification of damage stability on oil, chemical and gas tankers
This document comments on document SLF 53/8 by OCIMF and SIGTTO with regard to proposed operational guidelines for the verification of damage stability on oil, chemical and gas tankers.

SLF 53/8/3 (IACS) - Comments on Development of guidelines for the verification of damage stability on oil, chemical and gas tankers – Correct application of regulation 27 of the ICLL for damage stability calculations of tankers (oil tankers, chemical tankers and gas carriers) and damage stability verification on those tankers, to which tropical freeboard is assigned
This document comments on document SLF 53/8/2 by Norway and United Kingdom and describes the concerns caused by uncertainties contained in existing IMO instruments to be used as a basis for damage stability verification. In particular, the document invites the Sub-Committee to provide some clarification on the correct application of the International Convention on Load Lines (ICLL), 1966, regulation 27 for damage stability calculations of tankers (oil and chemical tankers and gas carriers).

SLF 53/8/4 (Iran) - Comments on Development of guidelines for the verification of damage stability on oil, chemical and gas tankers
This document provides comments on document SLF 53/8.

SLF 53/INF.9 (IACS) - Revised Guideline for scope of damage stability verification on new oil tankers, chemical tankers and gas carriers
This document provides at annex the Guideline for scope of damage stability verification on new oil tankers, chemical tankers, and gas carriers that has been revised by IACS as a result of informal comments received from the United Kingdom's Maritime and Coastguard Agency and the existing procedures used by, and the practical experience of, IACS members relating to damage stability calculations.

SLF 53/INF.11 (Spain) - Information on verification of damage stability requirements for tankers
This document provides information on outcomes of the investigation on damage stability verification for tankers and comments on document SLF 53/8.

Safety provisions applicable to tenders operating from passenger ships (agenda item 9)

Target completion date: 2012

Background: There is concern that tenders transferring passengers from passenger ships to the shore, where suitable berths are not available, are not meeting any minimum safety standards. While some craft are also lifeboats, and thus have to meet the requirements for lifeboats contained in the LSA Code Chapter IV and SOLAS Chapter III, others are not. The DE Sub-Committee, at its 53rd session (February 2010), drafted some guidelines for passenger ship tenders. These draft guidelines are intended to provide minimum standards for tenders which are not certified as lifeboats. The SLF Sub-Committee has been requested to review the stability related parts of the draft guidelines and refer any changes back to DE. The Sub-Committee will be invited to consider the outcome of the DE Sub-Committee (SLF 53/9) and any relevant documents submitted to this session.

LR position: LR welcomes the proposed guidelines which should improve the safety of passengers when they are being transferred from ship to shore and back. LR already issue a lifeboat / tender Safety Equipment Certificate together with a letter to the master when lifeboats are to be used as tenders. The certificate records the additional equipment which should be fitted prior to the lifeboat operating in tender mode and gives the operational limits which are dictated by the equipment provided.

Implications:
Builders/Designers/Manufacturers: Manufacturers of small craft used as tenders which are not tested as a “lifeboat“ will be expected to comply with the new guidelines. This will mean ensuring that the required equipment is provided.
Owners: Owners should be aware of the operational requirements contained in the guidelines which cover preparation, log book entries, stowage location, embarkation arrangements, refuelling and pollution prevention, manning, supervision and training, and operator certification. Owners should also ensure that the onboard equipment required is provided for each tender before it leaves the mother ship.
Flag Administrations and ROs: Flag Administrations and ROs should ensure at regular intervals that all tenders are suitably equipped in line with the guidelines.

Application: To tenders operating from passenger ships.

(Document submitted)

SLF 53/9 (Secretariat) - Outcome of DE 53
This document reports on the outcome of DE 53 with regard to the draft Guidelines for passenger ship tenders.
Review of damage stability regulations for ro-ro passenger ships (agenda item 10)

Target completion date: 2013

Background: This item was developed to assess whether the probabilistic damage stability requirements now contained in SOLAS chapter II-1 provide the same safety level as the older deterministic SOLAS requirements and the Stockholm Agreement. So far no definite proposals have been developed as there are a number of different research projects currently underway which have yet to report. A summary of these are given in document SLF 53/10/1. Further details of an EU project are presented in SLF53/INF.5, the results of which are expected in July 2011.

