



Evening Lecture

Jointly Organised by
The Joint Branch of the RINA and the IMarEST (Singapore),
Society of Naval Architects and Marine Engineers Singapore - SNAMES
and
Centre for Offshore Research & Engineering (CORE), NUS

“Prediction of Passing Vessel Effects on Moored Vessels”

By **Professor J.A. Pinkster**
PMH bv, Rotterdam, Prof. Emeritus Delft University of Technology

Date: Wednesday, 8 September 2010

Time: 6.15 p.m. to 7 p.m. Registration & Refreshments

Lecture begins at 7 p.m. and ends at 8 p.m.

Venue: Engineering Auditorium, Faculty of Engineering, National University of Singapore
(see attached map)

Please see the attached documents for the abstract of the lecture and biography of the speaker.

Please confirm with Ms. Jenny Seow by Monday 1 September 2010 via email.

Woon Kok Meng
For Technical Committee
Joint Branch (RINA-IMarEST)

Please reply to Ms Jenny Seow (6472 0096) by Email: jenny.seow@imarest.org

Yes, I would like to attend the talk.

Name: _____

Designation & Company: _____

Email: _____ Contact no.: _____



“Prediction of Passing Vessel Effects on Moored Vessels”

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ABSTRACT

Hydrodynamic effects of passing ships in confined waters fall into two main categories : If the passing vessel is large and moving relatively slowly, the effects on moored ships is mainly in the form of so-called suction of draw-down forces and moments which can induce significant transient low-frequency variations in horizontal motions and the forces in mooring lines and fenders . If the passing ship is a fast ferry, the wake wash is usually the primary source of hinder effects for other vessels, leading to unexpected motions or peak mooring loads.

The recent increase in the size of some classes of vessels, notably the container vessels and the increase in the number of LNG terminals within ports, have resulted in increased concern for the effects of passing ships. In the case of the container vessels the concern is focused on the effect of such passing vessels which are becoming so much larger on other moored container vessels. This can lead to down time of the loading/discharging process of the moored vessels. With respect to the LNG carriers the main focus in recent years has been on the effects of the passing vessels, be they tankers or container vessels, on moored LNGCs. The concern here is focused on mooring loads and motions of the moored vessels at the location of the manifold. Public concern for the safety of LNG terminals situated near populated areas is an important factor

Fast passenger ferries are often traveling at relatively high speeds in restricted waters. The wash waves they create have been a matter for concern for several years with the main focus being on the waves created by such vessels.

In the presentation, attention will be given to progress being made with respect to insight in the effects of both slow, large vessels and fast, small vessels on moored ships. In clarifying some of the effects of passing vessels, use is made of computational methods developed over the last years. These methods are being applied to the evaluation of the safety and integrity of new and existing mooring terminals for container vessels, tankers, LNG carriers and also to the evaluation of the effects of a passing fast ferry on other floating bodies. In the case of the effects of wash wave from a fast ferry, the analyses have also been carried out as part of the process of design evaluation of the vessel. Where appropriate, results of predictions will be compared with results from model test and full scale measurements.

Lastly some attention will be devoted to regulations with respect to safety and integrity of mooring terminals for tankers from the point of view of passing vessel effects and to the development of criteria with respect to wash waves of fast ferries. Attention will also be given a new initiative for an international co-operative research program focused on prediction methods for forces generated by passing vessels large vessels on moored vessels.

