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International Regulation News Update

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(+ “ships” are all self propelled vessels)	

This 83rd Session of the Maritime Safety Committee was held in Copenhagen, Denmark from 3-12 October 2007 due to the unavailability of the IMO Headquarters in London which remains under refurbishment and is scheduled to be completed in mid 2008. The expanded Committee adopted a few revisions to SOLAS and approved several recommendations.

SOLAS AMENDMENTS APPROVED IN PRINCIPLE

Means of Embarkation/Disembarkation

MSC 83 approved, in principle, amendments to SOLAS which would require the means of embarkation and disembarkation (such as gangways and accommodation ladders) fitted on new ships to comply with standards currently being developed by IMO. The date of build for new ships will be decided at MSC 84 in May 2008 when the SOLAS amendment is scheduled to be adopted.

The current draft standards, which were also approved in principle, refer to ISO 5488-1979 *Shipbuilding – accommodation ladders*, ISO 7061:1993 *Shipbuilding – aluminum shore gangways for seagoing vessels* and national standards.

Gangways and accommodation ladders on all ships (new and existing) will be subject to survey to confirm the proper operation of the ladder, gangway and winch, as appropriate. The load used for the test should be the lesser of the design load and the maximum operational load which may be nominated by the ship-owner or operator.

Emergency Towing Procedures

MSC 83 approved, in principle, amendments to SOLAS which would require all ships (new and existing) to be provided with a procedure for fore and aft emergency towing.

This procedure is to be carried onboard for use in emergency situations and shall be based on existing arrangements and equipment available on board the ship. The procedure, which needs only to be verified as being onboard (not be approved) by the Administration, is to include emergency towing arrangement drawings, an inventory of equipment on board that can be used for emergency towing, means and methods of communication; and sample procedures to facilitate preparation for and conduct of emergency towing operations.

If adopted at MSC 84 in May 2008, the amendments will apply as follows (the dates are tentative):

- all passenger ships not later than 1 January 2010;
- all cargo ships constructed on or after 1 January 2010; and
- all cargo ships constructed before 1 January 2010 not later than 1 January 2012

Intact Stability Code

MSC 83 approved regulation in SOLAS which will mandate that new ships ≥ 24 m in length to comply with Part A of the revised Intact Stability Code. If adopted in May 2008 at MSC 84, this will be the first time (except for high speed craft, HSC, that have been certified to the HSC Code and oil tankers ≥ 5000 dwt delivered on/after 1 February 2002) that an international convention will mandate compliance with specific intact stability criteria.

The criteria in Part A of the Code include requirements for:

- minimum range of righting arm;
- range of stability due to wind effects (Fig.1)
- ship specific criteria (passenger ship, oil tankers, cargo ships carrying timber deck cargo and high speed craft)

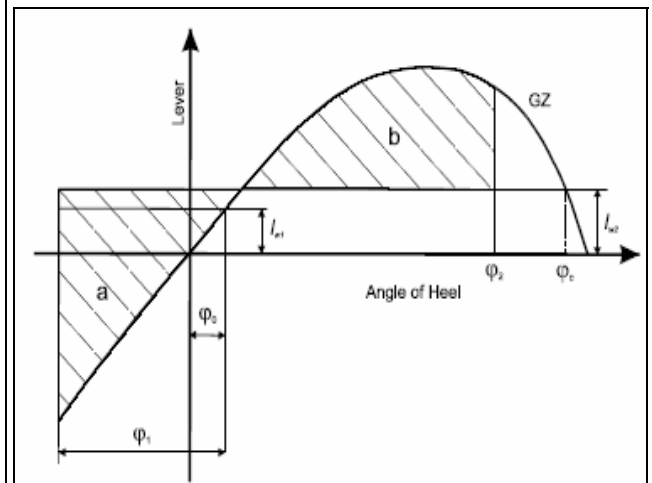


Figure 1 – Severe Wind and Roll

Part B contains recommendations to be used as a basis for relevant safety standards, unless national stability requirements provide at least an equivalent degree of safety.



RECOMMENDED COATING STANDARD FOR VOIDS

General

MSC 83 adopted resolution MSC.244(83) which contains recommendations for the protective coating system of void spaces on all types of ships. The recommendation is similar to, but not as robust as, the mandatory coating standard for ballast tanks as contained in resolution MSC.215(82).

Void spaces include voids which are subject to close-up surveys under the Enhanced Survey Program, in particular, internal structure of upper and lower stools, where fitted, but excludes the small non-accessible totally enclosed spaces located behind gusset or shedder plates at the bottom of corrugated bulkheads.

