
David Beachy | Principal Forensic Engineer, MS, PE, CFEI

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Professional Summary:

Mr. Beachy is a licensed professional engineer in multiple states throughout the Mid-Atlantic region and has over 13 years of engineering experience. He began his carrier in the United States defense industry as a mechanical design engineer performing complex structural and mechanical analyses for the development and field implementation of customer desired products. Mr. Beachy was accountable for all aspects of the product development life cycle including conceptualization, design, analysis, fabrication, verification testing, and deployment. He managed and led over nine successful mission direct projects providing client operators solutions in the field.

Mr. Beachy capitalized and leveraged his past engineering and hands-on experience when entering the forensic engineering field. Mr. Beachy has over six years conducting loss investigations and providing consulting services on topics of civil, mechanical, and fire protection engineering. Mr. Beachy's expertise include, but are not limited to:

- Mechanical failures
- HVAC systems
- Water losses and plumbing failures
- Vehicle forensics
- Fire protection systems
- Building envelope evaluation
- Analyzing and interpreting codes and standards

Licenses and Certifications:

Professional Engineer, Delaware, #21009

Professional Engineer, District of Columbia, #PE908722

Professional Engineer, Maryland, #49747

Professional Engineer, New Jersey, #24GE05340600

Professional Engineer, Pennsylvania, #PE087200

Professional Engineer, Virginia, #0402053588

Professional Engineer, West Virginia, #022999

National Engineering Registration, NCEES, 14-434-31

Certified Fire and Explosion Investigator, National Association of Fire Investigators, 22334-14283

Certified in Hazardous Waste Operations & Emergency Response (HAZWOPPER)

Project Experience:

Howard University, District of Columbia Forensic Mechanical – Boiler Failure

Investigated and analyzed boiler tube failures in two boilers, each rated at 112,000 lb/hr of steam, causing catastrophic boiler failure and a loss of heat to the entire University campus.

Earleville, Maryland Fire Protection Systems – Sprinkler Freeze

Investigated, analyzed codes, and performed heat transfer calculations to determine the factors that led to and the party responsible for a wet pipe sprinkler system to freeze.

Multiple Locations in Mid-Atlantic Forensic Mechanical – Plumbing Failures

Investigated multiple commercial and residential plumbing failures that included but was not limited to various PEX connection systems, soldering and brazing connections, and plastic to metallic fitting connections.

Exton, PA Forensic Mechanical – Elevated Humidity Levels

Investigated, analyzed codes and performed HVAC calculations to determine the cause for a dwelling to experience high humidity levels after a new HVAC system installation.

Court Qualifications/Depositions:

Litigation CV available upon request.

Professional Experience:

EFI Global, Service Line Principal, Principal Forensic Engineer, 2020 - Present

EFI Global, Senior Forensic Engineer, 2020

EFI Global, Forensic Engineer, 2018 - 2020

Unified Investigations and Sciences, Forensic Engineer, 2016 - 2018

Commonwealth Technology Inc., Mechanical Design Engineer, 2014 – 2016

Raytheon UTD, Mechanical Design Engineer, 2009 – 2014

Olde Town Engineering Company, Structural Engineer Intern, 2007 & 2008

Specialized Education:

Circuit Protection Devices, CED Engineering, 2022

Overview of Fire Alarm and Detection Systems, CED Engineering, 2022

Practical Fractography, ASM International, 2021

Tools to Ensure Effective Litigation Preparation and Testimony as an Engineering Professional, NSPE, 2021

Corrosion and Air Vents: NFPA 13 Code Requirements, Continuing Education Center, 2021
Multiple Zone Air Systems, ASM International, 2021
Bosch Vehicle Crash Data Retrieval Kit Training, Crash Academy, 2020
Commissioning Process, ASHRAE, 2020
Humidity Control: Avoiding Five Common Design Problems, ASHRAE, 2020
Fire Investigation Training Program, 4 Days, NAFI, 2020
Principles of Fire Investigation Multi-Program, 67 Credit Hours, CFITrainer.net, 2020
HAZWOPER Training, 40 Hour, 360training, 2019
NFPA 25 – Inspection, Testing, and Maintenance of Water Based Fire Protection Systems Hands On Training, 3 Days, NFPA, 2019
High Temperature Water Heating Systems, PDHdirect, 2019
EFP Indoor Air Quality Building Education & Assessment Guidance, PDHdirect, 2019
A Guide for Use and Adoption of The International Plumbing Code, PDHdirect, 2019
Direct Current Circuits Fundamentals, PDHdirect, 2019
Hands-On Electrical Fire and Arson Investigation, Public Agency Training Council, 2018
Introduction to Fire Suppression Systems Inspection, Testing, and Maintenance, PDHonline, 2018
Ethical Issues in Forensic Engineering, PDHdirect, 2018
Introduction to Inspection of Boilers and Unfired Pressure Vessels, PDHonline, 2018
Hands-on Vehicle Fire/Arson Investigation, Public Agency Training Council, 2017
Unified Investigations & Sciences In-service Webinar Series, Essentials of NFPA 1033, 2017
Mold Remediation in the Workplace – OSHA Guide, PDHonline, 2017
Introduction to Fire Protection Systems, PDHonline, 2017
Basics of Piping System Thermal Expansion for Engineers, PDHonline, 2017
Plastic Fundamentals: Properties and Causes of Failures, PDHonline, 2016
Essentials of Composite Materials for Engineers & Technical Managers, 2013
Design, Analysis & Fabrication of Composite Structures, 2012
Master Certificate in Concrete Production, 2011
Underground Pipeline Corrosion Control, 2010

Education:

Master of Science, Mechanical Engineering, The Catholic University of America, Washington, DC, 2012
Bachelor of Science, Mechanical Engineering, University of Delaware, Newark, Delaware, 2009



Affiliations:

National Society of Professional Engineers, NSPE

American Society of Heating, Refrigeration, and Air Conditioning Engineers, ASHRAE

National Association of Fire Investigators, NAFI

National Fire Protection Association, NFPA