

PROFESSIONAL SUMMARY

- ▶ Bachelor of Science in Mechanical Engineering, University of Houston, 2001.
- ▶ Bachelor of Science in Business Administration, two years of law school at Massachusetts School of Law.
- ▶ Primary Areas of Consultation: Mechanical System and Equipment Failure Analysis; Gas System Analysis and Testing; Explosion and Fire Analysis; Workplace Safety and OSHA Compliance Analysis.
- ▶ Residential construction, foundation and roof inspections, water intrusion/damage and foundation failure/deflection analysis.
- ▶ Corporate Director of Operations.

EMPLOYMENT RECORD

- ▶ 1993-Present **McDOWELL OWENS ENGINEERING, INC.** *Houston, Texas*
Director of Operations/Consulting Engineer Responsible for mechanical system and equipment failure analysis; fire and explosion analysis to determine origin and cause; natural and LP gas installation and testing of piping systems, and evaluation and analysis of workplace accidents. Other responsibilities include oversight of case assignment and management; business development and client relations; handle client account issues; coordinate administrative and engineering activities; research and procurement of necessary technical data, software and equipment; manage legal requests and issues.
- ▶ 1993-1995 **VINSON & ELKINS L.L.P.** *Houston, Texas*
Project Assistant II Responsible for maintaining and updating all document and case filings, as well as deposition and record summaries, legal research filing and trial notebook preparation. Duties also included preparation of affidavits and motions, as well as witness interviews and correspondence with various professionals and insurance clients whom we represented.
- ▶ 1993 **SOUTH MIDDLESEX COURT HOUSE** *Framingham, Massachusetts*
Assistant in the Clerk Magistrate's Office Responsible for preparing cases for daily docket calls for both civil and criminal courts, maintaining and organizing case files and assisting attorneys with case information and review.

EDUCATION

- ▶ Bachelor of Science, Mechanical Engineering
University of Houston, Houston, Texas, 2001
- ▶ Bachelor of Science, Business Administration
Framingham State College, Framingham, Massachusetts, 1991
- ▶ Massachusetts School of Law, Andover, Massachusetts, 1992-1994
- ▶ Northeastern University, Boston Campus, Boston, Massachusetts, 1987-1989

REGISTRATIONS, LICENSES & CERTIFICATIONS

- ▶ Licensed Professional Engineer:
 - ✓ Arkansas No. 12712
 - ✓ Florida No. 74103
 - ✓ Georgia No. PE047713
 - ✓ Louisiana No. 34007
 - ✓ Maryland No. 58466
 - ✓ Massachusetts No. 57298
 - ✓ Michigan No. 6201063117
 - ✓ Mississippi No. 18748
 - ✓ New Mexico No. 18414
 - ✓ North Carolina No. 043564
 - ✓ Pennsylvania No. 075579
 - ✓ Texas No. 99660
 - ✓ Virginia No. 0402066067
- ▶ Incorporated Engineer (IEng)
Engineering Council (United Kingdom)
Registration No. 00040792
- ▶ Certified Fire and Explosion Investigator (C.F.E.I.)
National Association of Fire Investigators
2006 by examination
Registration Number 11711-5620
- ▶ Permit & Non-Permit Confined Space Entry
(OSHA 29 CFR 1910.146)

CONTINUING EDUCATION

- ▶ Industrial Safety, November 24, 2022
- ▶ Pressure Relief Valves – Selection and Sizing of Pressure Relief Valves, November 23, 2022
- ▶ Valves – Purpose, Components, Functions, and Applications, November 22, 2022

