



SCHIFF ASSOCIATES

EDUCATION:

Ph.D. - Chemical Engineering,

Georgia Institute of Technology

M.S. - Chemical Engineering,

University of Missouri - Columbia

B.S. - Chemical Engineering,

University of Missouri - Columbia

REGISTRATIONS AND

CERTIFICATIONS:

NACE International

Certified Corrosion Specialist

DAN W. TOWNLEY Ph.D.

Special Projects Scientist / Corrosion Monitoring /

Electronic Instrumentation

Email: dtownley@schiffassociates.com

As Research Engineer (1981-1990), Senior Research Engineer (1990-1998) and Staff Corrosion Engineer (1998-1999), Dr. Townley worked in the facilities groups of the Chevron upstream technology organizations. He was responsible for applied research, technical service, and consultation in corrosion control and produced water treating for Chevron's domestic and foreign petroleum production operations.

RELATED PROJECT EXPERIENCE:

As a Special Projects Specialist Mr Townley as performed the following tasks.

- Over the span of 9 years, Dr. Townley planned and executed a series of on-site test for cathodic protection of offshore structures in water depths to 2,500 feet. These tests lead to the development of an improved design method for offshore cathodic protection, which has been detailed in several publications, in a NACE task group state-of-the-art report, and in an invited presentation to the NACE 1999 Research Topical Symposium.
- Dr. Townley has created a corrosion prediction program which compares the results of several public domain models. The program is interfaced to pipeline hydrodynamic simulation models (such as Pipephase and Olga) to provide a comprehensive picture of corrosion risks in multiphase pipelines.
- Dr. Townley assembled a state-of-the-art computer-controlled electrochemical corrosion monitoring laboratory. Data-acquisition software, incorporated commercially available data reduction subroutines into the analysis software.
- Dr. Townley designed, built, and operated systems for monitoring corrosion rates in produced fluids in the field. Worked with an electronics manufacturer to build portable electrochemical instrumentation similar to our laboratory equipment, Dr. Townley wrote a version of the data acquisition and analysis software for field use. The systems were used to verify the effectiveness of a corrosion inhibitor developed by Chevron Chemical company in preventing corrosion in production tubing. This corrosion monitoring technology is now in use by Chevron production personnel.
- Dr. Townley coordinated, and provided on-site direction for a Field Trial of a dry-cake, diatomaceous earth media filter for oily-water cleanup at two Chevron production facilities, comparing the technology to other alternatives on a technical and economic basis.



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Resume, Continued:

PUBLICATIONS:

- 1999 "Corrosion Protection of Fixed Offshore Structures," R.D. Holdsworth and D.W. Townley, International Workshop on Corrosion Control For Marine Structures and Pipelines, 9-11 February 1999, Galveston, TX; Minerals Management Service, American Bureau of Shipping, and the Colorado School of Mines (1999).
- 1999 "Boundary Element Modeling of Galvanic Anode Cathodic Protection Using the Design Slope Method" D.W. Townley, Research Topical Symposium, CORROSION/99, NACE International, Houston (1999).
- 1998 "Design of Galvanic Anode Cathodic Protection Systems for Offshore Structures," NACE International Task Group T-7L-16, Chairman D. W. Townley, NACE International Publication 7L198, Houston (1998).
- 1998 "Sacrificial Anode Cathodic Polarization of Steel in Seawater: Part 2 - Design and Data Analysis," W.H. Hartt, S. Chen, and D.W. Townley, Corrosion, 54(4), 317, (1998).
- 1998 "Final Report - Pulsed Rectifiers for Well Casing Cathodic Protection," D. W. Townley, Gas Research Institute Contract No. 5095-260-3391, Report No. GRI-97/0410, (January 1998).
- 1997 "Unified Design Equation for Offshore Cathodic Protection," D.W. Townley, Paper #97473 presented at Corrosion/97, March 9-14, 1997, New Orleans, NACE International, Houston.
- 1997 "Sacrificial Anode Cathodic Polarization of Steel in Seawater - Design and Data Analysis," W.H. Hartt, S. Chen, and D.W. Townley, Paper #97474 presented at Corrosion/97, March 9-14, 1997, New Orleans, NACE International, Houston.
- 1996 "An Overview of Wet Gas Production," E.H. Jones, D.W. Townley, and P.J. Shuler, 1996 ASME Fluids Engineering Division Summer Meeting, San Diego, CA, July 7-11, 1996.
- 1993 "A Boundary Element Model of Cathodic Well Casing Protection," S.H. Lee, D.W. Townley, and K.O. Eshun, Journal of Computational Physics, 107, 338-347 (1993).
- 1992 "Cathodic Protection of a Well Casing in a Layered Formation," S.H. Lee, D.W. Townley, and K.O. Eshun, BETECH/92, 7th International Conference on Boundary Element Technology, Albuquerque, NM, June 3-5, 1992.



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Resume, Continued:

- 1991 "Determination of Maximum Scan Rate for Linear Polarization Measurements," D.W. Townley, Corrosion, 47(10), 737 (1991).
- 1990 "Evaluation of Kramers-Kronig Transforms for Electrochemical Impedance Data," D. Townley, Journal of the Electrochemical Society, 137, 3305 (1990).
- 1989 "Reduction of Oil Field Production Wastes Using a Dry Cake Filter," D. Townley, R. J. Bergman, W. A. Goldman, 64th Annual Technical Conference of the SPE, Society of Petroleum Engineers, San Antonio, TX, October 8-11, 1989.
- 1983 "Electrochemical Sulfur Dioxide Concentrator for Flue Gas Desulfurization," D. Townley and J. Winnick, Electrochimica Acta, 28, 389 (1983).
- 1981 "Flue Gas Desulfurization Using an Electrochemical Sulfur Oxide Concentrator," D. Townley and J. Winnick, I&EC Process Design and Development, 20, 435 (1981).
- 1981 "Electrochemical Concentration of Sulfur Oxides from Flue Gas," Doctoral Dissertation presented to the faculty of the graduate school, Georgia Institute of Technology, Atlanta.
- 1980 "Mixed Potential Analysis of Sulfation of Molten Carbonate Fuel Cells," D. Townley, J. Winnick, and H. S. Huang, Journal of the Electrochemical Society, 127, 1104 (1980); discussion 127, 2653 (1980).
- 1979 "Electrochemical Sulfur Dioxide Concentration," Master's Thesis presented to the faculty of the graduate school, University of Missouri, Columbia.

