

ISOPE-2008: SBD-2008 Vancouver

CALL FOR PAPERS

The 18th International Offshore and Polar Engineering Conference

Vancouver, Canada, July 6-11, 2008

2nd ISOPE Strain-Based Design (SBD) Symposium: Pipelines

Strain-based design (SBD) generally refers to pipeline designs expected to have longitudinal strains greater than 0.5%. SBD encompasses both strain demand and strain capacity. At least two limit states are associated with SBD: *tensile rupture* and *compressive buckling*. SBD in recent years has been driven primarily by the need to construct pipelines in the arctic regions, deep-water offshore, and other areas with high probability of large ground movements. The strain capacity is affected by material properties, geometry/defect features, and interaction between pipes and their surrounding environment. The strain demand usually has large uncertainties. There are no standards or codified procedures that adequately address SBD of pipelines.

Following the successful first symposium on strain-based design of pipelines, ISOPE is hosting the second symposium at its annual conference in 2008. The overall scheme of second symposium is similar to the first one covering all aspects of science, technology, and applications of SBD of pipelines, with expanded focus on strain demand. The organizing committee cordially invites scientists and engineers from academia, industry, and regulatory authorities to share their latest advancements in this increasingly crucial technology area.

Suggested Technical Topics:

Strain Capacity

- Metallurgical design of steels for SBD
- Use of high strength micro-alloyed TMCP steels
 - Weld and HAZ properties
 - Balance of strength and toughness
- Development of weld defect assessment procedures (ECA)
 - Welding essential variables and procedure qualification tests
 - Weld property specifications
 - Defect assessment models
 - Material response under cyclic strains and dynamic loading
- Material testing methods
 - Small scale low constraint tests
 - Structural scale tests
 - Full scale validation tests
 - Reliability and consistency of testing methods
- Emerging issues for SBD, e.g., effects of bi-axial loading, strain ageing, etc.

Strain Demand

- Estimating applied strains from ground movements and displacement-controlled loading
- Soil/fluid/pipe interactions

Application of SBD

- Linepipe specifications for SBD
- Pipeline projects using SBD
- Construction practice for SBD
- Codes and standards development

Symposium Organizing Committee:

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Key Dates:

- Abstracts Due: **December 1, 2007**
- Manuscript for Review: **Jan. 15, 2008**
- Final Papers Due: **March 24, 2008**

Interested authors should send abstracts to one of the organizing committee members or submit online at www.isope.org. The abstract must include the contact author's postal address, telephone and fax numbers, and e-mail address to facilitate committee communication.