It remains to be seen which Administrations require void spaces to be coated and if they are to be coated if compliance with resolution MSC.244(83) is required.

Technical Standards

The recommended standards for voids, which address surface preparation and paint application, are summarized below (items underlined are different than those contained in MSC.215(82)).

- The soluble salt limit ≤ 50 mg/m² of sodium chloride
- The steel surface should be prepared so that the coating selected can achieve an even distribution at the required nominal dry film thickness (NDFT) and have an adequate adhesion by removing sharp edges, grinding weld beads and removing weld spatter and any other surface contaminant in accordance with ISO 8501-3 grade P2.
- 90% of all thickness measurements shall be greater than or equal to NDFT and none of the remaining 10% measurements shall be below 0.9 (NDFT).
- The surface is to be treated so as to achieve Sa 2 or St 3 on damaged shop primer and welds and Sa 2 removing at least 70% of intact shop primer, which has not passed a pre-qualification that is certified by the test procedures as per the Standard
- The surface after erection is to achieve St 3 or better or Sa 2 where practicable for butts and damages.
- A dust quantity rating of "2" is required for dust size class "3", "4" or "5".

- A minimum of one stripe coat and one spray coat are required.

Approval and Verification

Approval and verification recommendations in resolution MSC.244(83) are the same as resolution MSC.215(82). A Statement of Compliance or Type Approval certificate should be issued by a third party, independent of the coating manufacturer, based on the results of prequalification tests – which may include 5 years of field experience of current epoxy coatings that are known to perform at acceptable levels.

Inspections should be carried out by qualified coating inspectors certified to NACE Coating Inspector Level 2, FROSIO Inspector Level III, or equivalent, and verified by the Administration. Surface preparation and coating application throughout the coating process should be inspected to ensure compliance with this standard. The scope of inspection provides acceptance criteria for surface preparation and coating application. Representative structural members should be non-destructively examined.

Prior to approving the Coating Technical File, the Administration is to:

- check that the *Technical Data Sheet* complies with the coating performance standard;
- check that the coating identification on representative containers is consistent with the coating identified in the *Technical Data Sheet*;
- check that the inspector is qualified in accordance with the qualification standard included in the coating performance standard; check that the inspector's reports of the coating's application, as well as surface preparation, indicate compliance with the manufacturer's *Technical Data Sheet*; and
- monitor implementation of the Coating Inspection Requirements.

MISCELLANEOUS

GBS and SLA

MSC 83 continued the development of the Goal Based Standards (GBS) along two parallel development paths; a short-term prescriptive approach concentrating on bulk carriers and oil tankers and a long-term broader Safety Level Approach (SLA).



Due to planned activities it was decided to emphasize discussions at MSC 84 (May 2008) on the SLA activities and at MSC 85 (November 2008) on the prescriptive activities (relative to SLA) of GBS. The overall need to coordinate and develop a framework for bringing the two separate approaches together will be discussed at both meetings.

Tier III Progress - For the prescriptive GBS approach, the report of the IMO Pilot Panel was used as a basis for organization and development of the Tier III verification criteria, which when completed, will be the process used to guide the IMO Group of Experts to verify compliance of rules to the Tier I (Goals) and Tier II (Functional Requirements) of GBS.

The Pilot Panel, comprised of 16 experts under the coordination of the USA, completed its initial assessment of the IACS Common Ship Rules (CSR) so that it could validate the Tier III verification framework, identify shortcomings and propose improvements to the Tier III verification process.

The latest draft of the Tier III verification criteria has somewhat been broadened in order to allow for different ways of demonstrating that rules comply with the GBS. One improvement being considered is to allow the submission of a self-assessment process with the Rules to be assessed under GBS. There is still disagreement as to where to place detailed criteria within the GBS tier system, with most in favor of placing it in the Tier II functional requirements and leaving Tier III as only describing the process of verification.

Tier II Revisions - The development at MSC 83 also included modifications to Tier II covering continuous performance monitoring to give feedback on the rules and to the definition of the net scantlings to use during structural assessments. Cautionary notes made by various parties relating to the simple monitoring encompassing more than just the new-building rules were noted and the subject will be considered further by the Pilot Panel.

The definition of the net scantlings was changed from the “single”, “pure”, definition to one that is linked to the in-service thickness measurement requirements to assess the three strength modes (local, hull girder and fatigue strength).

The revised definition (*“The net scantlings should provide the structural strength required to sustain the design loads, assuming the structure is in intact condition and accounting for the steel diminution that could be reasonably expected to*

occur during the life of the ship due to corrosion and wastage”) reflects the preference of the Pilot Panel, the Working Group and the Committee.

