ITTC Benchmark Testing of Numerical Codes for Intact Stability- Approach and Preliminary Results

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Abstract

In this paper will be introduced the philosophy, plan of tests and preliminary results of the new benchmark study of numerical codes of intact stability that has been undertaken by the Stability in Waves Committee of the 24th ITTC. A similar benchmark study that was carried out during the last ITTC revealed quantitative disagreements in the predictions of the various codes, making clear the need for a further study that will elucidate the sources of these differences.

In the opening section the results of the previous benchmarking will be shortly discussed. Then the new plan of tests will be explained together with the objectives that these tests serve. Problems encountered so far and some preliminary results will finally be outlined. It is hoped that the paper will lead to a discussion on stability benchmarking in general and on the topics where further effort on mathematical modeling could have a significant impact on the accuracy of numerical predictions.