

ISOPE-2009: SBD-2009 Osaka
CALL FOR PAPERS

The 19th International Offshore and Polar Engineering Conference
Osaka, Japan, June 21-26, 2009

3rd ISOPE Strain-Based Design (SBD) Symposium: Pipelines

Strain-based design (SBD) generally refers to pipeline designs expected to have high longitudinal strains. 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, areas prone to seismic activities, deep-water offshore, and other areas with high probability of large ground movements. There are no standards or codified procedures that adequately address SBD of pipelines. Following the successful two symposia on strain-based design of pipelines, ISOPE is hosting the third symposium at its annual conference in 2009. The overall scheme of the third symposium is similar to the first two held in Lisbon and Vancouver, covering all aspects of science, technology, and applications of SBD of pipelines. The symposium has expanded focus on project experience with SBD, offshore applications, and 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

Applications of SBD

- Linepipe specifications for SBD
- Pipeline project experience with SBD
- Construction practice for SBD
- Codes and standards development

Strain Capacity

- Material design for SBD
 - High strain hardening capacity
 - Resistance to strain aging
 - 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
 - Effects of bi-axial loading
 - Effects of misalignments and geometric imperfections

Strain Demand

- Estimating applied strains from ground movements
- Soil/fluid/pipe interactions

Symposium Organizing Committee:

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Key Dates:

- Abstracts due: **November 20, 2008**
- Manuscript for review: **Jan. 20, 2009**
- Final papers due: **March 24, 2009**

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