It was decided that a second trial application of the latest guidelines for the verification of compliance using the IACS CSR for oil tankers would be performed in order to finalize the guidelines.

This trial application will be completed in time for MSC 85. This Project will not evaluate the IACS CSRs to determine if they meet the Tier I and II requirements.

Tier I Revisions - In addition to the functional requirement that ships should be designed and built to incorporate ergonomic design principles to ensure safety during operations, inspection and maintenance of ship's structures, the Committee also agreed to expand Tier I to consider occupational health and safety of seafarers and a paragraph for Tier I goals was drafted. Both of these topics will be developed further during the long-term development plan for GBS and the development of evaluation criteria for ship structural design and arrangements will be included in the second trial application plan for the Pilot Panel.

Safety Level Approach - The Committee noted the various comments made with regard to SLA development and usage of vessel data, such as categorization of ship types and the call to limit the number of ship types to a small number, and the general limitations when considering categorizations such as length, size, etc.

Further, the use of time windows for assessing statistics was noted. The Committee concurred on the linkage between GBS and FSA and noted that the development of a way ahead to more formally link the two items needed further discussion.

Regarding the tier structure reflective of the SLA, there is a general need to collate the information and proposals from previous sessions and reach agreement on a way forward. It was agreed that terminology used should be based on the guidelines for formal safety assessment (FSA) for use in the IMO rule-making process but might be expanded based on relevant proposals submitted to previous Committee sessions.

The importance of good statistical data to support analysis and assessment was discussed, but it was agreed that it would be premature to develop a more reliable database under the auspices of IMO.

**ISM Code**

A report by a group of independent experts was presented and briefly discussed during MSC 81 in May 2006. Due to very limited availability of raw data, the group collected and relied on the expert judgment from various levels of the shipping industry and from questionnaires completed by shipboard personnel, shore-based personnel, shipping companies and Administrations) in conducting their assessment of the impact and effectiveness of implementation of the ISM Code.

Although the replies to the questionnaire were not considered to be a representative sample of the entire industry, they were considered to represent the collective experience from those that support the Code.

The report concluded that although tangible positive benefits were evident when the ISM Code is fully implemented, compliance could be made more efficient by reducing administrative processes (such as use of information technology and integration of all documentation requirements) and by improving compliance monitoring.

Based on information submitted on recent research conducted which investigated the influence of internal and external organizational structures on safety management performance, MSC 82 agreed that the recommendations could be used by shipping companies and other organizations to influence the management of safety to improve their safety performance. Noting that the research identified a need to promote better communication skills relating to working practices for seafarers and to strengthen the implementation and enforcement of the requirements of the ISM Code, the MSC will consider revising the ISM Code to better reflect the seafarer representation on safety issues.

In addition, MSC 83 agreed that the guidelines for Administrations should be revised to make them more effective and user-friendly and that guidelines and associated training should be developed to assist companies and seafarers to improve the implementation of the Code.

MSC-MEPC.7/Circ.5 – The Committee agreed with MEPC 56 and adopted this Circular which provides guidance on the operational implementation of the ISM Code by Companies. The Circular recommends that the designated person is to

- verify and monitor all safety and pollution prevention activities in the operation of each

ship, including communication relating to policy information,

- evaluate the SMS effectiveness, analysis of non-conformities, accidents and hazardous occurrences;
- organize and monitor internal audits; and
- ensure that adequate resources and shore-based support are provided.

It is also recommended that Companies undergo annual internal audits to verify whether shore-based and shipboard activities comply with the SMS. Additionally, the Company should ensure that a system is in place for recording, investigating, evaluating, reviewing and analyzing such reports, and to take action, as appropriate.

MSC-MEPC.7/Circ.6 – A second Circular was adopted which contains recommended qualifications of the Designated Person under the provisions of the ISM Code. Three options are recommended to be adequately qualified:

- formal education from a tertiary institution in a relevant field of management, engineering or physical science;
- seagoing experience as a certified ship officer; or
- other formal education combined with not less than three years practical senior level experience in ship management operations.

General guidance is also provided on training and required experience for the Designated Person.

The Company should provide training courses covering qualification, training and experience and the appropriate procedures connected to compliance with the ISM Code including practical training and continuous updating. The Company should also provide documentary evidence that the Designated Person has the relevant qualification, training and experience to undertake the duties under the provisions of the ISM Code

General Cargo Ship Safety

Having made significant improvements in the safety of bulk carriers through the development and implementation of a number of regulations which implement various risk control measures, IMO has recently focused its attention on the continuing high rate of accidents (in particular occupational accidents onboard) as well as port

State detentions associated with general cargo ships.

