CONTENTS

PIPELINE AND RISER TECHNOLOGY

OMAE2014-23010 ................................................................. V06AT04A001
Design Parameter Reliability Analysis of Induction Bends
  Venkata M. K. Akula and Lance T. Hill

OMAE2014-23103 ................................................................. V06AT04A002
Investigation of Tensile Armor Wire Breaks in Flexible Risers and a Method for Detection
  Nick Weppenaar and Bo Andersen

OMAE2014-23106 ................................................................. V06AT04A003
Saturation Index Prediction based on Taguchi Approach and Multiple Linear Regression in Oil Wells
  Vivianne Cristina Ferreira Lima, Marco Antonio Ribeiro de Almeida, Florence Leal Machado,
  and Valter Antonio Monteiro Branco

OMAE2014-23111 ................................................................. V06AT04A004
Selection of Leak Detection Systems by Aggregation of Experts’ Judgment
  Sirous Yasseri

OMAE2014-23116 ................................................................. V06AT04A005
Trenching Considerations for Arctic Pipelines
  Mike Paulin, Joseph Cocker, Damien Humby, and Glenn Lanan

OMAE2014-23117 ................................................................. V06AT04A006
Arctic Offshore Pipeline Design and Installation Challenges
  Mike Paulin, Duane DeGeer, Joseph Cocker, and Mark Flynn

OMAE2014-23137 ................................................................. V06AT04A007
Determination of the Effect of Second Order Motions of Moored MODU on Wellhead Fatigue
  Dara Williams and Patrick Ashton

OMAE2014-23146 ................................................................. V06AT04A008
Fatigue Analysis of Subsea Jumpers Due to Slug Flow
  Bob (H. E. J.) van der Heijden, Henk Smienk, and Andrei V. Metrikine

OMAE2014-23151 ................................................................. V06AT04A009
Flexible Riser Bending Hysteresis Influence on Bend Stiffener Response
  Marcelo Caire

OMAE2014-23192 ................................................................. V06AT04A010
Finite Element Analysis of Flexible Pipes Under Compression
  Eduardo Ribeiro Malta and Clôvis de Arruda Martins

OMAE2014-23196 ................................................................. V06AT04A011
A Study for Statistical Characteristics of Riser Response in Global Dynamic Analysis With Irregular Wave
  Yanqiu Zhang, Zhimin Tan, Yucheng Hou, and Jiabei Yuan
OMAE2014-23201 Comprehensive Qualification Program for the Browse 24 Inch High Temperature Flexible Joint Prototype
Basim Mekha, Ben Hawkey, James Patrick, and Todd Pottorff

OMAE2014-23202 Heat and Mass Transfer Mechanism of Gas Hydrate Development for South China Sea
Xichong Yu, Li Gang, Weixin Pang, and Wu Yaling

OMAE2014-23222 Hydrodynamic Coefficients for Straked Risers
Arne Nestegård, Per Erlend Voie, and Nils Sødahl

OMAE2014-23250 A Multi-Purpose Finite Element Model for Flexible Risers Studies
Fabien Caleyron, Martin Guiton, Jean-Marc Leroy, Timothee Perdrizet, David Charliac, Pascal Estrier, and Laurent Paumier

OMAE2014-23266 Fatigue Assessment of Work-Over Risers Through Physical Testing
Gerhard Gundersen, Rolf Hugo Kirkvik, and Christopher Hoen-Sorteberg

Shaofei Ren, Wenyong Tang, Hongxiang Xue, and Zhe Hu

OMAE2014-23306 Comparative Study on the Collapse Response of Flexible Pipe Using Finite Element Methods
Nathan Cooke and Shawn Kenny

OMAE2014-23309 Simulation of a Free Standing Riser Model and Validation With Experimental Results
Marcio Yamamoto, Sotaro Masanobu, Satoru Takano, Shigeo Kanada, Tomo Fujiwara, and Takayuki Asanuma

OMAE2014-23331 Lateral Buckling and Walking Design of a Pipeline Subjected to a High Number of Operational Cycles on Very Uneven Seabed
Rafael F. Solano, Bruno R. Antunes, Alexandre S. Hansen, T. Sriskandarajah, Carlos R. Charnaux, P. Ragupathy, and Daniel Manso

