Patrick H. Vieth

Director and Head of Asset Risk Management

Curriculum Vitae

MANAGING RISK

DNV COLUMBUS, INC.
Asset Risk Management
5777 Frantz Road
Dublin, OH 43017-1386
Tel: (614) 761-1214
Fax: (614) 761-1633
www.dnv.com
www.dnvcolumbus.com

Mr. Vieth is Department Manager for Asset Risk Management at DNV Columbus. Mr. Vieth is a Mechanical Engineer and has over twenty years of experience in pipeline integrity, defect assessment, and pressure vessel fracture behavior. Mr. Vieth has contributed to the development of the Asset Risk Management group that was primarily designed to support the management of pipelines and facility piping that have undergone various forms of material degradation. The ARM group has continued to grow and expand capabilities in process and plant piping and refineries. Mr. Vieth has also been actively involved in the leadership team for CC Technologies and now DNV North America.

Mr. Vieth's expertise is primarily directed toward transmission pipeline industry where he works with pipeline operators with the development and implementation of short-term and long-term integrity management programs. This work primarily involves working with pipeline operators to develop programs to reduce the likelihood of failures through in-line inspection, hydrostatic testing, direct assessment, risk assessment, and fitness-for-purpose assessment.

Mr. Vieth has been active in research and the development of innovative solutions within the pipeline industry. He was a key-contributor in the validation and implementation of the RSTRENG corrosion assessment method. RSTRENG is recognized within the Federal Code of Federal regulations for transmission pipeline systems as a method for assessing the remaining pressure-carrying capacity of pipe, which has sustained wall loss due to corrosion.

Mr. Vieth was also a team member that developed a Transverse Field Inspection (TFI) program to address a pipeline operator's specific integrity concern. The TFI program utilized a new technology to identify longitudinal seam weld defects that could pose an integrity concern to the pipeline operations. Success in the development, validation, and implementation of this TFI program resulted in the Department of Transportation (DOT) Office of Pipeline Safety's (OPS) acceptance of this program in lieu of mandated hydrostatic testing to verify the integrity of the pipeline system.

Mr. Vieth has conducted several full-scale testing programs to evaluate the fracture behavior of defects in pressure vessels. These testing programs were conducted under the sponsorship of the Nuclear Regulatory Commission (NRC) to evaluate the fracture behavior of power plant piping subjected to dynamic loading.

Additional full-scale testing programs have been conducted to evaluate the pressure-carrying capacity of defects identified in transmission pipeline systems (natural gas and hazardous liquids) and removed from services. These tests have been used to evaluate the pressure-carrying capacity of pipe sections containing defects such as corrosion-caused metal loss and longitudinal seam weld defects.

Education

B.S., Mechanical Engineering, The Ohio State University

Experience

Director and Head of Asset Risk Management	DNV Columbus	2009 – present
Senior Vice President	CC Technologies Services, Inc.	1999 – 2008
Manager, Integrity Solutions	Pipeline Integrity International	1999
Senior Mechanical Engineer Associate	Kiefner & Associates, Inc. Worthington, OH	1991 – 1999
Research Scientist	Battelle, Columbus, OH	1985 – 1991

Professional Activities

American Society of Mechanical Engineers (ASME), Pipeline and Safety Division (PSD), Executive Committee.

American Society of Mechanical Engineers (ASME), #1271881, Past Chairman – Central Ohio Section of ASME, (1990).

National Association of Corrosion Engineers (NACE)

Professional Training

2008: DNV Energy – Overview, Direction Strategy, and Goals
2007: MIP Course for Leaders
2007: Project Management 1 – Condensed One-Day Version
2007: DNV Overview for New Acquisitions
2007: Port 2

Selected Publications

Risk Assessment

Vieth, P. H., Maier, C. J., Harper, W. V, Johnson, E. R., Neogi, B., Baskurt, U. J., "Probabilistic Assessment of Minor Mechanical Damage," Pending Publication, 6th International Pipeline Conference, September 25–29, 2006 (Calgary, Alberta, Canada), IPC2006-10409.

C. E. Jaske, P. H. Vieth, and J. A. Beavers, "Assessment of Crack-Like Flaws in Pipelines," Corrosion NACExpo 2002, Denver, Colorado, April 2002, Paper No. 02089.

Vieth, P. H., Moghissi, O. C., and Beavers, John A., "Integrity-Verification Methods Support US Efforts in Pipeline Safety," Oil & Gas Journal, Vol. 100.51, December 16, 2002, pp. 52-59.

Kiefner, J. F., Vieth, P. H., Orban, J. E., and Feder, P. I., "Methods for Prioritizing Pipeline Maintenance and Rehabilitation," American Gas Association, Pipeline Research Committee, Catalog No. L51631, September 28, 1990.

Corrosion Assessment

J. A. Beavers, F. Gui, P. Vieth, A. Ertekin, and N. Sridhar, "Overview of Materials Compatibility Issues with Fuel Grade Ethanol," EPRG / PRCI / APIA – 17th Biennial Joint Technical Meeting on Line Pipe Research, Milan, Italy; May 2009.

P. H. Vieth, J. A. Beavers, T. A. Bubenik, and R. D. Kane, "Biofuels Industry Takes a Searching Look at Using Pipelines," Pipeline and Gas Journal, Vol. 235, No. 1, November 2008, pp. 56-62.

