



MEGAN E. SEEBECK, BS

Ms. Seebeck is a materials science engineer with over a decade of experience in laboratory and field analysis of a broad range of materials. Ms. Seebeck uses her knowledge of metallurgy, mechanical behavior of materials, and materials characterization in conducting materials failure analysis. Her specialties include failure and fracture analysis, materials characterization, metallurgical testing and analysis, metals and glass manufacturing and production, and microstructural evaluation & characterization.

LICENSURE & EDUCATION

BS, Materials Science Engineering, University of Illinois, 2010

WORK HISTORY

Staff Engineer, *AEI Corporation*, 2020-Present

Johns Manville Technical Center, 2015-2020

Product Development Engineer – GoBoard, Innovation Team

Materials Engineer, Glass Laboratory

Failure Analysis and Materials Research, Metallurgy and Advanced Materials Lab

Materials Analyst, *Center for Aircraft Structural Life Extension – US Air Force Academy*, 2010-2015

Engineering Intern, *Packer Engineering*, 2006

EXPERIENCE

Prior to joining AEI Corporation, Ms. Seebeck worked in research and development for a building materials manufacturer. In this role, she worked in the Metallurgy and Advanced Materials Lab, performing failure analysis and conducting research on high temperature alloys and precious metals. During her time in the Glass Laboratory, she oversaw glass compositional analysis and testing. Prior to working in the R&D lab, she worked on the production, testing, and failure analysis of coated fiberglass mat foam boards, and associated plastic and metal components for use in the tiling industry.

In addition to her experience in the building materials industry, Ms. Seebeck worked as a materials analyst for the US Air Force Academy in the Center for Aircraft Structural Life Extension (CASTLE). At the Air Force Academy Research Center, Ms. Seebeck performed teardown analyses on military aircraft and helped to develop the method for reviewing and cataloging all non-destructive testing (NDT) indications and prioritizing indications for failure analysis. She also performed secret level security clearance work in the areas of metallurgical failure analysis and mechanical testing of military aircraft alloys. Additionally, Ms. Seebeck worked on corrosion research projects within the Technical Corrosion Collaboration program under the Office of the Secretary of Defense (OSD).

AREA OF EXPERTISE

Failure analysis of materials (visual examination, NDT, sample selection, sectioning, chemical and compositional analysis, fractography, metallography)

Materials characterization (optical microscopy, SEM, EDS, OES, XRD, EBSD, and FTIR)

Corrosion and metallurgical damage characterization

Mechanical testing (Instron and MTS)

Mechanical fatigue, vibration, and fracture mechanics

Code and standard analysis and interpretation

AWARDS & ACCOMPLISHMENTS

Guest Lecturer, US Air Force Academy, Engineering Course

Collaboration with Colorado School of Mines students on senior design project