Curriculum Vitae

Thomas R. Crane, P.E.
Principal Emeritus

Professional Practice

Licensed professional engineer with engineering experience since 1970. Founder and president of Crane Engineering, a consulting engineering firm serving the insurance industry, legal profession, and industrial clients. Extensive experience in mechanical systems, machine design analysis, safety and hazard analysis of mechanical systems, machine guarding, combustion mechanics, fuel gas systems and components. Former engineering branch manager for federal government.

Employment History

Principal Emeritus – Crane Engineering / ESi

Plymouth, MN • January 2019 - Present

President and Principal Mechanical Engineer – Crane Engineering

Plymouth, MN • 1978 - 2018

Founded engineering consulting firm offering complete range of forensic engineering, investigative and technical consulting services. Provides managerial and technical direction for company in primary areas of practice including analyses of mechanical systems, mechanical and material failure, explosions and fires; fuel gas equipment and controls.

Branch Manager and Senior Staff Engineer – U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Engineering Development Laboratory

1975 - 1977

Responsible for branch technical output and management of engineering and technical staff. Served as engineering consultant and project manager for the Marine Ecosystems Analysis project in the New York bight: developed design and specifications for mobile shipboard habitat units utilized for in-situ chemical analysis and personnel accommodations; directed project development, testing and materials, and failure analysis.

Staff Engineer – Crane Engineering, Inc.

Minneapolis, MN • 1974 - 1975

Responsible for investigation and analysis of mechanical failures, accidents, fires, and explosions. Prepared cause determinations relating to structural collapse, fire site analysis, pressure vessel rupture and consumer product failures.

Staff Engineer – Commissioned Officer Corps of the National Oceanic and Atmospheric Administration

Washington, D.C. • 1971 - 1974

Assigned to the Engineering Development Laboratory of the National Oceanic Survey, served as design engineer for deep-sea tide-gauge support system and Underwater Scientific Instrument Chamber habitat.

Professional Licenses

Licensed Professional Engineer

Minnesota

Professional Affiliations

Chairman: National Fuel Gas Code Committee, NFPA 54; ANSI Z223.1

Advisory Panel for the Sidewall Venting project for the Fire Protection Research Foundation

Advisory Panel for the CSST Research Project

Advisory Panel for the Combustion Requirements Project

National Association of Subrogation Professionals (NASP)

ASM International

American Society of Gas Engineers (ASGE)

International Association of Arson Investigators (IAAI)

National Fire Protection Association (NFPA)

Member: Technical Committee of National Fuel Gas Code, NFPA 54

American Gas Association (AGA)

Minnesota and National Society of Professional Engineers (NSPE)

Pi Tau Sigma, National Honorary Mechanical Engineering Society

Tau Beta Pi, National Honorary Academic Fraternity

Education

Bachelor of Science degree in Mechanical Engineering with distinction, University of Minnesota, Minneapolis, MN, 1970.

Presentations and Publications

Contributing editor, tenth edition of the National Fuel Gas Code Handbook (2018).

Natural Gas Claims and Litigation Association, “An Uncapped Line Meets Technology and Duty”, March 14, 2017.

NASP Litigation Skills, “The Past, Present & Future of Product Liability Subrogation Cases: The View from the Expert”, April 7-8, 2016.

NASP 2015 Subrogation Litigation: Skills and Management Conference, Napa, CA, March 19-20, 2015.

IAAI Minnesota Chapter, Applying the Scientific Method, Minneapolis, MN, March, 2014.

BOOM! Management of a Catastrophic Loss, NASP, San Diego, CA, November, 2013.

NYPGA Annual Spring Conference, Troy, N.Y., March, 2013.

NFPA 921: Not Just for Fire, Developing the Well Founded Opinion, NASP, Las Vegas, NV, November, 2012.

Contributing editor, seventh edition of the National Fuel Gas Code Handbook (2009).

Natural Gas Claims and Litigation Association speaker: “Codes and Standards”, April, 2009.

AEGIS Claims Roundtable, 2009: “Investigation, Testing and Testimony”.

Northwest Loss Association, Minneapolis, MN, 2001. Keynote speaker on evidence spoliation.

North Central Electrical League Inc, St. Paul, MN, 2000. Panelist on forensic engineering.

City of Plymouth, MN, 2000. Trainer for fire-fighting personnel on LP gas and system safety.

Consulting Engineers’ Council. Lecturer on product safety and hazard analysis.

Minnesota LP Gas Association. Lecturer on LP gas and system safety.

Wisconsin LP Gas Association. Lecturer on LP gas and system safety.

Iowa LP Gas Association. Lecturer on LP gas and system safety.

North Dakota LP Gas Association. Lecturer on LP gas and system safety.

University of Minnesota LP Gas School. Instructor.

Safety Seminar, National LP Gas Association Convention, Baltimore, MD, 1987. Lecturer on LP gas and system safety.

National LP Gas Association Risk Management and Liability Seminar, Atlanta, GA, 1987. Presenter.

Presentations to natural gas utilities for system safety analysis, development and modernization of facilities, loss control.

Presentations to industrial and commercial clients for product safety analysis, product application analysis for LP gas systems, design consultation for product hazard analysis.