During the research work a further problem has been identified, the possibility of rapid capsize when a ship has a long lower hold. It is proposed that the terms of reference for the Correspondence Group are widened so that it can investigate this and any other potentially dangerous situations which are identified.

There is also a proposal, in document SLF 53/10, that definitions of “capsize” and “rapid capsize” be developed. Additionally it is proposed to extend the current application of SOLAS II-1/8 to cargo ships (other than tankers) which have a long lower hold. A further proposal is to amend this regulation to require emergency power and lighting, internal communication, signals or other emergency devices to remain operable in parts of the ship not flooded.

The Sub-Committee is expected to establish a Working Group to deal with this subject in conjunction with agenda items 7, 12 and 14.

LR position: If the proposals in document SLF 53/10 are supported the safety standard for cargo ships with long lower holds will be significantly raised. However, making SOLAS II-1/8 applicable to cargo ships as well will be a return to deterministic standards which the IMO decided to move away from. The requirement for certain systems to remain operable after flooding will require significant design changes. The introduction of wider side damages for passenger ro-ro ships with a long lower hold would appear to help reduce the difference between the old and new SOLAS requirements. LR will be closely monitoring the discussion in the Working Group is expect to be established and will contribute as appropriate.

Implications:

Builders / Designers: There is a potentially huge impact on smaller ro-ro passenger ships if the requirements to ensure that equipment remains operational after damage are agreed, document SLF 53/10 refers. This will lead to a redesign of all electrical systems. For ro-ro cargo ships with long lower holds the proposed amendments in document SLF 53/10 will result in the watertight subdivision being redesigned. The result could well be a reduced payload / lane meter capacity.

Owners: Owners will see a higher cost for new build vessels, especially for ro-ro cargo ships.

Flag Administrations and ROs: Flag Administrations and ROs will need instructions or guidance on how to examine or verify rapid capsize.

Application: Ro-ro passenger ships and ro-ro cargo ships with long lower holds.
(Documents submitted)

SLF 53/10 (RINA) - Review of the SOLAS 2009 damage stability regulations and the Explanatory Notes to the SOLAS 2009 regulations
This document provides the outcome of RINA’s review of the SOLAS 2009 damage stability regulations and their Explanatory Notes, primarily in connection with the damage stability of ro-ro passenger ships.

SLF 53/10/1 (the United Kingdom) - Report of the SDS Correspondence Group
This document provides the report of the SDS Correspondence Group on the impact of the SOLAS 2009 amendments on ro-ro passenger ships, continuing the work initiated at SLF 51.

SLF 53/INF.5 (European Commission) - Damage stability parameters of ro-ro passenger ships according to SOLAS 2009 amendments, including water on deck
This document introduces and describes briefly the progress of a second study by the European Maritime Safety Agency on the damage stability of ro-ro passenger ships according to SOLAS 2009 amendments, including water on deck calculation.

Legal and technical options to facilitate and expedite the earliest possible entry into force of the 1993 Torremolinos Protocol (agenda item 11)

Target completion date: 2011

Background: The 1993 Protocol relating to the 1977 Torremolinos Convention has not yet entered into force as the necessary criteria (15 States and 14,000 fishing vessels over 24 metres) have not been met. To date 17 States have ratified the Protocol but the required number of vessels has not been met.

An intersessional Working Group was held to progress work on methods to achieve entry into force. Two methods for implementation were considered in depth:
- a formal agreement; and
- an assembly resolution.
The intersessional Working Group also considered what amendments were thought to be necessary to the existing text which would encourage States to ratify the Protocol. This covered the following areas:
- exemptions;
- application;
- certification (harmonized system of survey and certification or a simplified 5 year system);
- fire protection;
- life saving appliances;
- radiocommunications; and
- shipbourne navigational equipment and arrangements.
The report of their work is contained in document SLF 53/11.

The issue of including or excluding common fishing zones is further discussed in document SLF 53/11/2, with a proposal that where they are covered by exclusive economic zones (EEZs) then they need not be included.
The issue of using an equivalent tonnage to the length criteria is investigated in some depth in SLF 53/INF.12. This document concludes that considerable care needs to be taken on deciding the equivalence level in order to ensure that the safety of fishing vessels is not reduced.

The Sub-Committee is expected to establish a Working Group to discuss this subject together with agenda item 4.

