

Robert J. Cooley is a Senior Staff Consultant for ESi. He specializes in metallurgical analysis, failure analysis, and metallurgical testing. He is proficient in several analytical methods including optical microscopy, metallography, scanning electron microscopy (SEM) with energy dispersive X-ray spectroscopy (EDS), hardness testing, optical emission spectrometry (OES), and more. His experience in failure analysis covers a broad base of both materials and failure modes.

Education

B.S., Materials Science and Engineering (Magna Cum Laude).
Michigan Technology University. 2015

Licenses & Certifications

- State of Minnesota P.E. License 60011

Positions Held

Engineering Systems Inc., Plymouth, Minnesota

- Senior Staff Consultant, 2022 – Present

Element Materials Technology, St. Paul, Minnesota

- Metallurgical Engineer, 2016 – 2022

Huron Casting, Inc., Pigeon, Michigan

- Intern Metallurgist, May 2014 – August 2014

Engel Metallurgical, Sauk Rapids, Minnesota

- Intern/Metallurgical Technician, May 2012 – August 2012,
May 2013 – August 2013

Professional Affiliations/Honors

ASM International

- Member, 2021 – Present

ASM Minnesota Chapter

- Board of Directors, 2023 – Present

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Areas of Specialization

- Corrosion Analysis
- Failure Analysis and Fractography
- Metallurgical Evaluation
- Materials Joining and Plating
- Scanning Electron Microscopy
- Nondestructive Evaluation
- Lab & Inspection Services