The 54th session of IMO's Sub-Committee on Stability and Load Lines and on Fishing Vessel's Safety (SLF 54) was held from 16 to 20 January 2012 under the chairmanship of Mr. Z. Szozda (Poland). Representatives attended the session from 62 Members, one Associate Member, one UN specialized agency, one inter-governmental organization and 18 non-governmental organizations. IADC was not represented at this session.

The following is a summary of issues addressed by the Sub-Committee that may interest of companies with offshore oil and gas operations:

**Development of a second (new) generation intact stability criteria**

The Sub-Committee considered the report of its correspondence group. It noted that the group had considerably progressed the work, but a vast amount of work still remained.

A Working Group was formed to further develop the criteria. Following its deliberations, the Sub-Committee:

- Noted the updated version 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 maneuvering-related phenomena (surf-riding).
- Endorsed the view 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. Member Governments and international organizations to submit proposals on the revision of the Interim Guidelines to the next session of the Sub-Committee (SLF 55).
- Agreed, in principle, to the updated version of the draft vulnerability criteria, Levels 1 and 2, for the failure mode of excessive accelerations.
- 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.
- 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.
- Agreed to re-establish the Correspondence Group, under the coordination of Japan

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1 Dr. Eng. Naoya Umeda (umeda@naoe.eng.osaka-u.ac.jp)
.4 Develop, verify and further refine direct stability assessment procedures for the stability failure modes; and
.6 Submit a report to SLF 55.

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

The Sub-Committee considered:

- Information from Finland 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;
- A paper from Japan containing findings, based on preliminary research 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;
- Information from 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, was 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
- A paper from Japan presenting detailed information on the CFD tool, as applied to the Recommendation.

The Sub-Committee agreed to re-establish the Sub-Division and Damaged Stability (SDS) Correspondence Group, under the coordination of the United Kingdom\(^2\) to finalize draft amendments to the Recommendation on a standard method for evaluating cross-flooding arrangements for submission to SLF 55.

**Guidelines for Verification of Damage Stability Requirements for tankers**

The Sub-Committee considered the report of its Correspondence Group on Guidelines for Verification of Damage Stability for Tankers in particular the list of existing IMO instruments and other relevant references relating to the issue of verification of damage stability requirements; the proposed draft amendments to related mandatory instruments; the draft Guidelines for verification of damage stability requirements for tankers; the alternative text for part 2 (Operational guidelines) of the draft Guidelines; and the considerations in respect of loading "in accordance with" an approved loading condition.

Having established a Working Group on this issue, and in consideration of its report, the Sub-Committee agreed, in principle, to the draft Guidelines for verification of damage stability requirements for tankers, 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.

**Development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships**

The Sub-Committee considered the report of its correspondence group, 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)) 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.

The Sub-Committee 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, which should also take into account the outcome of the Sub-Committee on Bulk Liquids and Gasses’ 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.

The Sub-Committee formed a Working Group on this issue. The Group 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

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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)), for submission to MSC 90 for adoption.

The Group had also considered the proposed damage stability standard for OSVs that carry limited amounts of hazardous and noxious liquid substances in bulk, 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.

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

The Sub-Committee 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 Maritime Safety Committee to extend the target completion year for this output to 2013.

The Sub-Committee instructed the SDS Correspondence Group to:
- Finalize the draft amendments to SOLAS chapter II-1 and the related Explanatory Notes;
- 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;
- 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;
- 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
- Submit a report to SLF 55.

Integrity and uniform implementation of the 1969 TM Convention

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 States3, and instructed it to:
- Review the rules and requirements of the 1969 TM Convention and associated interpretations;
- Recommend and develop revised/updated interpretations of the 1969 TM Convention;
- Identify areas for improvement of the 1969 TM Convention;
- Recommend and develop draft amendments to the 1969 TM Convention, as appropriate; and
- Submit a report to SLF 55.

Unified stability criteria and operational guidance for vessels engaged in towing and anchor handling operations

The Sub-Committee considered:
- Commentary by Norway 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 analyzed with respect to the intended modes of operation. Relevant proposed amendments to the 2008 IS Code were included in the annex to the document;
- Background information from Norway 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
- Information from Finland 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

3 Mr. Peter D. Eareckson (peter.d.eareckson@uscg.mil)
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.

The Sub-Committee agreed to invite Member Governments and international organizations to submit comments and proposals to SLF 55. The delegation of Norway offered to serve as a focal point for the coordination of any joint submissions on the matter.

**Amendments to SOLAS regulation II-1/4 in order to clarify the application of SOLAS subdivision standards to cargo ships**

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 included a draft text for a revised regulation II-1/4 in the draft amendments to SOLAS chapter II-1.

The Sub-Committee noted that its working group had 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.

**Work program**

The proposed planned outputs for the Sub-Committee include:

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**Arrangements for the next session**

The 55th session of the Sub-Committee is tentatively scheduled from 18 to 22 February 2013. The Sub-Committee agreed to establish working or drafting groups on:

- Subdivision and damage stability;
- Intact stability;
- Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention
- Guidelines for verification of damage stability requirements for tankers and bulk carriers.

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4 Ms. Turid Stemre (tbs@sjofartsdir.no)
Elections.

The Sub-Committee deferred elections until the start of SLF 55.

The IMO report of this session is will be made available on the IADC website at:

Please feel free to contact me by phone (+1 / 713 292 1964) or e-mail (alan.spackman@iadc.org) with any questions you may have regarding this summary report.