CURRICULUM VITAE

Winston Mosher, B.Eng., M.A.Sc., P.Eng.

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EXPERT SUMMARY

Mr. Winston Mosher is a Senior Associate with the Materials & Product Failure and Energy & Power groups at 30 Forensic Engineering. Mr. Mosher holds a Bachelor of Materials Engineering and Master of Applied Science in Materials Engineering from Dalhousie University. He has more than 15 years of comprehensive engineering experience within industrial environments and Canada's oil and gas sector, managing multidisciplinary projects related to failure analysis, corrosion mitigation, and materials testing and selection. Mr. Mosher combines technical expertise with creative problem solving to devise strategic and innovative solutions to complex problems. Based in Calgary, he is a licensed Professional Engineer in the province of Alberta.

SPECIALIZED PROFESSIONAL COMPETENCIES

- Materials Engineering and Testing
- Failure Analysis
- Corrosion Mitigation
- Pipeline Maintenance
- Project Management
- Technical Writing and Presentations

ACADEMIC BACKGROUND

Master of Applied Science in Materials Engineering (M.A.Sc.), Dalhousie University, Halifax, Nova Scotia, 2010

Bachelor of Materials Engineering (B.Eng.), Dalhousie University, Halifax, Nova Scotia, 2008

ADDITIONAL COURSES AND CERTIFICATIONS

Project Leadership Certificate (Project Management Course), Northern Alberta Institute of Technology, 2019

NACE Internal Corrosion for Pipelines – Advanced Course, NACE International, 2012

SolidWorks Essentials, Hawk Ridge Systems, 2011

PROFESSIONAL EXPERIENCE

30 Forensic Engineering

Senior Associate, Materials & Product Failure and Energy & Power
2026 – Present, Calgary, AB

- Analyzes physical failure mechanisms including metallurgical, corrosion, materials, and fracture.
- Investigates failure of assets within the oil and gas industry such as pipelines, pressure equipment, heat exchangers, and valves.

Group 10 Engineering

Supervisor of Laboratory Services
2022 – 2026, Calgary, AB

- Supervised and managed a team of Engineers and Technologists working within the Materials Testing Center, maintaining a safe and collaborative work environment.
- Led improvements in safety management and organization of the start-up laboratory division of the company.
- Conducted full failure analyses, reporting and presentations on pipelines (sour and sweet gas, oil emulsion, water), pressure equipment, boilers, non-metallics, cables, braided hose, valves and heat exchangers.
- Raised profitability through improvements in productivity, processes, and implementing a more effective client billing model for failure analysis reports.
- Provided materials selection reports for sour gas processing facilities, carbon capture pilot plant piping and equipment, waste heat recovery units, hot caustic and solvent transport and lithium extraction.
- Assisted in the development of fracture control plans for natural gas and dense phase CO_2 pipeline projects internationally.
- Conducted in-situ (field) metallography, hardness testing and inspection from within heat recovery steam generators (HRSG), waste heat recovery units (WHRU), once through steam generators (OTSG), and operational pipelines.
- Utilized technical equipment such as an optical microscope, tensile tester, microhardness tester, coating test equipment as well as operated saws, torches, and sand blasting equipment.
- Maintained First Aid, Confined Space and H_2S Alive training certifications.

Innotech Alberta

Senior Materials/Corrosion Engineer
2011 – 2022, Devon, AB

- Directed long-term pipeline maintenance projects involving 13 industry partners (>$1.5M CAD).
- Designed and built two pilot scale pipelines; executed a series of multi-year joint industry projects using them.
- Composed comprehensive technical papers on work executed in pipeline maintenance and presented them at global conferences.
- Developed a novel corrosion sensor for pipelines from concept to a functional prototype.

- Provided 3D CAD (SolidWorks) support to various projects and demonstrated MS Office/Project proficiency.

Dalhousie University

Materials Testing
2010 – 2011, Halifax, NS

- Formulated and conducted extensive materials testing/characterization on aluminum powders.
- Adeptly repaired and installed complex research equipment and advised personnel on safety considerations.
- Developed novel aluminum alloys for the automotive industry and published the results to scientific journals.

Iron Ore Company of Canada (Rio Tinto)

Process Engineer
January – August 2007, Labrador City, NL

- Collaborated with process technicians to perform experiments and improve process efficiency.
- Gained familiarity with industrial scale mining equipment, as well as processes such as flotation separation, slurry filtration, pelletizing, and indurating.

IMP Aerospace

Processes & Environmental Engineer in Training
May – August 2006, Halifax, NS

- Guided personnel on conducting safe testing aligned with industry standards such as MIL-SPEC, ASTM, and ASM.
- Advised personnel on material considerations/environmental responsibilities for military aircraft maintenance.

PROFESSIONAL SOCIETIES AND ASSOCIATIONS

- Association of Professional Engineers and Geoscientists of Alberta, (APEGA), Member

PUBLICATIONS AND ACADEMIC SPEAKING ENGAGEMENTS

- Mosher, W. (2025). Presentation “Cracking the Code: Deciphering Carbon Steel Cracking in Diverse Environments”. International Pressure Equipment Integrity Association (IPEIA) Conference, Jasper AB.
- Mosher, W. (2021). “Methodology for the Evaluation of Batch Corrosion Inhibitor Films and their Integrity,” CORROSION 2021, Virtual Conference.
- Mosher, W. (2016). “Methodology for the Evaluation of Cleaning Pigs on Sludge Deposits for Corrosion Pits,” CORROSION 2016, Vancouver, BC.
- Mosher, W. (2014). “Methodology for Accelerated Microbiologically Influenced Corrosion in Under Deposits from Crude Oil Transmission Pipelines,” CORROSION 2014, San Antonio, TX.

- Mosher, W. (2012). “On Enhancement of Hypoeutectic Aluminium-Silicon Powder Metallurgy Alloy,” Canadian Institute of Mining, Metallurgy and Petroleum.
- Mosher, W. (2011). “Advances in Powder Metallurgy and Particulate Materials,” Metal Power Industries Federation, San Francisco, CA.
- Mosher, W. (2010). “On The Hot Deformation of Aluminium-Silicon Powder Metallurgy Alloys,” Powder Metallurgy.
- Mosher, W. (2010). “On the Development of a Hypoeutectic Aluminium-Silicon Powder Metallurgy Alloy,” Powder Metallurgy.