Information provided to previous sessions of the MSC confirmed that accident risks are high on general cargo ships compared to other ship types.

Figure 2, compares ship types for merchant ships over 100 GT (World Fleet Statistics 2000, Lloyd's Register, London).

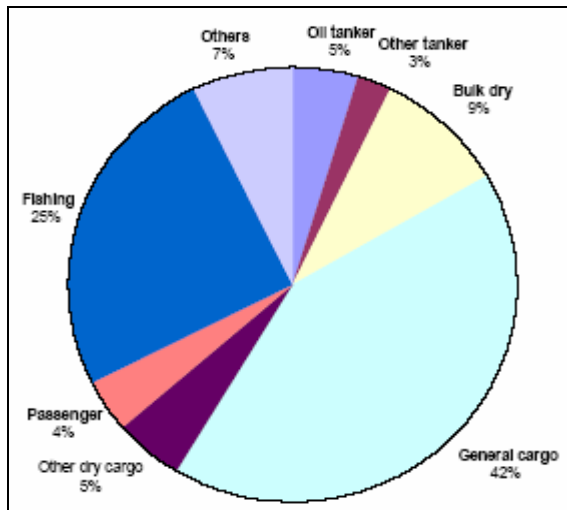


Figure 2 - Total Losses (1995-2000)

At MSC 83 in October 2007, there was general agreement that more detailed information was needed so that an analysis (FSA) of the cause of accidents can be undertaken to identify problem areas and appropriate risk control options. The Committee also recognized the variety of ship types covered by the category "general cargo ship" and will, at its next session in May 2008, develop a definition of "general cargo ship" and a strategy to set a direction on how best to enhance the safety of these ships.

The MSC was informed that EU research is currently being conducted which focuses on improvement of technologies for prediction of risks, safety and survivability of ships to remain afloat in an almost upright position, regardless of the kind of damage scenario (collision, grounding, fire or a power failure). Results will be submitted for consideration as they become available.

Mandatory Coating Standard Implementation

The Committee issued a Circular which clarifies the application of Coating Performance Standard for ballast tanks and double side skin spaces contained in resolution MSC.215(82) as per SOLAS II-1/3-2.

In the event a ship had its keel laid, or was contracted, such that its delivery was scheduled to be prior to 1 July 2012, but because of unforeseen circumstances beyond the control of the builder and the owner, was delivered after 1 July 2012 (and thereby requiring compliance with the coating standard), the Administration may accept the ship as an existing ship.

In such a case, the Administration is to report to IMO the grounds on which the ship has been accepted as an existing ship.

Explosions in Chemical and Product Tankers

In May 2006, MSC 81 considered a report on incidents of explosions on chemical and product tankers which was carried out by an Inter-Industry Working Group over the preceding two years.

The Group set out to identify the root causes of a database of incidents that have occurred over the past 25 years. The Group identified 35 occurrences that involved fires and explosions in cargo areas of chemical and product tankers. Any common factors amongst these incidents were identified with the objective of identifying corrective actions that would prevent any further similar incidents.

The analysis revealed that the accidents occurred:

- For ships < 20,000 deadweight;
- For a majority of the cases, during tank cleaning, venting or gas freeing;
- For a significant number of cases, when established procedures were not observed onboard;
- In ships carrying MARPOL Annex II cargoes.

The most significant contribution to the incidents, which in most cases involved ignition within a tank, was a failure to follow operational procedures. Technical or operational factors and manning levels were not considered to be a factor.

Because none of the incidents occurred when inert gas was applied, the Group recommended that a formal safety assessment and cost/benefit analysis be carried out before decisions are made concerning the mandatory provision of inert gas systems to product tankers under 20,000 deadweight.



Based on the above, MSC 83 tasked its technical Sub-Committees to consider several recommendations including:

- The need to evaluate a number of safety, operational and environmental issues identified in the Report with respect to the provision of inert gas systems;
- The need to carry out a formal safety assessment and cost/benefit analysis before deciding on the provision of inert gas systems; and
- Considering means to reduce sources of ignition, including the introduction of measures to mitigate in-tank pump failures and increasing the awareness of industry with respect to the consequences of static electricity which can develop from chemical spraying or steaming.

The work will consider measures for new ships and then, depending on the outcome, it could be extended to address appropriate measures for existing oil and chemical tankers. In this regard, the MSC 83 noted that there may be problems associated with retrofitting inert gas systems on new and existing tankers including the practical & safety implications for the operation of chemical tankers and product tankers < 20,000 dwt.