

# CANNEY BROOK FORENSIC ENGINEERS

*FORENSIC INVESTIGATIVE ENGINEERED SOLUTIONS*

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## **R Craig Williams PE CFEI CFII BSME MSAE PhD(abd)**

**Registered Professional Engineer, Certified Fire and Explosion Investigator**

Licensed in **CT, MA, ME, MI, MO, NH, NJ, NY, OH, RI, VT**

Mr. Williams is a mechanical engineer with more than 42 years' experience in consulting engineering, manufacturing, product design, business development, failure analysis, and fire and explosion investigation.

Mr. Williams provides mechanical, electrical, and materials engineering failure analysis, product defect analysis, fire origin and cause investigations, environmental consulting, and workplace injury investigations. These services are provided to the insurance, industrial, institutional, corporate, and legal communities.

Mr. Williams holds a Bachelor's of Science degree in Mechanical Engineering from the University of New Hampshire, a Master's of Science degree in Architectural Engineering from The Pennsylvania State University, and has completed Doctoral Studies in International Business from Southern New Hampshire University.

### **Fire Investigation - Origin and Cause**

Mr. Williams conducts fire investigations which include NFPA 921 based origin and cause investigations, engineering analysis and modeling. Specialized analysis of fires and explosions include residential, commercial, and industrial property, equipment, and vehicles. Exceptional investigations are achieved by incorporation of advanced thermodynamics, fluid flow, heat transfer and electrical engineering into fire investigations.

### **HVAC, Mechanical Equipment, Boilers, Pumps & Machinery Failures / Product Liability & Defect**

Mr. Williams has engineered, constructed, operated, and maintained HVAC, mechanical, process, control, and industrial power equipment, including industrial boilers, steam generation, electrical power production. Mr. Williams has investigated failures, disruptions, fires, and other events associated with industrial, commercial, and residential boilers. This experience allows Mr. Williams to accurately identify key elements of a failure, understand the mode of failure, and provide defensible opinions.

### **Electrical Equipment Failures - Fire, Accidents, Electrocuting, Defects, Electrical Impulses, Stray Current**

Mr. Williams has engineered, installed, and operated large 3-phase high voltage distribution, medium voltage distribution, and low (control) voltage distribution systems for industrial, commercial, and residential buildings and process. A failure analysis may begin with a fire, with a power interruption, with property damage, and/or, and with a business interruption.

### **Materials, Fatigue, and Failures - Corrosion - Fatigue - Coating Defects - Deterioration**

Mr. Williams investigates electrical, mechanical, piping, and plumbing failures which result in losses. Specialized investigations have included catastrophic boiler failures, machine tool failures, piping and plumbing, thermal stress material fatigue, water hammer, and bacterial corrosion.

### **Mobile Heavy Equipment and Vehicle Fire & Failures, Operator Accidents**

Mr. Williams investigates track and wheeled loaders, excavators, tree harvesting equipment, agricultural tractors, and skid steer tractors failures, fires, damage to property, and personal injury.

### **Personal Injury, Workplace Industrial Safety, Systems, Training, OSHA Compliance, Negligence.**

Mr. Williams has extensive experience with workplace safety, EPA and OSHA compliance. Mr. Williams investigates conditions and events which when brought together result in serious injury and/or death.

### **Environmental Engineering & Indoor Air Quality.**

Investigations identify detrimental building environmental conditions including formaldehyde, volatile organic compounds (VOCs), combustible gases, carbon monoxide, bacteria, mold and fungi.