OMAE2014-23351 Design Challenge of Rigid Riser-Spool Piece Against HTHP Induced Expansion in Pipe-in-Pipe Systems
Facheng Wang, Ming Gao, Jun Wang, Yigong Zhang, Xu Jia, and Jun Huang

OMAE2014-23366 Response of Mild Steel Pipes Under High Mass Low Velocity Impacts
Shamsoon Fareed and Ian May

OMAE2014-23373 Moonpool Effect Assessment During Structure Installation
Gabriel Vazquez Perez, Alessio Pistida, and Henk Smienk
OMAE2014-23403  On the Challenges With Pipeline Free Spans in Operational Phase  
Celso Raposo, Olav Fyrileiv, and Antonio Pereira

OMAE2014-23423  On the Effects of Bending Stiffness for Flexible Riser Model Tests  
Alex Ruskin, Zak Tahana, Shuhong Chai, Cheslav Balash, Henri Morand, and Cecile Izarn

OMAE2014-23424  Preliminary Study on Stick-Slip in Drillstring With Analytical Model Expressed With Neutral  
Delay Differential Equation  
Tomoya Inoue, Tokihiro Katsui, Chang-Kyu Rheem, Zengo Yoshida, and Miki Y. Matsuo

OMAE2014-23488  Acoustic Reflectometry for Blockage Detection in Pipeline  
L. Loureiro Silva, P. C. C. Monteiro, J. L. A. Vidal, and Theodoro A. Netto

OMAE2014-23493  Study of Slug Control Techniques in Pipeline Systems  
P. C. C. Monteiro, L. Loureiro Silva, J. L. A. Vidal, and Theodoro A. Netto

OMAE2014-23500  Hydrodynamic Forces due to Oblique Wave and Current Loading on Untrenched  
Subsea Pipelines  
Johnathan Green, Terry Griffiths, and Chris Craddock

OMAE2014-23507  Sandwich Pipes With Strain Hardening Cementitious Composites (SHCC): Numerical Analyses  
Guangming Fu, Claudio Moura Paz, John Alex Hernandez Chujutalli, Marcelo Igor Lourenço,  
Dirney Bessa de Lima Jr., Yong Li, Romildo Toledo Filho, and Segen F. Estefen

OMAE2014-23512  Numerical and Experimental Study of Damaged Sandwich Pipe Under External Pressure  
João Fabricio Machado de Castilho and Ilson Paranhos Pasqualino

OMAE2014-23520  Revisiting the Dimensional Analysis of Pipeline Embedment During Installation  
Daniel Carneiro

OMAE2014-23521  Rate Dependent Soil Resistance in FE Analysis of Pipeline Walking  
Daniel Carneiro, Andrew Rathbone, Kok Siong Soon, and Graham Viecelli

OMAE2014-23545  Load Response and Finite Element Modelling of Bonded Offshore Loading Hoses  
Tom Lassen, Andreas Istad Lem, and Geir Imingen

OMAE2014-23551  Flexible Pipe Modeling Using Finite Macro-Elements  
Rodrigo Provasi and Clóvis de Arruda Martins

OMAE2014-23567  Coupled Analysis of SCR and Flowline Under High Pressure and High Temperature  
C. H. Luk, Xinhai Qi, and Jianxia Zhong
Assessment of the Integrity of the PVDF Barrier in Unbonded Flexible Pipes
Michelle Davidson, Upul S. Fernando, John Hall, Brendon O’Donnell, James Latto, and George Karabelas

Analysis of End Fitting Barrier Seal Performance in High Pressure Unbonded Flexible Pipes
Upul S. Fernando and George Karabelas

Wrinkling and Collapse of Girth-Welded Lined Pipe Under Bending
Lin Yuan and Stelios Kyriakides

In Situ Investigation of Microstructural Changes in Thermoplastic Composite Pipe Under Compressive Load
Neville Dodds, Ketan Pancholi, Vineet Jha, Syed Fawad Tariq, and James Latto

Integrity Assessment of Clad Pipe Girth Welds
Antonio Carlucci, Nicola Bonora, Andrew Ruggiero, Gianluca Iannitti, and Gabriel Testa

