

Perry V. Young | P.E., C.F.E.I., C.V.F.I.

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Professional Summary:

Mr. Young has over 13 years of experience in utilizing the scientific method to investigate in the failure analysis of equipment and components, cause of fires and explosions, reconstruction of vehicle accidents involving light, heavy, and motorsports vehicles, industrial accidents, and assessment of scope of damage and cost of repairs of mechanical equipment.

Mr. Young has over 24 years of experience in aerospace and non-aerospace industrial experience. Areas of experience include gas turbine design, equipment/test rig design, support equipment design, material and component testing, and, failure analysis.

- Root cause of equipment/component failure investigation
- Fire and explosion causation
- Industrial accident investigation
- Accident reconstruction

Licenses and Certifications:

Professional Engineer, IL, #062.067909

Professional Engineer, IN, #PE11600236

Professional Engineer, IA, #23395

Professional Engineer, WI, #44821-6

Professional Engineer, MI, #6201065197

Professional Engineer, MO, #2014035822

Professional Engineer, MN, #56096

Professional Engineer, KS, #25257

Professional Engineer, NE, #E-16999

Professional Engineer, FL, #44205

Professional Engineer, GA, #29944

Professional Engineer, AL, #26620

Professional Engineer, MS, #17537

Professional Engineer, LA, #33558

Professional Engineer, TN, #00115039

Professional Engineer, SC, #31339

Professional Engineer, TX, #123957

Certified Fire and Explosion Investigator, NAFI, #10269-8998

Certified Vehicle Fire Investigator, NAFI, #10269-8998v

National Council of Examiners Engineering and Surveying (NCEES), #16-939-49

Project Experience:

Industrial Equipment Fire, Elkhorn, WI

Four cellulose grinders caught fire and spread a storage silo. A thorough review of security video determined that one of the grinders ignited in less than a second before an adjacent grinder. A thorough examination of the damage to the grinders determined that the cause of the fire was fatigue failure to one of the grinder blades, which were at the end of their useful life.

Gas Station Fire and Explosion, St. Augustine, FL

Aboveground storage tanks at a gas station was caught fire and exploded, resulting severe burns to the tanker-truck driver and the destruction of the gas station, 3 other structures, and over 20 vehicles. Through fire modeling analysis, it was determined that the tanker-truck driver was not monitoring the filling process.

Traffic Accident, Arcadia, FL

A passenger vehicle was passing a tractor-trailer on a two-lane road when the two vehicles collided, resulting in the death of the driver of the passenger vehicle. Through examination of photographic evidence and the collision site, it was determined the passenger vehicle struck the tractor-trailer as it was completing the passing maneuver and, not the tractor-trailer striking the passenger vehicle as was alleged.

Multiple Fire Sprinkler Pipe Failures, Panama City, FL

During routine testing of a fire sprinkler system, several pipes fractured, resulting in property damage to two condominium units and the ground floor common areas. Thorough examination of the fracture surfaces revealed that the pipes fractured in bending. It was further determined that the bending loads were a result of pipe movement that resulted from a water hammer/surge event.

Vehicle Fire, Gadsen, AL

A passenger vehicle was in use when smoke emanated from the hood. Subsequent examination of the vehicle found fire damage under the hood and in the trunk near the truck-mounted battery. Examination of the vehicle found both the electrical cable between the alternator and the starter and the ground cable between the vehicle body and the battery had severe fire damage. It was determined that the electrical cable between the alternator and the starter had shorted to the exhaust manifold, resulting in a large current to flow through the vehicle body to the ground cable to the battery. This large current overheated the ground cable, which started the fire in the trunk. The electrical cable shorted because the supports for the electrical cable were not reinstalled after maintenance of the vehicle.

Motorsports Vehicle Accident, Toronto, ONT

During an automobile race, a racecar was involved in a single vehicle accident, which included a collision with a concrete wall. The accident resulted in the death of the driver. A careful examination of the racetrack revealed that the racetrack met international guidelines in the area of the collision with the concrete wall.

Structure Fire, Ocala, FL

A packaged HVAC system was blamed for a fire in a mobile home by igniting dust and other debris and blowing the burning dust and debris into flexible HVAC ducting. Testing of the exemplar ducting revealed that a similar-sized fire within the ducting would not escape to the exterior of the ducting.