- ▶ Pumps – Purpose, Components, Functions, and Applications, November 21, 2022
- ▶ Safety Engineering Course, Safety & Health Requirements Parts 3 of 3, December 19, 2021
- ▶ Safety Engineering Course, Safety & Health Requirements Parts 2 of 3, December 18, 2021
- ▶ Safety Engineering Course, Safety & Health Requirements Parts 1 of 3, December 17, 2021
- ▶ Walking-Working Surfaces, an Engineer's Introduction, Dec. 13, 2020
- ▶ What do Engineers Need to Know about OSHA Safety Standards, Dec 12–13, 2020
- ▶ A Guide to Safe Scaffolding, December 5, 2020
- ▶ OSHA Required Training – Control of Hazardous Energy “Lockout/Tagout” – 29 CFR 1910.147, February 16, 2019
- ▶ Marine Fire Investigation – International Association of Arson Investigators, Zachary, Louisiana, February 12-15, 2019
- ▶ 2019 National Safety and Trainer’s Conference, Propane Education and Research Council, San Antonio, Texas, January 9-10, 2019
 - ✓ Emergency Response to Las Vegas Propane Explosion
 - ✓ Crisis Communication
 - ✓ Industry Trainer Panel, Parts 1 and 2
 - ✓ Trainer Best Practices and Techniques
 - ✓ Using “Safety Jeopardy” to Keep Students Interested and Involved
 - ✓ Cylinder Safety and Requalification
 - ✓ Leak Checks and Undersized Piping
 - ✓ Cathodic Protection and Regulator Issues
 - ✓ Crisis Communication
 - ✓ Legal Issues
 - ✓ Static Electricity Hazards in the Propane Industry
 - ✓ Preparing Employees and Customers for Natural Disasters
- ▶ Fire Science and Fire Investigation; University of Edinburgh BRE Center for Fire Safety Engineering, April 24-27, 2017
- ▶ Fuel and Combustion Systems Safety – Understanding Fuel Trains and Combustion Equipment, November 6, 2016
- ▶ Fuel and Combustion Systems Safety – Controlling Combustion Risks: Equipment, November 6, 2016

- ▶ Fuel and Combustion Systems Safety – Understanding Boilers and Their Special Risks, November 5, 2016
- ▶ Fuel and Combustion Systems Safety – Gas Supply System Issues, November 5, 2016
- ▶ Fuel and Combustion Systems Safety – Natural Gas Piping Basics, November 5, 2016
- ▶ Fuel and Combustion Systems Safety – Combustion Basics, November 5, 2016
- ▶ Electrical Forensic Engineering, June 18, 2016
- ▶ Human Factors in Forensic Analysis of Accident, June 16, 2016
- ▶ Introduction to Hazard Evaluation, June 15, 2016
- ▶ Elevator and Escalators Combo Course, The American Society of Mechanical Engineers, Las Vegas, Nevada, May 5-9, 2014
 - ✓ Introduction to Elevators and Escalators
 - ✓ How to Perform Elevator Inspections Using ASME A17.2
- ▶ Elevator and Escalators Combo Course, The American Society of Mechanical Engineers, Las Vegas, Nevada, May 5-9, 2014
 - ✓ Fire Investigations Involving Metal Halide Lighting
 - ✓ The Application of CT X-Ray to Analysis of Electrical Components
 - ✓ Lightning Related Structure Fires
 - ✓ High Voltage Impulse Testing of Corrugated Stainless Steel Tubing (CSST)
 - ✓ Vehicle Fire Burn Pattern Study: Part 2
 - ✓ Explosion Severity: Propane Versus Natural Gas
 - ✓ The Use and Misuse of Engineers in Fire Investigation
 - ✓ Industrial Incident Investigation Techniques
 - ✓ Evaluating Fire Damaged Regulators: How Reliable is Post-Fire Testing?
 - ✓ Investigation of Carbon Monoxide Incident
 - ✓ Small Electric Motor Fires
- ▶ Pressure Relief Devices: Design, Sizing, Construction, Inspection, and Maintenance, The American Society of Mechanical Engineers, Las Vegas, Nevada, September 24-25, 2012
- ▶ Plastics Fundamentals: Properties and Causes of Failures, June 8, 2012
- ▶ Electrical Engineering Fundamentals for Non-Electrical Engineers, EPIC Educational Program Innovations Center, April 26-27, 2012

- ▶ Hazardous Materials Transportation Training and Security Awareness Training, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, March 29, 2012
- ▶ Combustible Dust Hazards: Dust Explosions, The American Society of Mechanical Engineers, San Francisco, California, May 13-14, 2010
- ▶ The Scientific Method for Fire and Explosion Investigation Course by CFITrainer.net in conjunction with the International Association of Arson Investigators, Inc. (IAAI), April 15, 2010
- ▶ Advanced Arson Investigative Techniques for the Insurance Industry, Federal Law Enforcement Training Center (FLETC), Bureau of Alcohol, Tobacco Firearms National Academy, (IAAI), November 2-6, 2009
- ▶ Sprinkler and Other Automatic Fire Suppression Systems, The College of Engineering, The University of Wisconsin, February 2008
- ▶ HAZWOPER – Hazardous Waste Operations and Emergency Response (8 hour), CFR 1910.120, MDLS Safety Training, February 9, 2008
- ▶ 21st Fire Science and Fire Investigation Course, Fire Safety Engineering Group, The University of Edinburgh, Scotland, March 2007
- ▶ HAZWOPER – Hazardous Waste Operations and Emergency Response (8 hour), CFR 1910.120, MDLS Safety Training, February 16, 2007
- ▶ HAZWOPER – Hazardous Waste Operations and Emergency Response (40 hour), 29 CFR 1910.120(e) Confined Space Entry and Air Monitoring Certified, Argo Environmental Training and Consulting, Inc., February 19, 2006
- ▶ Catastrophic Propane Explosion and Carbon Monoxide Claims, Propane Claim Training Seminar, November 17-18, 2005
- ▶ Investigation of Gas and Electric Appliance Fires, Fire Findings, November 8-11, 2005
- ▶ Basic Service and Installation, Natural and LP Gas Systems, Gas Training Services, August 2004
- ▶ NFPA 58 Adoption of the 2001 Edition, Texas Propane Educational & Marketing Foundation, May 2004
- ▶ Certified Indoor Environmentalist Course, Indoor Air Quality Association (IAQA), May 2002