Crack Initiation and Growth in Bimetallic Girth Welds
Antonio Carlucci, Nicola Bonora, Andrew Ruggiero, Gianluca Iannitti, and Domenico Gentile

Design of Novel Solution of Flexible Pipe for Offshore Oil Offloading Transfer
A. T. Do, S. Legeay, D. Charliac, J. M. Pere, J. P. Roques, and A. Karnikian

Numerical Simulation of Solid Particle Erosion in a 90 Degree Bend for Gas Flow
Ri Zhang and Haixiao Liu

An Investigation on Circumferentially Cracked Bar Geometry for Critical CTOD Determination
Antonio Carlucci, Nicola Bonora, Andrew Ruggiero, Gianluca Iannitti, and Italo Persechino

Upheaval Creep of Rock Dumped Flexible Flowline
Yang Zhengmao, Kristian Norland, Neil Brown, and Daniel Karunakaran

Dynamic Response Control of Top-Tension Risers by a Variable Damping and Stiffness System With Magneto-Rheological Damper
Hooi-Siang Kang, Moo-Hyun Kim, Shankar S. Bhat Aramanadka, and Heon-Yong Kang

Predicting Hydrostatic Collapse of Pipes Using Finite Element Analysis
Ajit Bastola, Junkan Wang, Ali Mirzaee-Sisan, and James Njuguna
Effect of Reeling Simulation on the Mechanical Properties of New Duplex Stainless Steel for Line Pipe

Hidenori Shitamoto, Masayuki Sagara, Hisashi Amaya, Nobuyuki Hisamune, Daisuke Motoya, and Yuuki Watatani

Experimental Comparison of Tensile Armour Wires Using Strain Gages and Fiber Bragg Grating Techniques

Felipe Arías Vargas, Diogo Garcia Lopes, Paulo Pedro Kenedi, Judimar Clevelario, and Fabio de Souza Pires

Assessment of Parameters Influencing Lateral Buckling of Deep Subsea Pipe-in-Pipe Pipeline System Using Finite Element Modeling

M. Masood Haq and S. Kenny

Experimental Verification of HFMI Treatment of Large Structures

Halid Can Yildirim, Gary B. Marquis, and Per J. Haagensen

Integrity of Subsea Control Umbilical

Ramin Yasseri, Sirous Yasseri, and Bin Wang

Material Property Testing for Finite Element Modelling of Coatings

Helen Boyd, Erwan Karjadi, Harm Demmink, Guido Ridolfi, and Han Keijzers

Full Scale Application of Thermal Ageing in Line Pipe Material Selection for Deepwater Pipelines

Niels Kerstens, Ping Liu, and Duane DeGeer

Bursting Capacity Debonding of Ultra Deep Composite Production Riser: A Safety Assessment

Manander Singh and Suhail Ahmad

Hybrid Riser Tower Design: Evolution, Operational Efficiency and Compliance to Ultra Deep Offshore Challenge

Hervé Gueveneux and Philippe Le Buhan

On Determination of Acceptable Safety Class in Design of Pipe-In-Pipe (PIP) Systems

Soheil Manouchehri, Guillaume Hardouin, David Kaye, and Jason Potter

Flexible Riser Carcass Collapse Analyses: Sensitivity on Radial Gaps and Bending

Gunnar Axelsson and Håvard Skjerve
End Fitting Effect on Tensile Armor Stress Evaluation in Bent Flexible Pipe
Linfa Zhu and Zhimin Tan

A Methodology to Predict the Remaining Fatigue Life of a Flexible Pipe With Broken Tensile Armor Wires
José Renato M. de Sousa, Fernando Jorge M. de Sousa, Marcos Q. de Siqueira, Luís Volnei S. Sagrilo, George Campello, and Carlos Alberto D. de Lemos

On the Axisymmetric Response of a Damaged Flexible Pipe
José Renato M. de Sousa, Carlos Magluta, Ney Roitman, and George C. Campello

A New Riser Fatigue Monitoring Methodology Based on Measured Accelerations
Michael Long Ge, Jomon Kannala, Songcheng Li, Himanshu Maheshwari, and Mike Campbell

Author Index

xiii