**LR position**: To monitor the discussions. It should be made clear whether the Flag Administration or the owner of the fishing vessel can decide whether to use tonnage or length to ascertain compliance. Consistency should be maintained in the application and it should not be possible to choose to comply with certain requirements on the basis of length and others on the basis of tonnage.

**Implications**: When the entry into force criteria are met the Torremolinos Convention and Protocol will be mandatory.

The Protocol has requirements covering the following areas:
- construction, watertight integrity and equipment;
- stability and associated seaworthiness;
- machinery and electrical installations and periodically unattended machinery spaces;
- fire protection, detection, extinction and fire fighting;
- protection of crew;
- life saving appliances and arrangements;
- emergency procedures, musters and drills;
- radiocommunications; and
- shipborne navigational equipment and arrangements.

After the Convention and Protocol become mandatory:
**Designers**: Designers will have to take into account the requirements and ensure that their designs comply.

**Owners and operators**: Owners and operators will have to ensure that existing ships comply where required and that new ships comply with all the applicable requirements.

**Flag Administrations and ROs**: Flag Administrations and ROs will have to survey new and existing fishing vessels to the extent required and issue appropriate certification.

**Application**: The Torremolinos Convention and Protocol is, in general, applicable to fishing vessels of 24 metres in length and over.

The regulations contained in these chapters have length limits or have different requirements depending on the length of the ship:
- machinery and electrical installations and periodically unattended machinery spaces applies when \( L \geq 45 \text{m} \);
- fire protection, detection, extinction and fire fighting has different requirements for \( 45 \text{m} \leq L \leq 60 \text{ m} \) and \( L \geq 60 \text{m} \);
- life saving appliances and arrangements applies when \( L \geq 45 \text{m} \) only;
- emergency procedures, musters and drills (some requirements only apply when \( L \geq 45 \text{m} \));
- radiocommunications applies when \( L \geq 45 \text{m} \); and
- shipborne navigational equipment and arrangements (different requirements for lengths of \( 24 \text{m} \leq L < 45 \text{m}, 45 \text{m} \leq L < 75 \text{ m} \) and \( L \geq 75 \text{m} \)).
Although the majority of the requirements are applicable only to new ships, the following are also applicable to existing ships:

- life saving appliances and arrangements - only regulation 13 ‘Radio life-saving appliances’ and regulation 14 ‘Radar transponders’;
- emergency procedures, musters and drills;
- radiocommunications; and
- shipborne navigational equipment and arrangements.

(Date: 17/12/2010)

This document provides the outcome of the Intersessional Working Group on Fishing Vessel Safety.

This document provides additional information on the outcome of the Intersessional Working Group on Fishing Vessel Safety, including replies from IMO’s Legal Affairs and External Relations Division regarding questions raised by the Intersessional Working Group.

This document provides comment to the outcome of ISWG FVS regarding the exemption of 1993 Torremolinos Protocol to the fishing vessels operating in the common fishing zone.

Research has been undertaken in matters of equivalence of length to gross tonnage for its application in the draft revised 1993 Protocol to Torremolinos Convention.

Amendments to SOLAS chapter II-1 subdivision standards for cargo ships (agenda item 12)

Target completion date: 2011

Background: Concern has been raised at IMO that the current exemptions from complying with the probabilistic damage stability contained in SOLAS chapter II-1, given to vessels complying with deterministic damage stability contained in other IMO instruments (see footnote to SOLAS II-1/4), are no longer valid. The level of safety has not been demonstrated to be the same and the exemptions require review. There was also some discussion about the current wording of the footnote.

The Correspondence Group established at SLF 52 (January 2010) considered the matter and have developed four different possible amendments to the title of the current footnote to read:

- “Cargo ships shown to comply with the following regulations may be excluded from the application of the damage stability regulations in part B-1”;

Date: 17/12/2010
• “Cargo ships shown to comply with the following instruments and regulations may be excluded from the application of the damage stability regulations in part B-1”;
• “Cargo ships shown to comply with the damage stability regulations within the following may be excluded from the application of the damage stability regulations in part B-1”; and
• “Cargo ships shown to comply with the following subdivision and damage stability regulations may be excluded from the application of part B-1”.

Results of research into the safety standards of OSVs under A.469(XII) / MSC.235(82) and under probabilistic damage stability are still awaited. One document (SLF 53/INF.7) has been submitted which concludes that the safety level achieved by MSC 235(82) is comparable to that achieved by SOLAS probabilistic damage stability. Until further results of similar comparisons are available it is proposed to either delay the completion date of this item to 2012 or to complete the item and transfer the outstanding issues to agenda item 14 “Updates to SOLAS and the Explanatory Notes”.

