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## **JOEL D. HASSEBROCK** **ASSOCIATE STAFF CONSULTANT**

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Mr. Hassebrock is a metallurgical engineer with Engineering Systems Inc. (ESi). He is an Associate Staff Consultant in the Nebraska office of ESi located in Omaha. He is part of ESi's Rail Practice group and serves as a Site Safety Coordinator and the Artifact Handler for the Omaha office.

Mr. Hassebrock specializes in failure analysis, metallurgical analysis, and materials testing. His experience includes the use of glow discharge and optical emission spectrometers to perform chemical analysis, universal servo-hydraulic tensile testing machines to perform tensile, fatigue and dynamic testing, scanning electron microscopy (SEM), optical microscopy, metallographic sample preparations equipment, the use of microhardness, Brinell and Rockwell testing equipment and metalworking lathes and mills.

Mr. Hassebrock's experience includes field testing, data acquisition and processing, onsite third party quality assurance, onsite installation and repairs of track deflection measurement system, dynamic railway vehicle simulations. Mr. Hassebrock has previously helped develop, implement, and maintain procedures to ensure ISO 17025 accreditation compliance.

### **Areas of Specialization**

Metallurgical Failure Analysis  
Railcar Wheels, Axles, and Bearings  
Railcar Truck Castings and Assemblies  
Laboratory and Industrial Testing  
Mechanical Testing  
Instrumented Testing  
Nondestructive Testing and Inspection  
Fixture and Test Design

### **Education**

M.B.A., Heider College of Business, Creighton University, 2013  
B.S., Materials Engineering, Iowa State University, 2009

### **Professional Affiliations**

#### **American Society of Materials International (ASM)**

Member

*January 2019*

## **Positions Held**

### **Engineering Systems Inc., Omaha, Nebraska**

Associate Staff Consultant, 2015 - Present

### **TÜV Rheinland Rail Sciences Inc., Omaha, Nebraska**

Manager Vehicle Dynamics and Testing, 2014 - 2014

Laboratory Manager – 2013 - 2014

Laboratory Technician – 2010 - 2013

## **Publications/Presentations**

“Fracture of Hex Bars During Manufacture”, Journal of Failure Analysis and Prevention, August 2016