

# SBD-2018 Symposium at ISOPE-2018 Sapporo

The 28th Annual International Ocean and Polar Engineering Conference  
Sapporo, Hokkaido, Japan, June 10–15, 2018

## 12th ISOPE Strain-Based Design Symposium (SBD-2018)

### First CALL FOR PAPERS

The 12<sup>th</sup> symposium on the strain-based design will be held at the annual conference of ISOPE in 2018. The response to the prior symposia has been outstanding. This symposium will highlight the continued development in this highly critical area for new energy pipelines. SBD is the preferred design method, and often necessary technically and economically, for pipelines expected to experience 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 arctic regions, areas prone to seismic activities, deep-water offshore, and other areas with high probability of large ground movements. This symposium will cover all aspects of science, technology, and applications of SBD of pipelines. The organizing committee cordially invites scientists and engineers from academia, industry, and regulatory authorities to share their latest advancements.

*Special ISOPE room rate at ISOPE hotel room rates starts from \$80+/night.*

#### Suggested Technical Topics

##### *Applications of Strain-Based Design and Assessment (SBDA)*

- Linepipe specifications and material properties for SBD
- Project experience with pipeline design and construction for SBD
- Codes and standards development
- Limit states design for SBD applications including probabilistic approaches
- Offshore pipeline installation – reeling, J-lay and S-lay
- Fitness-for-service assessment of strain-based pipelines

##### *Strain Demand*

- Estimation of applied strains
  - Frost heave, thaw settlement, ice gouging
  - Earthquake, fault crossing, landslide
  - On-bottom stability

##### *Strain Capacity*

- Material design for SBD
  - Weld and HAZ properties: strength vs. toughness
  - Low application temperature line pipe coatings for corrosion protection
  - 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: transferability to full-scale
  - Full-scale validation tests: reliability and consistency of testing methods
- Emerging issues for SBD. Treatment of embedded defects, defect interaction, misalignment and geometric imperfections, strength variation
- Advanced modeling techniques to predict strain capacity: modeling of ductile fracture

#### Symposium Organizing Committee:

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Interested authors should send abstracts to one of the organizing committee members or submit online at

<http://www.isopec.org/call4papers/2018/HowToSubmitAbstractOnline.htm>

Include **the name of the inviter**. The abstracts MUST include the contact author's postal address, telephone and fax numbers, and e-mail address to facilitate communications.

#### Key Dates:



- Abstracts due: **October 20, 2017**
- Manuscript for review: **Jan. 15, 2018**
- Final papers due: **March 24, 2018**