



Editorial

This issue of the *Journal of Pressure Vessel Technology* highlights pipeline technology. It contains selected papers from the biennial International Pipeline Conference held in Calgary Canada in September 2006 (“IPC 2006”). The papers cover various issues including design, monitoring, diagnostics, and maintenance.

The papers were originally selected by the honor awards committee of IPC 2006, and all were identified as very high quality. The Pipeline Division of ASME (*Prof. P. Hopkins, Chair*) subsequently decided to submit all IPC award papers for publication in an ASME peer-reviewed journal. The Editor of the JPVT, *Prof. G. E. Otto Widera*, supported this initiative, and we are pleased to offer the papers in this issue.

This issue of the JPVT contains the first selection of these papers. The remaining papers will appear in subsequent issues of the journal.

- The paper by *J. L. González and A. Morales*, “Analysis of Laminations in X52 Steel Pipes by Nonlinear Finite Element,” provides numerical analyses of the interacting fields of laminations in a pipeline wall under pressure, using a nonlinear finite element model.
- The paper by *A. Lukyanov*, “Thermodynamically Consistent Anisotropic Plasticity Model,” offers an important insight into the process of assigning the right properties to an anisotropic material to be used when designing pipelines.
- The paper “Asymptotic Analysis for Buckling of Undersea Corroded Pipelines,” by *J. Xue* gives a rigorous analysis of the buckling phenomenon of subsea pipelines containing uniform corrosion in a pipeline in the circumferential direction.
- *S. Das* and *Y. Zhang* in their paper, “Failure of X52

Wrinkled Pipelines Subjected to Monotonic Axial Deformation,” provide experimental and analytical investigation of the wrinkling process of a pipeline subjected to axial compressive loadings that can lead to an “accordion type” failure of the pipe wall.

- *F. Caleyo, L. Alfonso, J. Alcántara, and J. Hallen* in their paper “On the Estimation of Failure Rates of Multiple Pipeline Systems,” show, using real life data, how to apply statistics to get the accurate failure rates for multiple pipeline systems.
- *J. Abes* in his paper “Safety and Loss Management System for Pipelines,” provides a brief outline of accident causation models and the development of a systems-based approach to pipeline safety, which was used for the Canadian CSA Z662 pipeline standard.
- *M. Sen, R. Cheng, D. Murray, and J. Zhou* in the paper “Mechanical Properties of Cold Bend Pipes,” study the dominant factors that reduce the moment capacity and buckle strain of cold bends, which are the places where possible geotechnical movements can concentrate pipe deformations.

These papers give an insight into some of the problems faced by pipeline engineers, and some of the developing solutions.

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Guest Editor