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- 9th (Deep) Ocean Mining (& Gas Hydrates)

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**Application of Digital Image Correlation in Testing of Weldments**

MA Verstraete, W De Waele, RM Denys, S Herteli, Univ of Gent, Belgium

**Effects of Cross-sectional Strain Distribution on the Critical Buckling Strain of Energy Pipelines**

A Fathi, JJR Cheng, Univ of Alberta, Canada

**Advanced Continuum Modeling to Determine Offshore Arctic Pipeline Strain Demand Due to Ice-Gouging**

SP Lele, JM Hamilton, M Panico, H Arslan, ExxonMobil Upstream Research, USA

**Shear Generated Fracture in Predicting Oil Leak in the BP Accident**

KN Kofiani, T Wierzbicki, K Evangelos, MIT, USA

**55. SBD III: Full Scale Testing in SBD (V. 4)**

**Tuesday June 21 14:00** Room 7

**Chair:** E Østby, SINTEF, Norway

**Co-Chair:** B Newbury, ExxonMobil Development Co, USA

**Full Scale Bend Testing of Strain Based Designed High Grade Buried Gas Pipeline**

G Mannucci, A Lucci, Centro Sviluppo Materials; CM Spinelli, ENI Gas & Power; A Baldi, G Mascia, Univ of Cagliari, Italy

**Material Guideline on Turning Point between Wrinkle and Rupture Developed under Bending**

E Tsuru, Y Shinohara, Y Nagata, J Agata, Nippon Steel, Japan

**Tensile Strain Capacity of 48" OD X80 Pipeline in Full-scale Bending Test with High Internal Pressure**

S Igi, T Sakimoto, N Suzuki, R Muraoka, JFE Steel, Japan

**Full-Scale Bending Test of 48" X80 Line Pipes**

H Tajika, N Suzuki, JFE Steel, Japan

**Full-scale Test Protocol for Measurement of Tensile Strain Capacity of Welded Pipelines**

S Kibey, SF Lele, M Macia, DP Fairchild, WT Cheng, ExxonMobil Upstream Research; WC Kan, MF Cook, R Noecker, B Newbury, ExxonMobil Development, USA

**Effect of Full Scale Pipe Bending Test Method on Deformability Results of SAW Pipes**

H Shitamoto, M Hamada, Y Nishi, I Takeuchi, Sumitomo Metal Industries, Japan

**65. SBD IV: Fracture Mechanics in SBD (V. 4)**

**Tuesday June 21 16:20** Room 7

**Chair:** E Tsuru, Nippon Steel Corp, USA

**Co-Chair:** D McColskey, NIST, USA

**Strain Rate Effect on Upper-Shelf Toughness for Pipeline Strain-Based Design**

L De Pari, WH Van Geertruyden, N Zettlemoyer, ExxonMobil Development, USA

**Evaluation for Fracture Toughness in Welded X80 Linepipes**

Y Shinohara, E Tsuru, T Hara, Nippon Steel, Japan

**Constraint-Based Assessment of CTOD Toughness Requirement for High-Strain Line**

F Minami, Y Takashima, M Ohata, Osaka Univ, Japan

**A New Assessment Approach for ECA of Clad and Lined Pipes Based on Shell and Line-Spring Finite Elements**

E Oslø, SINTEF; E Berg, LINKfr; B Nyhus, SINTEF; C Thaulow, NTNU; E Østby, SINTEF

**DNV's Strain-Based Fracture Assessment Approach for Pipeline Girth Welds**

SL Bjerke, S Wastberg, Det Norske Veritas, Norway

**A Multi-Tiered Procedure for Engineering Critical Assessment of Strain-Based Pipelines**

DP Fairchild, M Macia, S Kibey, V Krishnan, F Bardi, H Tang, ExxonMobil Upstream Research, USA

**Crystal Plasticity Modeling of the Local Crack Tip Stress Field**

A Kane, E Østby, SINTEF Materials and Chemistry, Norway

