

Report to AC

Stability in Waves Committee

Meeting: Sub-committee on Ship Design and Construction (Session 7)—SDC 7

Date: 3–7 Feb. 2020

Location: International Maritime Organization, London, UK

ITTC Participants: Mr. Akihiko Matsuda

SDC 7 Agenda: There was an extensive agenda for the one week meeting of SDC 7, of interest to the ITTC Stability in Waves Committee, was the work of two groups: the Intact stability Drafting Group, and the Damaged Stability Working Group. The focus of the Intact Stability Drafting Group was the SDC 7 agenda item:

- Finalization of second generation intact stability criteria (SDC 7/5)

For the Damaged Stability Working Group, the SDC 7 agenda item:

- Amendments to the Explanatory Notes to SOLAS chapter II-1 subdivision and damage stability regulations (resolution MSC.429(98)) (SDC 7/3)

Summary of participation: The ITTC Stability in Waves Committee representatives attended the opening and closing Plenary Sessions of SDC 7, and in between participated in the meeting of the Drafting Group on Intact Stability. Much of the effort of the Drafting group focused on the finalizing of Interim Guideline on the Second Generation Intact Stability Criteria.

Almost all members of China delegation include two members of Stability in Waves committee cancelled to join SDC7 because of coronavirus problem.

The central issues for discussion were finalizations of draft MSC circular and the Interim Guidelines on the Second Generation Intact Stability Criteria.

The Drafting group has considered in details and finalized two documents

- DRAFT MSC CIRCULAR, in Annex of SDC 7/WP.6
- INTERIM GUIDELINES ON THE SECOND GENERATION INTACT STABILITY CRITERIA, in Annex of SDC 7/WP.6

The Drafting group recommended that the Intersessional Correspondence Group develop the draft Explanatory notes on the Second Generation Intact Stability Criteria coordinated by Dr. Umeda, Japan. The subcommittee agreed with this recommendation and created the

Correspondence group. The final editing is expected to be done at SDC 8 in 2021.

This IMO development is well aligned with a number of ITTC aims, making ITTC participation in this development very relevant. In particular, we start to try Interim Guideline on the Second Generation Intact Stability Criteria. The experience gained in implementing the Interim guidelines is very important for ITTC, so it will continue to stimulate improvement of methods for numerical modeling of extreme ship motions with model experiments. In pursue of this aim ITTC has a chance to have a positive impact on this international development that may improve ITTC's stance.

In the onion of the ITTC representative, the matters of particular relevance are:

- Physical background of the IMO criteria (SiW Committee TOR #3)
- Development of new ITTC procedures for computational method for direct stability assessment (SiW Committee TOR #4); this procedures may include, but not limited to extrapolation, statistical validation, direct counting and proper environment modeling
- Roll damping (SiW Committee TOR #5 and 6)
- Parametric roll (SiW Committee TOR #7)
- Validation issues are related to model test procedures “Recommended Procedures, Model Tests on Intact Stability,” 7.5-02-07-04.1” issued in 2008 and “Captive Model Test Procedure 7.5-02-06-02” issued in 2014. These procedures are properly cited in SDC 7/WP.6.

Action requested of EC/AC:

To note the above information and approve further development in support of finalization of Interim guideline on the Second Generation Intact Stability Criteria.