Exponent
Failure Analysis Associates®

Exponent
17000 Science Drive
Suite 200
Bowie, Maryland 20715

telephone 301-291-2500
facsimile 301-291-2599
www.exponent.com

Paul A. Ledwith
Associate

Professional Profile

Mr. Paul Ledwith is an Associate in Exponent's Polymer Science and Materials Chemistry practice with over 20 years of experience analyzing mechanical, structural and materials failures ranging from consumer products to complex mechanical systems. Mr. Ledwith has conducted field inspections including transportation systems, power generation equipment, fire protection system components, and mechanical devices to determine the cause of accidents and failures. He has experience with mechanical testing, nondestructive examination techniques, and the development of specialized laboratory procedures for materials characterization. Mr. Ledwith uses tools such as Fourier-transform infrared spectroscopy for compositional analysis of residues, contaminants, and polymeric materials. He also performs fractographic evaluations of materials using optical microscopy and scanning electron microscopy as part of root cause analyses.

Prior to joining Exponent, Mr. Ledwith served in the United States Navy as a propulsion specialist aboard nuclear-powered fast attack submarines. He operated and performed maintenance on mechanical and electrical power generation equipment, including primary (nuclear) and secondary (conventional) systems.

Academic Credentials and Professional Honors

B.S., Materials Science and Engineering, University of Maryland, 2006

Publications and Presentations

Hoffman JM, Reitman M, Donthu S, Ledwith P. Complimentary failure analysis methods and their application to CPVC pipe. Proceedings, ANTEC 2010, Society of Plastics Engineers, Orlando, FL, May 2010.

Hoffman JM, Reitman M, Donthu S, Ledwith P, Wills D. Microscopic characterization of CPVC failure modes. Proceedings, ANTEC 2009, Society of Plastics Engineers, Chicago, IL, June 2009. Best Paper Award in Failure Analysis & Prevention.

Hoffman JM, Reitman M, Ledwith P. Characterization of manufacturing defects in medical balloons. Proceedings, ANTEC 2008, Milwaukee, WI, Society of Plastics Engineers, May 2008.

Reitman M, Ledwith P, Hoffman M, Moalli J, Xu T. Environmentally driven changes in nylon. Proceedings, ANTEC 2008, Milwaukee, WI, Society of Plastics Engineers, May 2008.

Ledwith P. Self-healing of a polyurethane-based polymer composite. American Physical Society, Los Angeles, CA, March 2005.

Professional Affiliations

- ASM International (formerly American Society for Metals, member since 1990)