



Exponent[®]
Engineering & Scientific Consulting

John Mills, Ph.D.

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Professional Profile

Dr. Mills specializes in failure analysis, failure prevention, metallurgy, materials science, and engineering risk assessment. He has experience in utility, oil and gas, nuclear, transportation and construction industries.

As an engineering consultant, Dr. Mills has managed and participated in failure analyses and root cause investigations, condition assessments and utility asset management programs. These investigations have involved the fracture, fatigue and corrosion of metallic components evaluated by techniques such as metallography, scanning electron microscopy (SEM), energy-dispersive X-ray spectroscopy (EDS), compositional analysis, mechanical testing (e.g., hardness testing, tensile testing) and non-destructive testing (NDT) methods. He also has experience performing data analysis and predictive numerical modeling using commercial software (MATLAB).

Dr. Mills was previously employed at the engineering consulting firm Lucius Pitkin, Inc. for a period of 7 years. In his position as Senior Engineer, his responsibilities included project management, failure analysis and material testing within the metallurgical division.

Dr. Mills completed his Ph.D. research at the Massachusetts Institute of Technology (MIT) in the Department of Materials Science and Engineering, where he studied mechanical properties of thin metallic films and biological cells. From this work, he authored technical publications in peer-reviewed journals and presented findings at professional society meetings.

While at MIT, Dr. Mills also served as a teaching assistant for graduate and undergraduate-level courses in Materials Science and Engineering (Mechanical Properties of Materials) and Biological Engineering (Introduction to Bioengineering & Molecular, Cellular, and Tissue Biomechanics).

Academic Credentials & Professional Honors

Ph.D., Materials Science and Engineering, Massachusetts Institute of Technology (MIT), 2007

B.S., Materials Science and Engineering, Cornell University, 2001

MIT Presidential Fellowship Award, 2001

Tau Beta Pi Engineering Honor Society, 2001

Materials Research Society (MRS) Graduate Student Gold Award, 2005

Prior Experience

Senior Engineer, Lucius Pitkin, Inc., 2011-2018

Professional Affiliations

ASM International