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To: relevant departments of CCS Headquarters, Shanghai Rules & Research Institute, Plan Approval Centers, CCS branches/offices, related shipyards, products manufacturers, designers, ship management companies, and ship owners.

Notice on Implementation of Resolution MSC.290(87) on Goal-based ship construction standards for bulk carriers and oil tankers

1. Background

Considering that the recent catastrophic pollution accidents were caused by insufficient structural strength of oil tankers due to ship hull strength, IMO decided to develop as a strategic project of high priority, goal-based standards for the design and construction of new ships in order to ensure more robust ships. The ship construction standards developed by IMO would permit innovation in design and at the same time ensure that ships are constructed in such a manner that, if properly maintained, they will remain safe for their entire economic life. The standards would also have to ensure that all parts of a ship can be easily accessed to permit proper inspection and ease of maintenance.

In 2004, Bahamas, Greece and IACS proposed jointly to the Maritime Safety Committee a five-tier system. IMO takes charge of the top three tiers: Tier 1- Goals, Tier 2 - Functional requirements and Tier 3 - Verification of conformity. Tier 4 - Rules and regulations for ship design and construction are developed by classification societies and should be verified by IMO. Tier 5 – Industry practices and standards should also be verified together with Rules indirectly.

2. Technical Note

2.1 INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION STANDARDS FOR BULK CARRIERS AND OIL TANKERS (hereinafter referred to as "the Standards") (Attachment 2)

2.1.1 The Standards consist of the following five-tier system:

.1 Tier I – Goals

High-level objectives to be met. Ships shall be designed and constructed for a specified design life (not less than 25 years) to be safe and environmentally friendly, when properly operated and maintained under specified operating and environmental conditions (North Atlantic environmental condition), in intact and specified damage conditions, throughout their life.

.2 Tier II – Functional requirements

Criteria to be satisfied in order to conform to the goals, including as follows: (1) Design life; (2) Environmental conditions; (3) Structural strength; (4) Fatigue life; (5) Residual strength; (6) Protection against corrosion; (7) Structural redundancy; (8) Watertight and weathertight integrity; (9) Human element considerations; (10) Design transparency; (11) Construction quality procedures; (12) Survey during construction; (13) Survey and maintenance; (14) Structural accessibility and (15) Recycling.

.3 Tier III – Verification of conformity

Procedures for verifying that the rules and regulations for ship design and construction conform to the goals and functional requirements.

.4 Tier IV – Rules and regulations for ship design and construction

Detailed requirements developed by IMO, national Administrations and/or recognized organizations and applied by national Administrations and/or recognized organizations acting on their behalf to the design and construction of a ship in order to conform to the goals and functional requirements.

.5 Tier V – Industry practices and standards

Industry standards, codes of practice and safety and quality systems for shipbuilding, ship operation, maintenance, training, manning, etc., which may be incorporated into, or referenced in, the rules and regulations for the design and construction of a ship.

2.1.2 Application

The Standards shall apply to oil tankers of 150 m in length and above and to bulk carriers of 150 m in length and above, constructed with single deck, top-side tanks and hopper side tanks in cargo spaces, excluding ore carriers and combination carriers:

- .1 for which the building contract is placed on or after 1 July 2016;
- .2 in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 July 2017; or
- .3 the delivery of which is on or after 1 July 2020.

2.2 GUIDELINES FOR VERIFICATION OF CONFORMITY WITH THE INTERNATIONAL GOAL-BASED SHIP CONSTRUCTION STANDARDS FOR BULK CARRIERS AND OIL TANKERS (hereinafter referred to as "the Verification Guidelines") (Attachment 3)

2.2.1 Verification means the rules for the design and construction of bulk carriers and oil tankers have been compared to the Standards and have been found to be in conformity with or are consistent with the goals and functional requirements as set out in the Standards.

2.2.2 The rules for the design and construction of bulk carriers and oil tankers of an organization which is recognized by an Administration, or national rules of an Administration used as an equivalent to the rules of a recognized organization, shall be verified as conforming to the Tier I goals and Tier II functional requirements, based on the Verification Guidelines. The final decision on verification of conformity shall be taken by the Maritime Safety Committee of the Organization which shall inform all Contracting Governments of the decision.

2.2.3 Once the rules for the design and construction of bulk carriers and oil tankers of an Administration or recognized organization have been verified as being in conformity with the Standards, this conformity shall be considered to remain in effect for rule changes, provided that no verification of rule changes has resulted in a non-conformity. Unless the Maritime Safety Committee decides otherwise, any rule changes introduced as a result of verification of conformity shall apply to ships for which the building contract is placed on or after the date on which the rule change enters into force.

2.2.4 Verification Process

Refer to Part A of the Verification Guidelines.

2.2.5 Information/Documentation requirements and evaluation criteria

Refer to Part B of the Verification Guidelines.

2.3 Timetable and schedule of activities for the implementation of the gbs verification scheme

Timeline	Action
May 2010	MSC 87 Adopt GBS SOLAS amendments
June 2010	• Secretariat issues circular letter calling for nominations of auditors, processes received nominations and regularly reports on progress to the Committee • Secretariat issues circular letter inviting advanced notification of intention to submit a verification request
1 July 2011	GBS SOLAS amendments deemed to be accepted
July 2011	• Secretariat staff is recruited and commences work on the establishment of the GBS verification scheme

	• Secretariat issues letter inviting requests for initial verification audits
1 January 2012	GBS SOLAS amendments enter into force and Standards take effect
January 2012 to December 2015	• Secretariat prepares, organizes and finalizes all audits requests • Secretariat processes any appeal requests • Secretariat regularly reports to the Committee on progress made
31 December 2013	Deadline for the receipt of initial verification
2014	MSC reviews progress made in GBS implementation
January 2016	Secretariat prepares documentation on all audits conducted for MSC 96 for final decision on conformity
May 2016	• MSC 96 takes final decisions on conformity with GBS for all rules submitted • Secretariat informs Administrations/ROs of MSC's decisions • Secretariat circulates results of successful verifications • Secretariat maintains list of all rules verified to conform to Standards
1 July 2016	GBS SOLAS amendments(and Standards) become applicable
December 2016	MSC 97 reconsiders the verification process and related resources
January 2017	• Secretariat prepares for and organizes annual audits of rule changes, and ad hoc rule change audits as and when requested • Secretariat organizes initial verification audits as may be requests • Secretariat processes any appeal requests

3. Requirements of survey during construction

The Ship Construction File with specific information on how the functional requirements of the Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers have been applied in the ship design and construction shall be provided upon delivery of a new ship, and kept on board the ship and/or ashore* and updated as appropriate throughout the ship's service. The contents of the Ship Construction File shall, at least, conform to the guidelines developed by the Organization(Refer to MSC.1/Circ. 1343).

4. Notes

This Circular is available on www.ccs.org.cn and should be forwarded by each branch and plan approval center to relevant shipyards, product manufacturers, ship owners and designers within its business area.

5. Attachments

Attachment 1: Resolution MSC290(87)

Attachment 2: Resolution MSC287(87)

Attachment 3: Resolution MSC296(87)

Please feel free to contact Technical Management Department of CCS for any inquiry (rt@ccs.org.cn).