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Outline of MSC83 and GBS-WG

MARITIME SAFETY COMMITTEE 83rd session (MSC83)

- Bella Center in Copenhagen, Denmark
- Chairman: Mr. Neil Ferrer (Philippines)
- Attendants: approx. 100 Member Governments
  approx. 50 inter- and non-governmental organizations
Outline of MSC83 and GBS-WG

Working Group on Goal-based New Ship Construction Standards

- Bella Center in Copenhagen, Denmark
- Chairman; Capt. P. Little (United States)
- Attendants; approx. 40 Member Governments
- approx. 10 inter- and non-governmental organizations
Main terms of reference of GBS-WG

1. Further development of the proposed draft SOLAS amendments

2. Further development of the draft Goal-based New Ship Construction Standards for bulk carriers and oil tankers and consideration of:
   - Application of GBS to BC and OT with ice class
   - Inclusion of a new functional requirement on continuous performance monitoring
Main terms of reference of GBS-WG

(cont’d)

2. Further development of the draft Goal-based New Ship Construction Standards for bulk carriers and oil tankers and consideration of;

◆ Inclusion of a new functional requirement concerning the acceptable probability of exceedance of the design load for ships’ structures

◆ Modification to the existing Tier II functional requirements proposed by the Pilot Panel

◆ Definition of “Net scantlings” included in functional requirement II.3 on structural strength
Main terms of reference of GBS-WG

3. Finalizing the draft MSC circular on Guidelines for the information to be included in a Ship Construction File

4. Further development of the draft Guidelines for the verification of compliance with GBS, part A and part B
   - Part A; Tier III Verification process
   - Part B; Information / documentation requirements and evaluation criteria
5. Preparation of a plan and timetable for a second, more in-depth, trial application of the Guidelines for the verification of compliance with GBS using the IACS CSR

6. Consideration in detail of the report of the Correspondence Group on the Safety Level Approach

   - Categorization of ship types
   - Review of available statistical data
   - Evaluation of the current safety level
   - SLA functional requirements and common terminology
Key issues and WG’s outcome

**Draft SOLAS amendment**

- Draft SOLAS amendments make the GBS for BC and OT mandatory
- Tier I should apply to all ship types, as agreed, however,
- Application of current amendments;
  - + Majority; only to BC and OT
    because of no Tier II and III applicable to other types of ship, so far.
  - + Some delegations; to all new ships
- Applicability threshold for BC; 〔90m〕or〔150m〕
- Applicability threshold for OT; 150m
Key issues and WG’s outcome

Draft SOLAS amendment (cont’d)

- Necessity of sufficient Phase-in schedule
  - For classification societies, to develop, modify and adopt the new rules concerned.
  - For the Group of Experts, to verify the rules concerned.
  - It was agreed that further consideration is needed after Tier III will be finalized at MSC85 in Dec. 2008, before the adoption of SOLAS amendment.

- Adequate measures to protect the intellectual property rights (IPR), not inside SOLAS but somewhere.
Key issues and WG’s outcome

Application of GBS to BC and OT with Ice class

- GBS-NSC should also be applied to BC and OT with ice class, however no specific Tier II and III are developed for ice class so far.

- In the long term, GBS should cover all conditions, including ice class.
Key issues and WG’s outcome

Functional requirement on continuous performance monitoring (PM)

- Involves not only classification rules for new ship construction but also maintenance, operational considerations and numerous other factors, however

- WG could not determine the appropriate method to implement PM.

- In the short term, the concept could be considered in the draft Tier III verification process.

- In the long term, PM might be required somewhere outside of GBS-NSC.
Key issues and WG’s outcome

Modifications to existing Tier II functional requirements

--- Definition of “Net scantlings” ---

**PREVIOUS**

The net scantlings shall provide the structural strength required to sustain the design loads, assuming the structure in intact condition and excluding any condition for corrosion.

**PRESENT**

The net scantlings should provide the structural strength required to sustain the design loads, assuming the structure 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.

Reasonable from technical point of view

Too much for global strength such as hull girder bending capacity and long-term fatigue process, etc
Key issues and WG’s outcome

Draft MSC circular on Guidelines for the information to be included in a Ship Construction File (SCF)

- Intellectual property rights (IPR)
- Level of detail required
- Correlation between the SCF and the Tier III verification guidelines

→ To be further considered at MSC85
Key issues and WG’s outcome

Draft Guidelines for the verification of compliance with GBS

- Primary verification process
  - by the Group of Experts? or
  - by self-assessment of the Classification society?
- Number of members of the Group of Experts?
- Decision making criterion;
  - Simple majority? or 2/3 majority?
- Refinement of the Guidelines by the submitted documents and the comments of the working group
Key issues and WG’s outcome

SAFETY LEVEL APPROACH (SLA)

- Position of SLA --- One of the two approaches
  - GBS for BC and OT with the prescriptive approach
  - GBS using the safety level approach

- Categorization of ship types using databases
  - Lloyd’s Register Fairplay (LRFP)
  - Lloyd’s Maritime Information Unit (LMIU) etc

→ To be further discussed for establishment of the Safety Level Approach in GBS.
Future development of GBS

Mission of the Intersessional Correspondence Group organized between MSC83 and MSC85
- Development of a generic GBS framework
- The prescriptive and the safety level approach

Short term plan
- MSC83 ~ MSC84 ➔ Develop unified GBS framework
- MSC84 ➔ Finalize unified GBS framework and continue development of SLA
- MSC85 ➔ Finalize and approve Tiers I to III of GBS for BC and OT
- MSC86 ➔ Adopt SOLAS amendments and associated guidelines ???

Long term plan
- Expansion of GBS-NSC for other types of ship ???
Future development of GBS

Mission of the Pilot Project Phase 2

by Pilot Panel

- Further development of the Draft Guidelines for the verification of compliance with GBS, part A and part B

- Conducting a trial of the refined GBS Tier III verification process using the IACS Common Structural Rules (CSR) for oil tankers

- Submitting the interim report to MSC84 and the final report to MSC85 including the draft Guidelines for the verification of compliance with GBS, Part A and B
Future development of GBS

Schedule of the Pilot Project Phase 2

- IMO MSC83
  - Nomination of replacement for Pilot Panel
  - Beginning of refinement of Tier III
  - Meeting to complete initial revision of Tier III
  - Commencement of trial application
  - Submission of interim progress report to MSC84
  - IACS presentation meeting, evaluation discussion

- IMO MSC84
  - Meeting to finalize trial application and prepare report to MSC85

- IMO MSC85
  - Submission of report to MSC85

Challenges of GBS in future

- When will GBS be actually finalized for the verification of the CSR for OT and BC?

- Who will be able to verify the CSR as the Group of Experts and how can IMO select such real Experts?

- How will GBS be able to settle the technically rational acceptance criteria considering the state-of-the-art of the structural design of ships?

- How can IMO manage to achieve the well-balanced GBS under the extremely political pressure?
SAJ’s opinion and Conclusion

It still seems a long way to the goal of the Goal-based New Ship Construction Standards.

We, the Asian shipbuilders, should keep watching carefully over the process of IMO MSC, GBS-WG, CG and Pilot Project, and actively participate in them.

We, the Asian shipbuilders, should enhance the cooperation any further in giving IMO the technically rational opinions from now on.
Thank You!