

SLF 54 GL–Experts participated in Working Groups

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Working Groups' summaries from the 54th session of IMO Sub-Committee for Stability, Load Lines and Fishing Vessels (SLF).

The following Working Groups were established:

- 1.) Subdivision and Damage Stability (SDS) [\(More\)](#)
- 2.) Guidelines for Verification of Damage Stability Requirements for Tankers [\(More\)](#)
- 3.) Intact Stability [\(More\)](#)

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1.) Subdivision and Damage Stability (SDS)

Within the Working group on SDS (Subdivision and Damage Stability) considerable progress on a number of items was made.

Under the agenda item "Safe Return to Port" it was agreed that the calculation procedure for cross-flooding arrangements shall be revised based on input from several research projects. For on-board loading computers which include a damage stability module, a specific need to re-open the discussion to clarify the application method was identified. Such a damage module may be helpful for the crew in case of casualties; therefore the accuracy of the module was addressed as being of high importance.

With respect to RoRo passenger ships there is an ongoing discussion on the applicable safety level. Several research projects are comparing the safety level of the present SOLAS 2009 regulations with those of the former SOLAS under special consideration of the Stockholm Agreement ("Water on deck"). It was found necessary to wait for the outcome and results of such research projects (GOLADS, FloodStand, EMSA(2), RP625) in order to consider their results for the future discussion.

Further on, there were considerations related to the damage stability standard for OSV vessels. An amendment to the existing OSV Code was proposed to have vessels with a length of over 100m comply with the probabilistic damage requirements according to SOLAS 2009. Vessels between 80 and 100m in length shall be allowed to choose whether to apply the deterministic approach of the OSV Code or alternatively the probabilistic method.

A considerable amount of time was used for the revision of SOLAS 2009 and Explanatory Notes. It was clarified that also for smaller cargo ships with a length of less than 80m the arrangement of a double bottom is required. Alternatively equivalent protection may be verified by a calculation procedure. A proposed methodology for such a calculation procedure is available but has to be developed in more detail.

Further on the arrangement of the well for lubricating oil under main engines in relation to the double bottom protection was discussed. The present method showing equivalent protection by applying the calculation procedure acc. to Reg. 9.8 was added with the option to arrange such a well with a vertical distance of $h/2$ to the keel line.

During certain operations a vessel can operate with drafts less than the "Light Service Condition" (e.g. during ballast water exchange) or in excesses of the summer load line draft (e.g. on tropical draft). A procedure was developed and agreed to include such draft ranges for the stability limiting curve.

Continuing, related to the stability limiting curve, it was addressed that a trim limitation is valid based on the damage stability calculation according to SOLAS 2009. A corresponding procedure for the calculation process and also for the onboard use was agreed.

Regulation 4 of the present SOLAS 2009, chapter II-1 defines the applicability of the subdivision and damage standard. Herein a footnote is included which lists certain codes describing alternative damage stability standards. It was noted that the footnote entails a different legal status than that of the regulation text itself. Therefore a revised wording for SOLAS II-1Reg. 4 was prepared. It is assumed that the discussion on this item will continue as several delegations have raised concerns about the wording and following implementation of the revised text.

The anticipated completion date for most of the items discussed within the SDS Group will be in the next (SLF 55) meeting and the following enforcement will be at MSC 92 which will probably be held in May 2013.

2.) Guidelines for Verification of Damage Stability Requirements for Tankers

The "Intersessional Correspondence Group on Verification of Damage Stability for Tankers" as well as IACS discussed the permissible deviations of tankers' service loading conditions from approved loading conditions.

While the correspondence group report and a submission by China proposed methods for developing these permissible deviations, the discussion in plenary and in the working group, established during that session, targeted establishing a mandatory requirement of a loading instrument for tankers.

Consequently the Sub-Committee agreed on the justification for expanding the agenda item in order to develop requirements for the mandatory carriage of stability computers on tankers, considering possible exemptions by flag states for existing tankers or tankers in dedicated services.

The matter was submitted to the Maritime Safety Committee (MSC) for further consideration at MSC 90 in May this year along with the "Guidelines for Verification of Damage Stability Requirements for Tankers" which were further modified by the Working Group and some proposed damage stability amendments to the Load Lines Convention.

3.) Intact Stability

The work focussed mainly on the development of the "Second Generation Intact Stability Criteria". Proposed criteria for all failure modes to be addressed (pure loss of stability, parametric roll, surf-riding / broaching, dead ship condition and excessive acceleration) are now at hand for level 1 as well as for level 2 vulnerability criteria. A method of calculation and a standard are to be determined. While the methods are fixed in general, the standards, e.g. a limiting value for final assessment or waves to be considered etc., are to be defined by further validating and testing work.

A paper submitted by Germany proposing a standard format included a developed example for the presentation of vulnerability criteria to improve their understanding and transparency. It was agreed to present all criteria in the proposed form.

During the intersessional correspondence group prior to SLF 54, the German intact stability group developed criteria for level 1 and 2 vulnerability relating to the failure mode "excessive acceleration". As the Peoples Republic of China developed similar criteria, a joint proposal of Germany and the Peoples Republic of China for level 1 vulnerability criteria was prepared during SLF 54.

There was a discussion on a possible approach for the calculation of excessive accelerations based on the roll back angle due to wave action as it is given in the weather criterion of IS-Code 2008, part A, Reg. 2.3. and whether to use the weather criterion as level 1 vulnerability criteria for the failure mode "dead ship condition". The weak points of the calculation methods embedded in the weather criterion were highlighted by some delegations with Germany being one of them. As a way forward it was agreed to further develop the weather criterion, by revision of MSC.1/Circ.1200, "Interim guidelines for alternative assessment of the weather criterion."

As it is of utmost importance to test the proposed criteria before their implementation GL highly recommends all related parties to do so. We would be happy to offer assistance concerning this matter.