



With the increase of ship size and the planning of new terminals along waterways and port entrances, the effects of passing ships on the motions and the mooring loads of berthed vessels have become an important issue for planning, engineering and port operations. ROPES JIP investigates this issue.

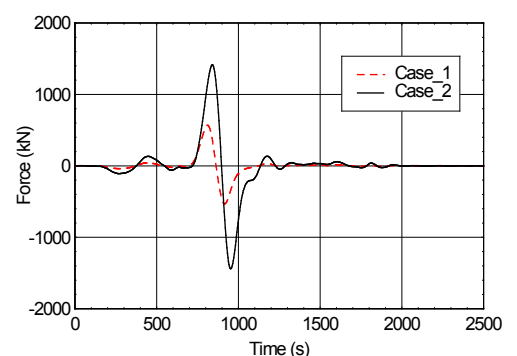
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The Research on Passing Effect of Ships (ROPES) Joint Industry Project (JIP) is aiming to develop and validate computational tools to predict the loads on berthed vessels so that the motions, line and fender loads can be computed in a reliable way. The project comprises software development and delivery, model testing and extensive full-scale monitoring. A combination of numerical analysis, laboratory experiments and real world data is a powerful mix when it comes to providing a better insight into the effects of passing ships. At the same time, sufficient data will be collected to develop and validate numerical tools for the dynamic analysis of moored vessels.

A monitoring campaign will be conducted in the Port of Rotterdam for various berthing geometries. A moored vessel will be extensively instrumented to record motions and mooring loads. In addition, the speed and distance of passing vessels will be recorded as well as the wind, wave and current conditions. In this way each situation can be numerically simulated and a deterministic correlation between the numerical results and the measured values can be obtained.

Best Practice Finally, the results will be evaluated and a Best Practice will be developed to provide solutions for existing and new port and terminal developments.

ROPES was initiated by PMH, Svasek, Deltares and MARIN and stakeholders such as ports, terminal operators, vessel operators and engineering contractors are all invited to participate in this three-year project. For further information please contact Mr Jo Pinkster (jo.pinkster@pmh-bv.com) or Henk van den Boom (h.v.d.boom@marin.nl).



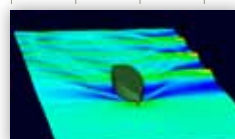
Sway force on moored LNG Carrier in deep (Case_1) or shallow (Case_2) part of terminal. VLCC passing in deep channel

2007



Start ANYSIM:
multi-body time
domain simulation

2008



1000 RAPID projects
completed