The different wording for the amendment of the title to the footnote to SOLAS II-1/4 and the issue of whether MODU Code compliant vessels should also be exempted from probabilistic damage calculations is deferred to the Working Group which is expected to be established to deal with this subject in conjunction with agenda items 7, 10 and 14.

LR position: The results of the study given in SLF 53/INF.7 are noted. However, offshore supply vessels are built to fit many purposes and in many configurations. An anchor handling vessel, for example, will normally have a larger machinery space and is thereby more vulnerable to deeper damages according to the SOLAS 2009 damage stability requirements. On the other hand, if only the damage stability requirements in SOLAS 2009 are made applicable to offshore supply vessels, the smaller damages would not explicitly be covered, i.e. the vessels could capsize as a result of small damages. It is therefore suggested that it would be better to wait for additional studies on other OSV designs before any decisions are made.

Implications: Depending on the outcome of the discussions OSV designers/builders may have to carry out additional / alternative stability calculations.

Application: New offshore supply vessels (may be extended during discussions), 80 metres in length and greater. Date of application yet to be determined.

(Documents submitted)

SLF 53/12 (the United Kingdom) - Report of the SDS Correspondence Group
This document provides the report of the SDS Correspondence Group on revisions proposed in document MSC 85/23/1 to the footnotes to regulation 4.1 of SOLAS chapter II-1, part B, Subdivision and damage stability regulations, as contained in the SOLAS 2009 Consolidated Edition.

SLF 53/INF.7 (China) - Study on the impact of the probabilistic damage stability requirements of SOLAS 2009 amendments on offshore supply vessels
This document summarizes the study on the impact of the damage stability requirements of the SOLAS 2009 amendments on offshore supply vessels of more than 80 m in length L.
Amendments to the 1966 LL Convention and the 1988 LL Protocol related to seasonal zone (agenda item 13)

Target completion date: 2011

Background: There is a proposal to move the Southern limit of the Summer zone by 50 miles in order to improve the safety of tankers transiting Cape Agulhas. Currently the traffic corridor is quite narrow and there is an increased risk of collision between tankers travelling East and those travelling West with the increase in traffic. The load line zones are weather related and the submitted information document (SLF 53/INF.4) provides background weather information for the area.

The issue was discussed at NAV 56 (July 2010) and the proposal was agreed by that Sub-Committee. The SLF Sub-Committee will make a final decision taking into consideration any other relevant documents submitted to this session.

LR position: To monitor the discussion.

Implications: Ships will be able to sail further south round Cape Agulhas on their summer load line marks.

Application: All ships.

(Document submitted)

SLF 53/INF.4 (South Africa) - Shifting of the Summer/Winter Seasonal Zone off Cape Agulhas, southern tip of Africa
This document provides information on wind and wave data in order to assist the Sub-Committee to finalize the draft amendments to the International Convention on Load Lines, 1966.

Revision of SOLAS chapter II-1 subdivision and damage stability regulations (agenda item 14)

Target completion date: 2012

Background: During finalisation of the amendments to SOLAS chapter II-1 (as given in Resolution MSC.216(82)) areas for further improvement were identified. Investigation work on these topics is progressing and may lead to further changes to the Convention.

Proposed amendments to SOLAS and the explanatory notes which have been agreed by the Correspondence Group are given in paragraph 12 of document 53/14. These cover the following areas:

- exclusion of ballast water exchange procedures from the light draught;
- the footnote to SOLAS II-1/4.1 to be updated to reflect the fact that resolution A.534(13) has been updated by resolution MSC.266(84);
- OBO ships are no longer included so the explanatory notes need to be updated;
- formulae for K in the published version and errata are not correct (MSC.216(82) is correct).
• the footnote to SOLAS II-1/7-2.5 which references resolution A.266(VIII) should be changed to resolution MSC.245(83);
• the use of L, or L in regulation 8;
• unusual double bottom arrangements;
• references to steerage passengers are no longer relevant;
• application of regulation 20 to be to all ships (not just passenger ships); and
• clarification that regulation 22 is applicable to both passenger and cargo ships.

