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MARK WEISS **SENIOR STAFF CONSULTANT**

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Mark Weiss is a Senior Staff Consultant for ESI. He is a highly skilled laboratory chemist with over 26 years of experience in materials analysis and characterization and failure analysis. He is exceptionally experienced and skilled in the investigation of issues involving the physical and chemical properties of polymers and other organic materials, and the effects of processing, contamination and lot-to-lot variation on material performance. His expertise includes materials characterization by FTIR, RV, VN, MFR, GPC, DSC, TGA, KFT and microstructural analysis by scanning electron and optical microscopy techniques. Mark has a strong analytical, mechanical and engineering aptitude with exceptional skills in test method and instrumentation selection and usage. Mark has an excellent reputation with clients as a results-focused and highly competent and knowledgeable scientific professional.

Areas of Specialization

Corrosion
Failure Analysis
Fatigue and Fracture
Industrial Services
Laboratory Testing
Polymers
Welding/Joining
Materials Testing
Microstructural Analysis

Education

Bachelor of Science Chemistry/Polymers, Michigan Technological University, Houghton, MI, 1996

Professional Affiliations/Honors

ASM International

ASM International, Minnesota Chapter, Board of Directors, June 2014 – Present

Minnesota Chapter, Treasurer, December 2022 – Present

Minnesota Chapter, Past Chair, October 2022 - Present

Minnesota Chapter, Past Chair, June 2017 – June 2018

Minnesota Chapter, Chair, June 2016 – June 2017

Minnesota Chapter, Vice Chair, June 2015 – June 2016

American Chemical Society (ACS)

Society of Plastic Engineers (SPE)

Positions Held

Engineering Systems Inc., Plymouth, Minnesota

Senior Staff Consultant, 2019 – Present

Crane Engineering, Plymouth, Minnesota

Analytical & Polymer Chemist, 2012-2018

Thermotech / The Polymerlab.com, Hopkins, Minnesota

Lab Chemist / Senior Lab Technician, 1996-2012

Dow Chemical Company, Midland, Michigan

Lab Technician Contractor, 1986-1992

Dow Corning Corporation, Midland, Michigan

Lab Technician Contractor, 1990

Publications/Presentations

"FTIR Imaging via FPA in the Characterization of Polymers", J.R. Babcock, **M.E. Weiss**, presented at IMAT 2022, September 14, 2022.

"Exploiting Physical, Mechanical, and Chemical Properties to Identify Contaminants", **M.E. Weiss**, webinar presenter for Engineering Systems, Inc. (ESi) Webinar, 2020

"FTIR Imaging via FPA in the Characterization of Polymer Oxidation", **M.E. Weiss** and J.R. Babcock, presented at ASM Minnesota Symposium, Brooklyn Park, MN, February 19, 2020.

"Carbonyl Index Depth Profiling via Micro FTIR", J.R. Babcock, **M.E. Weiss**, D.B. Edwards, D.E. Duvall, and A.R. Shah, presented at MS&T Technical Meeting and Exhibition, Portland, OR, September 30, 2019.