Nicholas Quigley | Forensic Mechanical EIT, **BSME, WETT**

45 Vogell Rd., Suite 210, Richmond Hill, Ontario L4B 3N6 *905-717-6294*

Nicholas.Quigley@efiglobal.ca

Professional Summary:

Mr. Nicholas Quigley is a Forensic Mechanical EIT for EFI Global in Canada and brings new knowledge of technology and failure modes and effects analysis (FMEA) to the forensic engineering field.

Mr. Quigley's background includes investigation, assessment and report production for a broad range of failures for the insurance and legal professions. Specific areas of experience include fire investigation, slip, trip and fall, product failures, material assessments, battery technology and systems, control systems, data analysis, failure analysis, cause and origin assessments, root cause analysis, and product liability matters.

He is fluent in both French and English.

Project Experience:

Forensic Investigation of Fire, Explosion, and Water Losses: Investigation of the origin and cause of failures causing a fire, explosion, or water loss by utilizing the scientific method, as detailed in the current NFPA 921 (National Fire Protection Association) Standard. This includes the investigation of all types of structures, vehicles, mechanical systems, and machinery.

Advanced Material Testing: Coordination of advanced metallurgical and polymer testing, and aggregate testing in various private owned projects for quality control, long-term durability assessments, fire resistance examinations, product deficiency, and forensic investigation purposes. Conducting fractography and fracture surface analysis of various material failures including corrosion, cracking, and mechanical failures.

Standard of Care: Technical and unbiased reviews of experts' reports, data, and opinions in comparison with municipal, provincial, and national bylaws, standards and Acts and Codes, in order to provide feedback on standards and duties of care.

Slip & Fall: Forensic investigations of various types of slips and falls utilizing the scientific method. Investigations include code review, review of human factors, and litigation support in various slip and fall cases.

Product Liability: Investigations of alleged product failures to assess the product design, manufacturing, maintenance, and product use in determining product deficiencies or defects. This includes assistance in the determination of product failure liability.

Root Cause Analysis: Forensic investigations utilizing the scientific method to determine the direct cause and root causes of insurance claim losses. This includes thorough investigations to determine the root causes of potential failures or losses in the forensic analysis of insurance claims.

Professional Experience:

EFI Global Canada 2019 – Present
Forensic Mechanical EIT
EFI Global Canada 2017
Engineering Intern

Education:

Health Science Diploma – Dawson College, Montreal
Mechanical Engineering Degree – Wayne State University, Detroit

Certifications & Licenses:

WETT Site Basic Inspector
NFPA 472 – Hazardous Materials Awareness
Drone Pilot License Basic Operations – Small Remotely Piloted Aircraft System, Visual line-of-sight

Affiliations:

Order of the Engineer
Canadian Association of Fire Investigators (CAFI)
National Association of Fire Investigators (NAFI)
International Association of Arson Investigators (IAAI)
ASTM International
ASM International
SAE International
Wood Energy Technology Transfer Inc. (WETT)

Courses:

Solving the Unsolvable (CAFI) – May 2019
NFPA 472 Hazardous Materials Awareness (FESTI) – October 2019
Principles of Fire Investigation (IAAI) – January 2020
Arc Mapping Basics (IAAI) – January 2020
Introduction to Appliances (IAAI) – January 2020
Investigating Motor Vehicle Fires (IAAI) – January 2020

Wildland Fires Investigation (IAAI) – January 2020
Metal Failure Analysis (ASTM) – March 2020
Introduction to Youth-Set Fires (IAAI) – April 2021
Electric & Hybrid Vehicle Fires (IAAI) – May 2021
Lithium-Ion Battery Fires (IAAI) – June 2021
Plastic Fundamentals: Properties and Causes of Failures (PDH) – December 2021
Introduction to Youth Set Fires (IAAI) – April 2022
Classification of Corrosion Failures (PDH) – April 2022
NFPA 1033 & 921: 2022/2021 Editions Important Updates (IAAI) – September 2022
Fire Protection Systems (IAAI) – September 2022
Emerging Technologies in Fire Investigation (IAAI) – January 2023
Photovoltaic Cells & Systems (IAAI) – January 2023
Site Safety Assessment (IAAI) – February 2023
Introduction to Metallurgical Failure Analysis (PDH) – February 2023
Code Compliance (WETT) – March 2023
Fire Effects Part 1: Heat Effects on Fuels – April 2023
Fire Effects Part 2: Combustion By-Products Effects (IAAI) – May 2023
Wood-burning Systems (WETT) – May 2023
SITE Inspection (WETT) – June 2023
Fire Investigation for Fire Officers Multi-Program (IAAI) – June 2023
Thermal Stress and Thermal Shock of Materials (PDH) – September 2023
Brittle Fracture of Materials (PDH) – September 2023
Human Factors in Forensic Analysis of Accidents (PDH) – September 2023