A considerable number of other matters remain to be agreed and clarification is sought from the Sub-Committed on the following matters:
• whether safety levels should remain as they were for old SOLAS;
• which parts, if any, of the explanatory notes should be made mandatory;
• whether the restriction of L>80 metres only relates to the probabilistic damage or to all the matters covered by SOLAS chapter II-1 parts B-1 to B-4;
• the issues of adjusting “r” to take account of raking damages and any allowance for structural resistance should be deferred; and
• extents of damage in II-1/9.8 need verifying against data.

These are all expected to be referred to the damage stability Working Group which is expected to be established to discuss this agenda item together with agenda items 7, 10 and 12.

LR position: LR will closely monitor the discussion on this very important topic. If amendments to SOLAS are proposed and agreed then it is important that the application of the amendments to new and existing ships is made very clear.

One of the proposals is to make SOLAS II-1/9 applicable to all ships regardless of length (it currently is only applicable to dry cargo ships of 80m in length and above and for passenger ships regardless of length). If regulation 9 is made applicable to cargo vessels having a length of less than 80m, this will introduce damage stability requirements (regulation 9.8) for vessels which did not have to comply with such requirements in the past. Before making such decisions it is strongly recommended that the consequences of doing so for the relevant ship types is thoroughly examined, bearing in mind that this will also affect ship types such as special purpose ships, offshore supply vessels and bulk carriers. In this connection it should be noted that the regulation 9.8 bottom damage requirements can lead to very large damages. It is, however, noted that there is a need for double bottom requirements of some ships not currently covered by SOLAS II-1/9.

Implications: Until further work is done it is difficult to determine the implications. If it is agreed that SOLAS II-1/9 should be applicable to all SOLAS ships this will result in a redesign of the watertight subdivision in cargo ships less than 80 metres in length. This can result in higher building costs.

Application: The application of any amendments has not yet been determined.

(Documents submitted)

SLF 53/14 (the United Kingdom) - Report of the SDS Correspondence Group
This document provides the SDS Correspondence Group’s report on the revision of the SOLAS chapter II-1 subdivision and damage stability regulations as contained in the 1974 SOLAS Convention, as amended, and of the associated Explanatory Notes as contained in resolution MSC.281(85).
SLF 53/14/1 (the United States) - Comments on the report of the SDS Correspondence Group
This document comments on the report of the SDS Correspondence Group (SLF 53/14) and indicates the United States' view that the work under this planned output is not bound by the old harmonization principle to maintain an equivalent level of safety to the previous SOLAS chapter II-1 subdivision and damage stability regulations.

SLF 53/14/2 (Japan) - Comments on the report of the SDS Correspondence Group
This document contains comments on the development of probabilistic bottom damage stability requirements.

Consideration of IACS unified interpretations (agenda item 15)

Target completion date: Continuous

Background: This is a constant agenda item under which IACS can advise the Sub-Committee about any new or amended unified interpretations which have been developed and which are relevant to the SLF sub-committee since the last meeting. The Sub-Committee can then decide whether they consider the UI should be made an accepted IMO unified interpretation or not. No documents have been submitted to this session.

Any other business (agenda item 18)

One document has been submitted under this agenda item covering the following topic:
- Open watertight doors

Guidance for watertight doors on passenger ships which may be opened during navigation

Background: Guidance on when watertight doors on passenger ships may be left open during navigation has been discussed over many sessions of both the DE and SLF Sub-Committees. The text was finalised at DE 54 (October 2010) and submitted to MSC 88 (November – December 2010) for approval. When DE finalised the text it recognised the need for SLF to further consider two matters:
  - possible amendments to SOLAS II-1 to harmonize the floodability calculations in the two documents; and
  - possible amendments to MSC.1/Circ.1245 “Guidelines for damage control plans and information to the master”.

LR position: To monitor any discussions on the issue. It is expected that the request will be passed to the SDS Working Group for further consideration.

Implications: It is too soon to determine any implications.
Application: To passenger ships carrying 12 or more passengers which wished to leave a watertight door open during navigation.

(Document submitted)

SLF 53/18 (Secretariat) - Outcome of DE 54 - Guidance for watertight doors on passenger ships which may be opened during navigation

This document reports on the outcome of DE 54 regarding the draft MSC circular on Guidance for watertight doors on passenger ships which may be opened during navigation, and relevant recommendations for the SLF Sub-Committee.
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