Recent development of analysis and design procedures for vessels for production, storage and transport of oil and gas

by

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Significant developments of ships for production and storage of oil have taken place, over the last two decades. Offshore gas production is also expected to rise significantly. While tankers for oil transport are mature technology, intensive efforts are currently devoted to further extend the technology for effectively transporting gas in liquefied or compressed form. The economic advantage of increasing the size of LNG tankers while maintaining the number of tanks as small as possible, represents a challenge.

The Keppel lecture deals with recent developments of structural analysis and design procedures for safe and economic design of ships with the aforementioned function. The lecture presents an overview of recent activities of methods for dealing with the hull structures. Emphasis is placed on gas containment structures. Particular developments are reported on wave-induced loads such as slamming, green water and sloshing, overall hull girder strength, fatigue and fracture resistance as well as robustness with regard to accidental effects due to ship impacts, fires and explosions.

Torgeir Moan has been Professor of Marine Structures in Norwegian University of Science & Technology (NTNU) since 1977. His main research interest is structural analysis and design of all kinds of marine structures. He has authored more than 250 scientific papers, and delivered more than 10 keynote, plenary lectures in international conferences and award lectures. He has educated 40 doctoral students and is currently supervising 10 of them and has hosted 25 foreign postdocs and visiting professors. He has been a visiting professor at MIT for one year and UC Berkeley for two years. He has contributed in the development of various structural design standards for offshore structures, ships and floating bridges in Norway and internationally. Most recently, he was responsible for the most modern standard for analysis of loads and load effects for offshore structures (NORSOK N-003) that will serve as basis for ISO standard for floating platforms. He has also been engaged in accident inquiries. Since 1976, he has been involved in ISSC, was the Chairman for ISSC in 1994-97 and served in its Standing Committee. He is editor of J. Marine Structures and serves on the editorial board of six other journals.

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Keppel Offshore & Marine Lecture 2005

“Recent development of analysis and design procedures for vessels for production, storage and transport of oil and gas”

on Wednesday, 30 November, 7pm
at the Engineering Auditorium
Faculty of Engineering, National University of Singapore
21 Lower Kent Ridge Road, Singapore 119077

☐ Yes, I would like to attend the lecture.
☐ No, I will not be attending the lecture.

Name : __________________________
Organization : __________________________
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