

**MEETING:** International Maritime Organization (IMO), Sub-Committee on Stability, Load Lines and on Fishing Vessels Safety, 51st session (SLF 51)

**OUTLINE OF THE MEETING:** SLF Sub-Committee mainly deals with issues concerning SOLAS chapter II-1 (provisions relating to subdivision and damage stability), the Intact Stability Code and the Safety Recommendations for small fishing vessels recently. At the 51st session, the following items were discussed intensively.

1. Explanatory Notes to the revised SOLAS chapter II-1.
2. New generation intact stability criteria.
3. Design criteria and operational guidelines for damaged passenger ships for safe return to port.

**DATE:** From July 14 to July 18, 2008

**VENUE:** IMO Headquarters, London, UK

#### ATTENDANCE FROM NMRI

**Dr. Harukuni Taguchi** (Left in the photo):  
Senior Researcher of Marine Dynamics Group

**Dr. Yoshitaka Ogawa** (Right in the photo):  
Chief Researcher of Project Team for Research on Goal Based Standards and Centre for International Cooperation



**Dr. Ogawa** explained a Japanese proposal at the plenary.

#### MAJOR CONTRIBUTIONS

**Dr. Taguchi** participated in the considerations of time-dependent survivability of passenger ships in damaged condition and revision of the Intact Stability Code (IS-Code).

In terms of the revision of IS-Code, he participated in the working group and explained a procedure utilized in the Japanese domestic safety standards to reduce the wind pressure used in the application of the weather criterion for ships engaged in restricted service. He also contributed to the development of the framework of the new generation intact stability criteria and its terminology.

**Dr. Ogawa** participated in the considerations of development of the Explanatory Notes to the revised SOLAS chapter II-1, design criteria and operational guidelines for damaged passenger ships for safe return to port and damage stability regulations for ro-ro passenger ships in addition to the above mentioned two agenda items.

With regard to the revision of IS-Code, he contributed to the discussion on the substantial contents of the new generation intact stability criteria in accordance with the Japanese proposal (SLF 51/4/3) that reflected the results of research of NMRI. He also contributed to the development of the framework of the new generation intact stability criteria and its terminology.

In addition, he contributed to the discussion on design criteria and operational guidelines for damaged passenger ships for safe return to port in accordance with the Japanese proposal (SLF 51/11/4) that were conducted by NMRI. As a result that the submitted papers facilitated an extensive debate, based on the submitted papers, the SDS (subdivision and damage stability) Correspondence Group will mainly prepare draft guidelines for operational information for masters of passenger ships for safe return to port by own power or under tow.

Furthermore, in terms of damage stability regulations for ro-ro passenger ships, he exchanged information with other countries delegations.

## **MAJOR OUTCOME OF THE MEETING**

### **1. Explanatory Notes to the revised SOLAS chapter II-1**

The Sub-Committee agreed to the Explanatory Notes to the revised SOLAS chapter II-1 and the covering draft MSC resolution for submission to MSC 85 for adoption.

### **2. New generation intact stability criteria**

The Sub-Committee agreed to the framework and draft terminology for the new generation intact stability criteria which will establish minimum requirements for major dynamic modes of stability failures mentioned below.

- (1) Restoring arm variation problems such as parametric excitation and pure loss of stability.
- (2) Stability under dead ship condition.
- (3) Manoeuvring related problems in waves such as broaching-to.

The Sub-Committee also agreed the updated plan of action to develop the new generation intact stability criteria and re-establish the Correspondence Group on Intact Stability under the coordination of Japan (co-ordinator : Naoya Umeda, Associate Professor of Osaka University), and instructed the group to:

- .1 continue to work on the items contained in the updated plan of action for intact stability work, as set out in annex 4 to document SLF 51/WP.2, taking into account documents submitted to SLF 51 and relevant documents from previous sessions;
- .2 further consider the new generation intact stability criteria on the basis of document SLF 51/WP.2, taking into account documents submitted to SLF 51;
- .3 identify a sample of ships relevant to the failure modes described in paragraph 2.2 of the Framework for the new generation intact stability criteria (SLF 51/WP.2, annex 1), for which the results of well documented experiments are available;
- .4 collect and make available to the correspondence group all the relevant data of the ships (identified in subparagraph .3 above). The data should possibly include body lines and general arrangement plans, loading and operational conditions, appendages and, when required, propulsion and manoeuvring data, and experimental data;
- .5 collect in the mid-term (tentatively March 2009) the results that Member Governments and international organizations have submitted to the Organization concerning the application of procedures for checking vulnerability in accordance with paragraph 2.3 of the Updated plan of action (SLF 51/WP.2, annex 4);
- .6 collect in the mid-term (tentatively June 2009) the results that Member Governments and international organizations have submitted to the Organization concerning the application of procedures for direct assessment of intact stability in accordance with paragraph 2.4 of the Updated plan of action (SLF 51/WP.2, annex 4);
- .7 on the basis of these results, co-ordinate the development of preliminary specifications for the quality of the procedures and for the quantities considered relevant for the formulation of new generation intact stability criteria; and
- .8 submit a report to SLF 52.

### **3. Design criteria and operational guidelines for damaged passenger ships for safe return to port**

In the course of consideration of the submitted documents by Japan (SLF51/11/4), Italy, Germany and United States, the Sub-Committee noted that a majority of delegations who expressed support to the United States' view that an operational guidance only for safe return to port should be developed, which should also address the need for onboard computers.

The Sub-Committee instructed the SDS (subdivision and damage stability) Correspondence Group, taking into account the documents submitted to this session and discussion made in plenary, to:

- .1 develop design and damage stability criteria for passenger ships for safe return to port by own power or under tow;
- .2 prepare draft guidelines for operational information for masters of passenger ships for safe return to port by own power or under tow;
- .3 prepare draft amendments to SOLAS regulation II-1/8-1; and
- .4 submit a report to SLF 52.

In view of the above development, the Sub-Committee invited the Maritime Safety Committee to extend the target

completion date of the item to 2011.

#### **4. Damage stability regulations for ro-ro passenger ships**

With regard to the instruction by MSC 84 to give a preliminary consideration to the new work programme item on “Damage stability regulations for ro-ro passenger ships”, the Sub-Committee noted that MSC 84 had considered document MSC 84/22/12 (Austria et al), proposing to review the damage stability requirements of the revised SOLAS chapter II-1, to ensure that the issue of water on deck for ro-ro passenger ships is adequately addressed within those requirements and document MSC 84/22/23 (CESA) which pointed out that the combined use of the revised SOLAS chapter II-1 and the Stockholm Agreement would not be appropriate, as they are based on different concepts, and expressed the opinion that the decision could be taken only after the technical background of the proposal is made available.

The Sub-Committee, noting the view that further information is necessary and that the relevant studies are being conducted, instructed the SDS Correspondence Group to:

- .1 examine the impact of the damage stability requirements of the SOLAS 2009 amendments on ro-ro passenger ships, in comparison with the SOLAS 1990 regulations in association with the Stockholm Agreement;
- .2 define criteria to be used for the evaluation of the two approaches and determine whether the level of safety between them is generally equivalent;
- .3 assess existing and new studies on the subject as well as design experience;
- .4 if it is found that safety levels are not generally equivalent, identify possible rectification measures; and
- .5 submit a report to SLF 52 under the agenda item “Damage stability regulations for ro-ro passenger ships”.

#### **THE NEXT SESSION OF SLF**

The next session (SLF 52) will be held in January 2010 at the headquarters of International Maritime Organization in London UK.