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**Title:** Efficient Methods for Direct Calculation of Slamming Loads on Ships

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**Abstract:** This paper is concerned with slamming on ships, with particular emphasis on bow flare slamming. An efficient numerical method presented by Hermundstad and Moan (2007) is briefly described, and a summary of previous and new validation results is given. This includes a bow section dropped onto calm water, a 120 m RoRo ship at 20 knots, a 290 m cruise ship at low speed and an FPSO at zero speed. Predictions of slam-induced local stresses by combined slamming and FE-analysis are validated for an aluminum section dropped onto calm water. Based on the experience with the different cases, some general remarks are made with respect to the applicability of the method, the importance of various physical effects and the need for further work.

**Keywords:**