

Tyler J. Janecek

PE

Senior Consultant & Team Lead



Mr. Janecek is a Senior Consultant located in the Omaha, Nebraska office of Engineering Systems Inc (ESI) and practices mechanical engineering. He has experience in utility equipment, railroad maintenance of way equipment, hydraulic systems, structural design, machine design, electrically insulating aerial equipment, and is the team lead for the Design and Testing segment of ESI's Rail Practice Group.

Mr. Janecek specializes in the design, prototyping and evaluation of mechanical systems and equipment. He has extensive experience in machine design, solid modeling, finite element analysis, fabrication, and testing. He has 6 years of industry experience designing electrically insulating mobile elevating work platforms (MEWP), digger derricks, and underground cable handling equipment for the utility market. During that time, he was involved in the design, testing, and implementation of all aspects of the equipment including the structures, machine design, hydraulic system, insulating system, power generation, and body compartments. Since joining ESI, Mr. Janecek has worked on several projects designing new and upgraded maintenance of way equipment for the railroad industry, testing of various products for all different types of industry, and providing engineering and project management support to local industries.

Mr. Janecek has also been involved in the creation and upkeep of internal company standards relating to lifting provisions, anaerobic adhesives, electrically insulating material qualification, and electrically insulating MEWP qualification and periodic testing.

Education

BS, Mechanical Engineering. University of Nebraska-Lincoln.
2016

Licenses & Certifications

- State of Nebraska P.E. License E-20718

Languages

- English

Contact Information

tjjanecek@engsys.com
(402) 881-4860

ESI Omaha

5697 N 13th Street
Omaha, NE 68110

Areas of Specialization

- Solid Modeling
- Mechanical & Materials Design
- Mechanical Testing
- FEA
- Hydraulic Systems
- High Voltage Dielectric Protection Systems
- Laboratory & Industrial Testing
- Data Acquisition & Instrumented Testing
- Non-Destructive Testing & Inspection

Positions Held

Engineering Systems Inc., Omaha, Nebraska

- Senior Consultant and Team Lead, 2026 – Present
- Senior Staff Consultant, 2025 – 2026
- Staff Consultant, 2023 – 2025

Altec Industries, Specialty Product Engineering, St. Joseph, Missouri

- Staff Engineer, 2021 - 2023
- Engineer II, 2019 - 2023

Altec Industries, Aerials Product Engineering, St. Joseph, Missouri

- Engineer II, 2019
- Engineer I, 2017-2019

Continuing Education

Dale Carnegie Course: Effective Communication & Human Relations, Skills for Success – Dale Carnegie, 2018

Fastener Training - Fastenal, 2018

Blodgett's Design of Welded Connections - Lincoln Electric, 2019

Level 1 GD&T Fundamentals - Sigmetrix, 2022

Traffic Crash Reconstruction for Engineers - Northwestern University Center for Public Safety, 2024

Professional Affiliations/Honors

American Society of Mechanical Engineers (ASME)

- Member

American Railway Engineering and Maintenance of Way Association (AREMA)

- Member
- Chapter 27 Committee Member

International Fluid Power Society (IFPS)

- Member
- Board of Directors – Member at Large, 2025 – Present
 - Finance Committee Member

- Education Committee vice chair
- Membership Committee Member
- Fluid Power Hall of Fame Committee Member

Certifications

- Hydraulic Specialist (IFPS), 35532, 2022
- Mobile Hydraulic Mechanic (IFPS) 24094, 2018

Publications

“So Just Like Bending a Paper Clip?” Porter Ritchie, Hans Iwand, **Tyler Janecek**. Journal of Failure Analysis and Prevention, November 2024.

Presentations

- “Dielectric Effects of Vacuum in Hydraulic Lines,” **Tyler Janecek**, Introduction to Dielectric Systems Course, Altec Industries, St. Joseph, MO, 2022.
- “Lifting Provisions Design Guidelines”, **Tyler Janecek**, Trystar, Faribault, MN, 2026