Professional Experience:

EFI Global, Inc. Addison, IL, Sr. Mechanical Engineer, 2015 – Present

Engineering Design & Testing Corp., Consulting Engineer, Birmingham, AL & Orlando, FL, 2004-2015

Sports Club of America (SCCA), Race Track Safety Reviewer, Topeka, KS, 2009-2014

Hitachi Electronic Devices (USA), Mechanical Engineer, Greenville, SC, 2003-2003

General Electric Power Systems, Lead Design Engineer, Greenville, SC, 1999-2003

United Technologies Corporation/Pratt & Whitney Aircraft Engines, Sr. Support Equipment Logistics Engineer, Sr. Materials Engineer, Materials Engineer, West Palm Beach FL, 1979-1999

Specialized Education:

Vehicle Fire, Arson, & Explosion Investigation Science & Technology Seminar, NAFI, 2018

Boiler Technology, Redvector.com, 2017

Compressed Air System Basics, Redvector.com, 2017

Mechanical Science: Heat Exchangers, Redvector.com, 2017

Scissor Lift Safety - 29 CFR Subpart L 1926.452(w) Training, Compliance Training Online®, 2017

Construction Scaffolding Safety - 29 CFR 1926 Subpart L Training, Compliance Training Online®, 2017

Ladder Safety Training courses, American Ladder Institute, 2017

An Introduction to Inspection of Boilers and Unfired Pressure Vessels, PDHDirect.com, 2016

Water Industry Hydraulics, RedVector.com, 2016

Fuel and Combustion Systems Safety - Natural Gas Piping Basics, RedVector.com, 2016

Fuel and Combustion Systems Safety - Understanding Fuel Trains and Combustion Equipment, RedVector.com, 2016

2013 NFPA 654, Standard for Prevention of Fire and Dust Explosions from the Processing and Handling of Combustible Particulate Solids Training Series, National Fire Prevention Association, 2016

Wood Fire Safety, PDHdirect.com, 2016

Fuel and Combustion Systems Safety - What You Don't Know Can Kill You! RedVector.com 2016

Fuel and Combustion Systems Safety - Understanding Boilers and Their Special Risks, RedVector.com, 2016

2015 IFC Essentials Fire/Life Safety Systems, RedVector.com, 2016

HVAC Refrigeration Essentials, RedVector.com, 2016

Understanding Moisture Intrusion and Mold Growth, RedVector.com, 2016

Mold Basics, RedVector.com. 2016

Vehicle CDR Training Update, Engineering Design & Testing Corp., 2015

Emergency Stops and Their Role in Industrial Safety, Engineering Design & Testing Corp., 2015

Applied Vehicle Dynamics Seminar, SAE International, 2014

Crash Data Recording Training, Engineering Design & Testing Corp., Orlando, Florida, 2012

Quantitative Measurement of LP/Natural Gas Pipe Systems, Engineering Design & Testing Corp., 2012

Hot Wheels: Investigating Vehicle Fires, Engineering Design & Testing Corp., 2012

Investigation of Gas and Electric Appliance Fires, Fires Findings, 2012

Vehicle Dynamics of Passenger Vehicles, Engineering Design & Testing Corp., 2011

Advanced National Fire, Arson & Explosion Investigation Training Program, National Association of Fire Investigators, 2011

Human Factors and Driver Response – An Overview of the State of the Art, Engineering Design & Testing Corp., 2010

Product Liability – Terms and Techniques, Engineering Design & Testing Corp., 2010

The Engineer's Role in Loss Valuation, Engineering Design & Testing Corp., 2010

Fire Safety Design: Egress & Extinguishing Systems, RedVector.com, 2010

Hot-Dip Galvanizing: Corrosion Protection, RedVector.com, 2010

Fire Suppression Systems – Save the Day or Rain on Your Parade, Engineering Design & Testing Corp., 2009

Use of Metallurgical Analysis to Pinpoint a Brake Problem and the Cause of a Bus Fire, Engineering Design & Testing Corp., 2009

Track Safety Review Training, Sports Car Club of America, 2009

Lights Out: Power Generation Mechanical Equipment Failures, Engineering Design & Testing Corp., 2008

Damage Assessment: Electronic Theodolite Applications, Engineering Design & Testing Corp., 2008

Education:

Bachelor of Science, Mechanical Engineering, University of Missouri, Columbia, Missouri, 1979

Courses Instructed/ Guest Lecturer:

Society of Automotive Engineers (SAE International)
American Society for Metals (ASM International)
American Society of Mechanical Engineers (ASME)
National Fire Prevention Association (NFPA)
National Association of Fire Investigators (NAFI)

Publications and Presentations:

Young, Perry and Harris, R.D. "Analysis of Transport Trailer Front End Structures", Proceedings of 2007 Materials Science & Technology Conference and Exhibition, Detroit, Michigan, 2007

**Litigation CV available upon request.