Vieth, P. H., and Kiefner, J. F., "RSTRENG User's Manual," American Gas Association, Pipeline Research Committee, Catalog No. L51688, March 31, 1993.

Kiefner, J. F., and Vieth, P. H., "The Remaining Strength of Corroded Pipe," American Gas Association, Eighth Symposium on Line Pipe Research, Houston, Texas, September 1993.

Kiefner, J. F., and Vieth, P. H., "Evaluating Pipe: New Method Corrects Criterion for Evaluating Corroded Pipe," Oil and Gas Journal, August 6, 1990.

Kiefner, J. F., and Vieth, P. H., "Evaluating Pipe: PC Program Speeds New Criterion for Evaluating Corroded Pipe," Oil and Gas Journal, August 20, 1990.

Vieth, P. H., and Kiefner, J. F., "Database of Corroded Pipe Tests," American Gas Association, Pipeline Research Committee, Pipeline Research Committee, Catalog No. L51689, April 4, 1989.

Kiefner, J. F., and Vieth, P. H., "A Modified Criterion for Evaluating the Remaining Strength of Corroded Pipe," American Gas Association, Pipeline Research Committee, Catalog No. L51609, December 22, 1989.

Pipeline Failures

Maier, C. J., Beavers, J. A., Shie, T. M., and Vieth, P. H, "Interpretation of External Cracking On Underground Pipelines," 6th International Pipeline Conference, September 25–29, 2006 (Calgary, Alberta, Canada), IPC2006-10176.

Michiel P. Brongers, Clifford J. Maier, Carl E. Jaske, Patrick H. Vieth, Mark D. Wright, and Robert J. Smyth, "Evaluation and Use of a Steel Compression Sleeve to Repair Longitudinal Seam-Weld Defects," 52nd Annual Pipeline Conference, San Antonio, TX, USA, April 17-18, 2001.

Michiel P. Brongers, Clifford J. Maier, Carl E. Jaske, Patrick H. Vieth, Mark D. Wright, and Robert J. Smyth, "Tests, Field Use Support Compression Sleeve for Seam-Weld Repair," Oil & Gas Journal, PennWell Corporation, Houston, Volume 99.24, June 11, 2001, pp. 60-66.

Vieth, P. H., Roytman, I., Mesloh, R. E., and Kiefner, J. F., "Analysis of DOT Reportable Incidents for Gas Transmission and Gathering Pipelines – 1985 through 1994," American Gas Association, Pipeline Research Committee.

Vieth, P. H., et al., "DOT Incident Data Analysis," American Gas Association, PRC *I*nternational, 9th Symposium on Line Pipe Research, Houston, Texas, September 1996.

Vieth, P. H., Maxey, W. A., Mesloh, R. E., Kiefner, J. F., and Williams, G. W., "Investigation of the Failure in GRI's Pipeline Simulation Facility Flow Loop," Gas Research Institute, March 15, 1996.

In-Line Inspection

Vieth, P. H., Ashworth, "In-Line Inspection," International Pipeline Conference.

Vieth, P. H., Rust, S. W., Johnson, E. R., and Cox, M. J., "In-Line Characterization and Assessment," American Gas Association, PRC *I*nternational, 9th Symposium on Line Pipe Research, Houston, Texas, September 1996.

Rust, S. W., Vieth, P. H., Johnson, E. R., and Cox, M. J., "Corrosion Pig Performance and Risk Assessment," Pipes and Pipelines International, Pipeline Pigging Conference, Houston, Texas, February 1996.

Vieth, P. H., Rust, S. W., Johnson, E. R., and Cox, M. J., "Corrosion Pig Performance Evaluation," American Society of Mechanical Engineers, American Petroleum Institute, 7th Annual Energy Week Conference, Houston, Texas, January 1996.

Vieth, P. H., Rust, S. W., Johnson, E. R., and Cox, M. J., "Corrosion Pig Performance Evaluation," National Association of Corrosion Engineers (NACE), NACE/96, Denver, Colorado, March 1996.

Rust, S. W., Vieth, P. H., Johnson, E. R., and Cox, M. J., "Quantitative Corrosion Risk Assessment Based on Pig Data," National Association of Corrosion Engineers (NACE), NACE/96, Denver, Colorado, March 1996.

Flaw Growth

Maxey, W. A., Vieth, P. H., and Kiefner, J. F., "An Enhanced Model for Predicting Pipeline Retest Intervals to Control Cyclic-Pressure-Induced Crack Growth," American Society of Mechanical Engineers (ASME), Offshore Mechanics and Arctic Engineering (OMAE) 1993, Proceedings of the 12th International Conference, Volume V (Pipeline Technology), 1993.

Full-Scale Testing

Scott, P., Kramer, G, Vieth, P., Francini, R., and Wilkowski, G., "The Effects of Cyclic Loading During Ductile Tearing on Circumferentially Cracked Pipe – Experimental Results," ASME PVP Volume 280, June 1994, pp 207-220.

Wilkowski, G., Vieth, P., Kramer, G., Marschall, C., and Landow, M., "Results of Separate-Effects Pipe Fracture Experiments," Post-SMiRT-11 Conference, August 1991, Paper 4.2.