

Daniel R. Grice, P.E.

Principal Materials Engineer

Materials Evaluation and Engineering, Inc.
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SUMMARY

Materials engineer with experience in failure analysis, materials characterization, product evaluation, and research and development. Proficient in evaluation of failures in metallic and nonmetallic materials by fracture, wear, corrosion, thermal damage, or other degradation.

EDUCATION AND PROFESSIONAL CERTIFICATIONS

Bachelor of Science, Materials Science & Engineering, 2009
University of Wisconsin-Madison, Madison, Wisconsin

Registered Professional Materials and Metallurgical Engineer, 2015

Minnesota License 53128

Montana License PEL-PE-LIC-74575

Nebraska License E-18851

Wisconsin License 101521-6

EXPERIENCE

December 2014 to Present

Materials Evaluation and Engineering, Inc.

Plymouth, MN

Materials Engineer, 2014 - 2015

Senior Materials Engineer, 2015 - 2024

Principal Materials Engineer, 2024 - present

- Perform product failure analyses for a diverse industrial clientele and to support insurance investigations and product-liability litigation.
- Product development through component testing and material selection.
- Manufacturing support through consultation on materials-related problems.
- Materials engineering evaluation for forensic investigation of water damage, fires, explosions, and other product-failure incidents.
- Provide expert witness testimony in the areas of materials science and failure analysis.

June 2013 to November 2014

IMR Test Labs
Lansing, NY
Manager, Metallurgical Services

- Supervise a group of 11 metallurgical technicians and 4 metallurgical engineers
- Assure departmental conformance to standards necessary to maintain A2LA, Nadcap, and customer-specific accreditations.
- Act as the primary point of contact for external customers regarding results, work progress, scheduling, and prioritization for a group with approximately \$2.5 million in annual sales.

January 2010 to May 2013

IMR Test Labs
Lansing, NY
Metallurgical Engineer

- Product support through failure analysis of industrial components.
- Manufacturing support through characterization of materials-related problems.
- Product development through component testing.

AWARDS AND RECOGNITION

- Journal of Failure Analysis and Prevention Editor's Choice Article, 2022
- UW-Madison College of Engineering Early Career Award, 2021
- ASM International Bronze Medal Award, 2020
- ASM International Materials Education Foundation Outstanding Scholar, 2008

PROFESSIONAL AFFILIATIONS

- ASM International Member 2006 - present
 - Failure Analysis Committee Member, 2010 - 2016
 - Failure Analysis Society Member, 2016 - present
 - Emerging Professional Board of Directors Member, 2016 - 2018
 - Reviewer, ASM Handbook Volume 11B – Characterization and Failure Analysis of Plastics, Published 2022 (<https://doi.org/10.31399/asm.hb.v11B.9781627083959>)
 - Reviewer, Journal of Failure Analysis and Prevention, 2015 - present
 - International Metallographic Society Member, 2022 - present
 - AM&P Editorial Committee Member, 2023 - present

PROFESSIONAL AFFILIATIONS (CONTINUED)

- Material Advantage Committee Member, 2018 - present
 - Vice Chair 2021 - 2022; Chair 2022 - 2023
- Emerging Professionals Committee Member 2010 - 2016
 - Secretary 2012 - 2013; Co-chair 2013 - 2015
- ASM International Minnesota Chapter Member 2014 - present
 - Board Member 2015 - 2017
- ASM International Twin Tier Chapter Member 2010 - 2014
 - Secretary 2010 - 2011; Chair 2011 - 2013
- University of Wisconsin-Madison Material Advantage Chapter Member 2006 - 2009
 - Chair 2008 - 2009
- TMS Member 2006 - 2010, 2015

TRAINING/CONFERENCE PRESENTATIONS

- Grice, Daniel R. and Hanke, Larry D., "Use of Exemplar Testing to Investigate Claims of Overtightening of Brass Plumbing Fittings" IMAT 2024, October 2024, Cleveland, Ohio
- Grice, Daniel R. and Hanke, Larry D., "A Historical Perspective of Fracture Analysis" ASM Minnesota Chapter "Materials Retrospect: 100 Years of Advancement" Symposium, February 2020, Brooklyn Park, MN
- Grice, Daniel R. and Hanke, Larry D., "Hydrogen Embrittlement Case Studies: Contributions from Materials Processing" MS&T 2019, October 2019, Portland, Oregon
- Hanke, Larry D. and Grice, Daniel R., "Radiant Tube Heater Failure Analysis and Resulting Changes to NFPA 54" MS&T 2019, October 2019, Portland, Oregon
- Grice, Daniel R., "Fractography and Failure Analysis" Two-day, on-site course developed and taught for an industrial manufacturer, July 2019, Minnesota
- Grice, Daniel R. and Hanke, Larry D., "Failure Analysis and Modeling Tools in Engineering Design" ASME Minnesota Section Symposium, March 2017, Plymouth, Minnesota
- Grice, Daniel R. and Miller, Brett A., "Fatigue and Fracture of Bicycle Components" MS&T 2016, October 2016, Salt Lake City, Utah
- Grice, Daniel R. and Burns, Neil D., "Case Studies in Environmentally Assisted Failures: Solving Their Problem When You Don't Know the Cause" MS&T 2013, October 2013, Montreal, Quebec.

PUBLICATIONS

- Dan Grice, Scanning Electron Microscopy in Fractography, Fractography, Vol 12, ASM Handbook, Edited By Craig J. Schroeder, Ronald J. Parrington, Joseph O. Maciejewski, James F. Lane, ASM International, 2024, p 241–253, <https://doi.org/10.31399/asm.hb.v12.a0006876>
- Grice, D., Hanke, L. & Mathias, J. Analysis of Stop Valve Leaks: Environmental Stress Cracking of Styrene Copolymer Valve Stems. J Fail. Anal. and Preven. (2022). <https://doi.org/10.1007/s11668-022-01364-2>

RECENT DEPOSITION AND TRIAL EXPERIENCE

Available upon request.