

Jack Thom, PE

Forensic Engineering Expertise

Mechanical Failure

Determine root cause of mechanical failure, including industrial accidents, explosions, appliances, HVAC equipment, plumbing, fireplaces and auxiliary heating appliances, and fire suppression systems.

Inspection and Evaluation of Roofing Systems

This includes steep slope roofs covered with asphalt composition shingles, metal roofs, and low slope roofs. Past work involved offering opinions and repairs related to installation deficiencies and storm-related damages, including for hail and wind.

Origin & Cause

Determine the source and responsible party or element related to water damage in a building. Examples of past work include failure of roofing causing moisture entry, bio-organic growth, humidity and condensation related losses. Other examples include mechanical water losses related to fire suppression, plumbing, and appliances and determine cause of failure related to the water loss. Investigate other mechanical losses in residential, commercial, industrial equipment, and appliances to determine the cause of mechanical failure.

Qualifications & Training

- Tremco Fluid Applied and Single Ply Contractor Training, Nederveld, Inc., February 2025
- Froze Pipe Training, Case Studies, Supply Tools, Methods to Evaluate, Nederveld, Inc., January 2025
- Fire Suppression Systems Inspection, Testing and Maintenance, NCITE Engineering Hub, LLC, October 2024
- Design of Earth-Retaining Structures, NCITE Engineering Hub, LLC, August 2024
- IGU Designs and Curtain Wall Window Training, Nederveld Inc., February 2024
- Roof System Thermal and Moisture Design Course, October 2023
- Foundations Training, Nederveld Inc., April 2023
- HVAC 1 Training, Nederveld Inc., January - April 2023
- Water Entry Prevention and Moisture Control in Buildings, University of Wisconsin – Madison, March 2023
- Foundations Training, Nederveld Inc., February 2022
- Lithium-Ion Battery Fires, International Association of Arson Investigators (IAAI), June 2021
- NFPA 921 2021 Updates, Nederveld Inc., October 2020
- Introduction to Collision Analysis, Nederveld Inc., September 2020
- Certified Nuclear Lead Auditor, Flowserve, July 2019
- Certified ISO 9001 Lead Auditor, Flowserve, May 2018
- DLS Leadership Training, Flowserve, 2014
- Certified Green Belt, Flowserve, April 2008

Education

Master of Science Degree in Engineering Management
Western Michigan University, Kalamazoo, MI
December 2009

Bachelor of Science in Mechanical Engineering
Western Michigan University, Kalamazoo, MI
December 1994

Licenses & Certifications

PE - Professional Engineer
Licensed by the State of Michigan – Number 6201049892
Licensed by the State of Indiana – Number PE12100876

Employment History

Forensic Engineer
Nederveld, Inc.

September 2020 – Present

Investigation of losses to determine root cause of mechanical failure, including industrial accidents, explosions, appliances, HVAC equipment, plumbing, water intrusion, fireplaces and auxiliary heating appliances, fire suppression systems, vehicle fire and vehicle accident reconstruction analysis. Investigation of losses related to various steep-slope and low-slope roof systems.

Quality Engineering Specialist

Flowserve Corporation, Kalamazoo, MI

2016 – 2020

Conducted internal ISO and nuclear audits and facilitated training for new auditors. Completed certified material review and certified letters for high visibility product lines. Processed internal and external non-conformance product, led quality investigations, and collaborated with various departments to troubleshoot root cause and assist with corrective actions. Researched and completed a specialized pharmaceutical certificate, resulting in a reduction of individual certificates. Produced and reviewed written work instructions, operating procedures, and policies to support the Quality Management System. Served as a quality engineering representative on product development and gate reviews.

Project Engineering Manager

Flowserve Corporation, Kalamazoo, MI

2009 – 2016

Managed a department of designers and engineers with project accountability for approximately \$1.5 million of shipments per month. Led weekly cross-functional meetings related to project schedules, product assembly, testing schedule, and customer issues. Devised new processes and guidelines to enhance engineering and designer efficiencies and quality. Led daily review meetings to track progress of customer projects. Upgraded test lab compressors and filtration system to meet and exceed testing requirements for high pressure technology. Identified and resolved technical problems with equipment, including customer field support.

Sr. Technical Service Engineer

Flowserve Corporation, Kalamazoo, MI

2005 – 2009

Supervised a six-member team of designers responsible for proposal, detailed assembly, and part drawings required for customer review and production. Designed, routed, and reviewed custom engineered mechanical seals for the chemical, petroleum, and pharmaceutical industry. Provided customers with seal failure analysis, product troubleshooting, and recommended corrective action. Improved engineering job flow process from initial order receipt to product

Jack Thom, PE 2

Last Modified: 2/17/25

Mr. Thom has not been retained unless this Curriculum Vitae is accompanied by a signed letter of engagement.

shipment. Wrote and revised new and repaired product work instructions for the engineering department. Presented technical training sessions to new application engineers and customers.

Technical Service Engineer
Flowserve Corporation, Kalamazoo, MI
1997 – 2005

Sized and selected mechanical seals for sales and customers. Designed, routed, and reviewed custom engineered mechanical seals for the chemical, petroleum, and pharmaceutical industry. Determined engineering calculations, FEAs, and flowrates for seals and rotating equipment.

Inside Sales Engineer
Fluid Process Equipment, Kalamazoo, MI
1995 – 1997

Consulted with clients to determine the correct pumping system and sealing technique for their production applications. Sized, selected, and provided technical support and troubleshooting of systems and equipment related to mechanical seals, pumps, and motors. Supplied cost/delivery estimates of assemblies and equipment to the customers.

Professional Affiliations

Former Member: American Society of Engineering Management (ASEM)
Member: Indoor Air Quality Association (IAQA), 2021-Present

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