PROFESSIONAL MEMBERSHIPS

- National Association of Fire Investigators (NAFI)
- Institute of Fire Engineers – Member (MIFireE)
- American Society for Testing and Materials (Company Affiliation)

- American Society of Gas Engineers
- National Fire Protection Association (NFPA) Member (Alternate) NFPA 58, Liquefied Petroleum Gas Code, Technical Committee
- National Fire Protection Association (NFPA) Member (Alternate) NFPA 54, National Fuel Gas Code, Technical Committee
- International Association of Arson Investigators, Inc. (IAAI)
- Accredited Standards Committee Z223 on National Fuel Gas Code, Alternate Member (ANSIZ223) American

PROFESSIONAL PRESENTATIONS

- ▶ "A guide to fire and explosion investigations – updates, trends, current issues", DRI: 2021 Fire Science and Litigation Seminar, Washington, D.C., September 10, 2021
- ▶ "Understanding Propane Fuel Gas Systems/Equipment", McDowell Owens Engineering Presentation, Houston, Texas, October 8-9, 2018
- ▶ "The Importance of Employee Training and Development Programs", 2017 Risk Management Summit Presentation, Las Vegas, Nevada, October 17, 2017
- ▶ "Fuel Gas Explosion Investigation", Crum & Forster Presentation, Houston, Texas, December 7, 2016
- ▶ "Forensic Engineering & The Scientific Method", CSI Forensic Science Camp, San Jose State University, San Jose, California, July 30, 2015
- ▶ "Radiant Barrier – Required Green Building Materials are Creating New Subrogation Opportunities", NASP 2014 National Association of Subrogation Professionals, Orlando, Florida, November 10-11, 2014
- ▶ "A Strange New Source of Structure Fire Ignition", ISFI 2012 International Symposium on Fire Investigation Science and Technology, College Park, Maryland, October 15-17, 2012
- ▶ "Hot Topic: Fires Involving Lightning & Reflective Radiant Barriers", Cozen O'Connor 2012 Dallas Subrogation & Insurance Litigation Seminar, Dallas, Texas, May 23, 2012
- ▶ "Fuel Gas Explosion Investigation", Propane Claim Training Seminar, Orlando, Florida, November 17-18, 2005
- ▶ "Understanding Mold in Indoor Environments", Navajo Nation Annual Insurance Conference and Exposition, Las Vegas, Nevada, June 19, 2003
- ▶ "Cause and Effect of Unintended Releases from Propane Cylinders and Tanks", Propane Gas Defense Association, San Francisco, California, October 8, 1999

PUBLICATIONS

"NFPA 921, Articulating the Next Steps in a Dynamic Document", Benstock, E. and Camara, N., 2021. [online] dri.org. Available at: <https://www.dri.org/docs/default-source/webdocs/other/2021/september/fire-sciencebenstock.pdf> [July–September 2021]

"A Strange New Source of Structure Fire Ignition", ISFI 2012 Proceedings of the 5th International Symposium on Fire Investigation Science and Technology, National Association of Fire Investigators, Pgs. 585-595, 2012

"Reflective Radiant Barriers: Good for Energy Savings – Bad for Fire Safety", National Association of Fire Investigators, October 29, 2010, <[http://www.nafi.org/files/article/Reflective RadiantBarriers112010101029121028.pdf](http://www.nafi.org/files/article/Reflective%20RadiantBarriers112010101029121028.pdf)>

"Special Report: Reflective Radiant Barriers", Fire Findings, Vol. 17, No. 3, Pgs. 7-11, 2009

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