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Natasha McQuaid, P.Eng., CRM

Materials & Metallurgical Engineer

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Education

UNIVERSITY OF TORONTO

Certificate of Risk Management

2013

McMASTER UNIVERSITY

Bachelor of Engineering and Management; Material Science and Engineering

2011

Experience

ROAR ENGINEERING

Manager, Materials & Metallurgical Engineering

2015 – PRESENT

Provide forensic engineering services including failure analysis investigations, product assessments and code compliance on various materials including destructive and non-destructive testing.

Investigation of mechanical failures, such as heavy equipment, machinery, boiler systems, and vehicles, as well as plumbing, sprinkler, and other building systems. Material failure analysis includes cracking failures, corrosion failures, failure due to material degradation, plumbing component failures, oil tank failures and freezing damage. Analysis completed on various materials including metals, polymers, ceramics, and composites.

Assess compliance to North American codes and standards such as CSA, ASTM, ASM, ASME, NACE, NFPA and building codes.

Preparation of technical reports for all of the above.

TRYLON TSF
Project Manager-Engineering Services

2014 – 2015

Managed various large telecommunication carrier accounts within the Canadian market. Accounts responsible for included Bell Mobility, Telus Mobility, Wind Mobile, Manitoba Hydro, Government of Alberta, etc. Responsible for quoting, scheduling engineering resources, and executing client projects according to their priorities. Facilitated communication between clients, engineering/detailing teams and upper management. Review all deliverables to ensure the quality of field audits, engineering analysis and detail drawings to ensure client's expectations are met.

Developed and increased business with responsible accounts by building client relations and understanding each client's requirements. Developed internal processes to create efficiencies to better turnaround deliverables and understand the department's capacity.

Responsible for forecasting and delivering results to meet internal company targets on a month-to-month basis. Part of the team that exceeded the company revenue and contribution margin targets over the course of one fiscal year.

Managed a company-wide Special Project which involved the installation of four telecommunication towers in the Northwest Territories. The project was managed from quoting, design, manufacturing, shipping, to installation. The project was completed-meeting the company's internal margin targets.

ROCHON ENGINEERING
Materials/Metallurgical EIT/Laboratory Manager

2011 – 2014

Provided forensic engineering services including failure analysis investigations, laboratory testing, product assessments and code compliance on various materials including destructive and non-destructive testing.

Investigation of mechanical failures, plumbing, sprinkler, and other building systems. Material failure analysis included cracking failures, corrosion failures, plumbing component failures, and freezing damage. Investigated numerous oil tank failures.

Managed an ISO 17025:2005 accredited laboratory. Laboratory testing procedures in optical microscopy, scanning electron microscopy, hardness testing, and microstructure analysis.

Assess compliance to North American codes and standards such as CSA, ASTM, ASM, ASME, and NACE.

Preparation of technical reports for all of the above.



ROCHON ENGINEERING
Materials/Metallurgical Student

SUMMER 2009 – 2010

Under the supervision of a senior engineer, completed examinations and reports on various products made of metal, ceramic and polymers. Analysis entailed attending site locations, various metallurgical testing, as well as writing detailed reports.

Preparation of laboratory procedures for ISO 17025:2005 accreditation process.

AVIVA CANADA
Bank Office Support

2008 – 2009

Used various database programs to assist in the inventory of claims files and documentation, as well as Police report management.

Specialized Professional Competence

The National Fire Protection Association

NFPA 13 Standard for the Installation of Sprinkler Systems Hands-On Training, 2019

NFPA 13 Standard for the Installation of Sprinkler Systems - Certificate, 2017

NFPA 25 Standard for the Inspection, Testing and Maintenance of Water Based Sprinkler systems – Certificate, 2017

L.I.F.T. Training

Fall Protection for Working at Heights - Certificate, 2018

The Canadian Association of Technical Accident Investigators & Reconstructionists

Crash Data Retrieval (CDR) Analysis and Application, 2015

Northwestern University

Traffic Accident Reconstruction 1, 2013

PC-Crash Simulation Software

PC-Crash Essentials, 2013

EPIC Educational Program Innovations Center

Advanced Internet Research Techniques for Engineers, 2013

Building Mechanical Systems Design, Operation and Maintenance, 2012

CALA Canadian Association for Laboratory Accreditation

Understanding ISO/IEC 10725. 2013

Memberships

Professional Engineers of Ontario, registered as Professional Engineer (P. Eng.)

Global Risk Management Institute (GRMI)

A Society for Material (ASM)

American Ceramic Society (ACerS)

National Association of Corrosion Engineers (NACE)

Association for Iron and Steel Technology (AIST)

The Minerals, Metals, and Materials Society (TMS)

Guelph Triathlon Club



Volunteering and Achievements

ASM Ontario, Executive Committee
Communications Director

2012 & 2013

Insurance Starlight Gala
Auction Committee Member

2012 & 2013

American Ceramic Society President's Council of Student Advisors
Recruitment Co-Chair
McMaster University Delegate Annual General Meeting

2011 - 2012

McMaster Engineering Society
Vice President Education

2010 - 2011

McMaster Women in Engineering Scholarship

