

COMPREHENSIVE. DIVERSE. PRACTICED.

For over a decade, our fire experts have been called upon to investigate, analyze, and opine on some of the most catastrophic fire and explosion-related events in Canadian history. Our highly-skilled and diverse team of experts provide a unique perspective and profound understanding of how and why fires and explosions occur. Whether the loss is associated with a complex metal refining process, a food processing facility, a commercial HVAC unit or an ordinary space heater, we have the right experts to provide insight into both the cause and broader context of the event. During the course of our investigations, we keep our clients informed of our progress and findings and make sure we meet their timelines for deliverables. When requested to do so, we produce reports that are concise, understandable, and actionable. 30 Forensic Engineering strives to provide the most comprehensive, cost-effective investigation, reporting, and remediation options possible.

Origin Determination

- Residential, commercial and industrial fire and explosions investigation
- Rapid execution and deployment to site
- Expert assessment of fire patterns and damage
- Superior evidence management and storage procedures
- Clear, concise and actionable peer-reviewed reporting

Cause Determination

- Joint inspections and examinations
- Oxygen, natural gas and propane appliances/equipment
- Appliances and industrial equipment
- Commercial Kitchen and Industrial Food Processing Equipment
- Electrical Equipment and Transformers
- Fuse, Circuit Breaker, Motor Control and Electrical Cabinets

Litigation Support

- Review of Fire Marshal's Reports
- Litigation Quality Reports
- Review/rebuttal of opposing expert reports
- Factors beyond cause: Fire Separations, Fire Department response, Sprinkler System Failure, Alarm Failure
- Mediation attendance
- **Expert Witness testimony**

30 Forensic Engineering

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Rashmiya Raviraj, B.A.Sc., CFEI, P.Eng.

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Senior Associate | Fire Investigation | Electrical Failure Analysis

6 years of experience in over 300 fire origin and cause investigations, with approximately 200 involving electrical failures. Expertise in electrical equipment fires, explosions and electrical failures. Additional experience with infrared thermography, x-rays and electrical quality control and assurance.



Daniel Pelkman, RSE, ME, CCEI, C.tech, NABCEP, CFEI, CCFI-C

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Senior Associate | Fire Investigation | Electrical Failure Analysis | Renewable Energy

Experience in over 50 fire origin and cause investigations. 24 years of experience in the electrical industry. Electrical quality control, project management, and assurance of residential, commercial, and industrial wiring installations, infrared thermography and Solar Photovoltaic Systems specialist.



Deepak Bhathal, CRSP, CFEI

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Senior Associate | Fire Investigation | Industrial Hygiene | Remediation

10 years of experience in engineering consulting and construction industry. Specializing in environmental projects including air quality and odour control, water quality, asbestos and mould sampling and abatement, occupational hygiene, HVAC and hazard assessments.



Troy Eggum, CIP, Ph.D., CFEI, P.Eng.

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Senior Associate | Mechanical Failure Analysis | Oil and Gas | Corrosion

Over 20 years experience, with specialized expertise in product, equipment, and system failures in industrial and consumer settings, with deep experience in the oil and gas, energy, and mining industries. Additional experience as Energy Adjuster, specializing in large and complex losses for national and international insurance markets.



Terrence Holder, M.A.Sc., BSSO, CFEI, CCFI-C, P.Eng.

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Practice Lead | Fire Investigation | Structural and Building Science Failure

Experience in fire origin and cause investigations. Over 20 years experience in forensic investigations of structural losses, as well as building science and building code compliance. Court qualified as an expert in matters related to concrete.



Tom Pepper, CFEI, CCFI-C, P.Eng.

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Practice Lead | Fire Investigation | Building and Fire Code Assessment

Experience in fire origin and cause investigations. Over 15 years of building and fire code compliance assessments, construction experience and forensic engineering. Court qualified as an expert in civil/ structural engineering and building codes.

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