

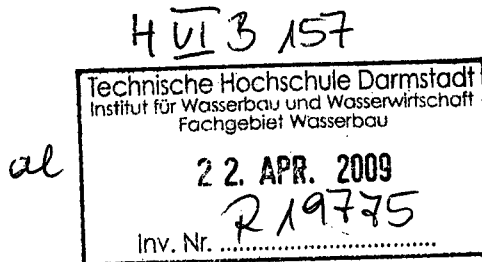
# **MOSS 2008**

## **Marine Operations Specialty Symposium**

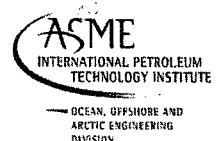
***Editors:***

**Yoo Sang Choo**

**David N. Edelson**



**Organized by:**



## Contents

<i>Preface</i>	iii
<i>Sponsors</i>	iv
<i>International Organising Committee</i>	v
 <b>Lessons Learnt and Codes</b>	
Topsy Turvy Twelve Pile Launches <i>Peter Marshall</i>	3
Updated DNV Codes for Marine Operations <i>Per Øystein Alvær</i>	12
 <b>Simulation of Operations</b>	
Simulation of 'Ormen Lange' Installation Operations <i>Peter C. Sandvik and Svein-Arne Reinholdtsen</i>	25
Model Tests and Computer Simulations for Njord FPU Gas Module Installation <i>Remmelt van der Wal, Hans Cozijn and Chris Dunlop</i>	37
Anchor Handling Simulation <i>Noël Bovens and Brian Townsley</i>	57
Human Element in the Safety Modeling of Offshore Marine Operations <i>Haibo Chen and Torgeir Moan</i>	70
 <b>Transportation</b>	
Heavy-Lift Transport Ships – Overview of Existing Fleet and Future Developments <i>Frank van Hoorn</i>	83
A New Approach to Designing and Approving Barge Tows <i>James Vavasour, Doug Devoy, Trevor Mills and Albert B. Aalbers</i>	100
 <b>Hydrodynamics and Lifting Operations</b>	
First and Second Order Wave Effects in Narrow Gaps Between Moored Vessels <i>Liang Sun, Paul H. Taylor and Rodney Eatock Taylor</i>	113

Hydrodynamic Coefficients of Porous Plates and Application to Subsea Deployment <i>F.-X. Sireta, K. Thiagarajan, B. Molin and F. Pistani</i>	125
Simplified Method for Prediction of Hydrodynamic Forces on Subsea Structures Lifted Through Wave Zone <i>Tormod Bøe and Arne Nestegård</i>	133
Dynamic Amplification Factors in Lifting Operations for Installation of a Subsea Spool <i>Mehrdad Kimiaei and Ali Reza Khosroshahli</i>	147
<b>Floatover Operations</b>	
Kikeh Spar Topside Floatover Installation — Operational Aspects <i>David N. Edelson, Daniel van Schooneveld, Jim Wang and Doug Smiley</i>	157
Mating Analysis of the Truss and Hull Sections on the Truss Semisubmersible in Open Water <i>John Murray, Cheng-Yo Chen and Chan K. Yang</i>	172
Float-Over Technical Challenges <i>Alp A. Kocaman and Daejun Kim</i>	184
Float-Over High Air Gap <i>Jean-Marc Cholley and Marc Cahay</i>	196
Floatover – Installation of Topsides <i>Rune Aalvik Lien, Helge Johnsgard, Kjetil Eckhoff and Jan Gramnas</i>	206
Vessel Adapted for Deck Structure Installation and Removal: New Solution <i>Jean-Marc Cholley, Pierre Armand Thomas and Nicolas Tcherniguin</i>	219
Assembly of a Monocolumn Hull by the Mating of Two Sections <i>Daniele Lima, Marta Tapia Reyes and Isaias Quaresma Masetti</i>	230
<b>Installation of Subsea Template</b>	
Wet-Tow and Installation of Subsea Templates <i>Kenneth Aarset, Tale Kristine Ulstein and Håvard Strand</i>	241
The Pencil Buoy System — Installation of Subsea Structures without Offshore Crane Vessel <i>Trine Risoey, Helge Johnsgard, Henrik Mork and Jan Gramnas</i>	258
<b>Pipeline Installation</b>	
Reducing the Cost of Offshore Pipelines <i>Andrew C. Palmer, John Hammond and Roger A. King</i>	275

Analysis of an Alternative Pipeline Installation Procedure that Combines Onshore Deflection and Offshore Transportation <i>Danilo Machado Lawinsky da Silva, Rodrigo Almeida Bahiense, Breno Pinheiro Jacob, Fernando Gomes da Silva Torres and Antonio Roberto Medeiros</i>	285
Design and Installation of Steel Transfer Lines for Deep Water Export Terminal Projects <i>Hervé Quintin and Marin Abélanet</i>	294
<b>Installation and Control of Moorings and Risers</b>	
Installation of Deep Water Moorings <i>Frode Eidheim and Ian Frazer</i>	307
Design and Installation of Steel Catenary Risers in Deep to Ultra Deep Water <i>Hervé Quintin and Marin Abélanet</i>	318
Deepwater Minimum Production Riser System, Design, Fabrication, Installation <i>Jean-Francois Saint-Marcoux and Mason Wu</i>	332
Parametric Evaluations of the Buoy Supporting Riser (BSR) Installation <i>Antonio C. Fernandes, Jairo B. Araújo, Marcos Rangel, Joel S. Sales Jr, José C. L. de Almeida, Ricardo Franciss and Jorge Merino</i>	343
Switching Control for Thruster-Assisted Position Mooring <i>Dong T. Nguyen and Asgeir J. Sørensen</i>	352
Control of Marine Drilling Riser Angles by Position Mooring <i>Dat H. Nguyen, Dong T. Nguyen, Ser T. Quek and Asgeir J. Sørensen</i>	367
<b>General Session</b>	
Ampelmann Demonstrator: Completion of a Motion Compensation Platform for Offshore Access and Review of Different Applications <i>J. van der Tempel, D. J. Cerda Salzmänn, J. M. L. Koch, F. W. B. Gerner and A. J. Göbel</i>	383
Response Based Motion Analysis Methods for a Turret Moored FPSO <i>Iwan Aryawan, Richard Bamford and Graham Stewart</i>	398
Weather Routing: Uncertainties and the Effect of Decision Support Systems <i>A. B. Aalbers and C. J. G. van Dongen</i>	411
Design and Construction Considerations for Compliant Towers Offshore Borneo <i>Peter Marshall and Carlos Llorente</i>	424
Transport and Installation of Shah-Deniz TPG500 in the Caspian Sea <i>Pierre-Armand Thomas, Nicolas Tcherniguin and Jean-Marc Cholley</i>	444
Author Index	455