



C. TRIPP WAGNER III, BME, IAAI-CFI, PI **Director – Mechanical**

Contact

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Education

B.Eng., Mechanical Engineering,
University of Delaware, 2003

Associations

- Member, Society for Fire Protection Engineers (SFPE)
- Member, International Association of Arson Investigators (IAAI)
- Member, National Fire Protection Association (NFPA)
- Member, National Fire Academy Alumni Association (NFAAA)

Awards

IAAI National Photography
Winner, 2013

IAAI DE Investigator of the Year,
2009

Five Points Fire Company
Recognition for Outstanding
Investigation and Arrest of a Fire
Injuring Several Fire Fighters 2008

Delaware Senate Concurrent
Resolution 29 for the Courageous
Rescue of a Woman from a
Burning Home 2000

Delaware House of
Representatives Tribute for Heroic
and Courageous Effort 2000

C. TRIPP WAGNER III, BME, IAAI-CFI, PI, is Director of Mechanical with experience in fire and explosion forensic investigations involving structures, vehicles, marine vessels, appliances, electrical systems, gas systems, fire protection systems, explosive and incendiary devices, product instructions, labels, and warnings. He has provided extensive expert witness services and technically substantiated analyses in accordance with NFPA 921 Guide for Fire and Explosion Investigations, including detailed reports, depositions, hearings, grand juries, and criminal trials. Mr. Wagner has served as member on the Technical Committee on Fire Investigations, NFPA 921. Mr. Wagner also has extensive experience with forensic investigations involving non-fire losses from vehicles, water systems, appliances, vehicles, and HVAC systems.

PROFESSIONAL HIGHLIGHTS

Director – Mechanical, Churchwell Fire Consultants, Inc., Philadelphia region, August 2021 – present

Responsibilities include forensic fire and explosion investigation and analysis to evaluate origin and cause, fire reconstruction, performance of detection and suppression systems, fire spread analyses, and litigation support. Forensic investigations of vehicles, appliances, and systems involved in non-fire losses. Review and evaluation of internal expert forensic reports.

Director Fire Forensics – North/South, Senior Mechanical Engineer Jensen Hughes, West Chester, PA, 2016–2021.

Responsibilities include overseeing and managing fire forensic operations, marketing, and business development of the North and South regions of North America. Forensic fire and explosion investigation and analysis to evaluate origin and cause, fire reconstruction, performance of detection and suppression systems, fire spread analyses, and litigation support. Forensic investigations of vehicles, appliances, and systems involved in non-fire losses. Review and evaluation of internal expert forensic reports.

Deputy State Fire Marshal III, Delaware State Fire Marshal's Office, New Castle, DE, 2005–2016.

Origin and Cause Investigator on over 1000 fire and explosion scenes which included a wide range of structures, vehicles, and other machinery/equipment. Examined electrical and mechanical components of items, appliances, and vehicles in the evaluation of cause hypotheses and assessing accidental and criminal incidents. Examined fire protection systems to determine whether they operated correctly during a fire or the reason for failure. Inspected commercial,

medical, academic, and multi-family residential units to determine if fire protection equipment and life safety issues met code. Served as backup

supervisor for The New Castle County Investigative Division. Supervised staff of 14 in absence of current supervisor. Supervised investigators at fire/explosion scenes in absence of current supervisor. Served as statewide Forensic Sciences Laboratory liaison and evidence coordinator.

Adjunct Professor – FET-230 Fire Related Building Construction, Delaware Technical Community College, New Castle, DE 2012.

Fire Inspector, Delaware State Fire Marshal's Office, New Castle, DE, 2004–2005.

Professional Firefighter/EMT, Arlington County Fire Department, Arlington, VA, 2002–2005.

Part-time Firefighter/EMT, Christiana Fire Department, Christiana, DE, Brandywine Hundred Fire Department, Wilmington, DE, Dover Fire Department, Dover, DE, Aetna Hose, Hook, and Ladder, Newark, DE, 1994–2006.

CERTIFICATIONS/TRAINING

Engineering, Fire/Explosive Investigations (including but not limited to the following)

American Boat & Yacht Council Surveying Electrical Systems, 2020
American Boat & Yacht Council De-mystifying Basic Electrical Concepts and Standards, 2020
Dry Sprinklers for Commercial & Residential Fire Protection, Victaulic University, 2020
American Boat & Yacht Council Corrosion Project Webinar, 2020
New Jersey International Association of Arson Investigators AGM, 2020
New Jersey International Association of Arson Investigators Latest Concepts in Fire Investigation, 2020
American Boat & Yacht Council Marine Law Symposium, Fire, Explosions and Other Thermal Events 2020
Thermal Management of Automotive Battery Packs, 2019
Combustible Dust Safety: Clean-up and Engineering Controls, 2019
Dust Explosion Codes & Standards: Ensuring Regional Compliance and Global Consistency, 2019
Modeling Gas Release from Lithium-Ion Batteries during Thermal Runaway Using FDS, 2019
NJ International Association of Arson Investigators Annual Training Conference, 2019
International Association of Arson Investigators Motor Vehicles:
 The Engine and the Ignition, Electrical, and Fuel Systems, 2017
 Transmission, Exhaust, Brake, and Accessory Systems, 2017
International Association of Arson Investigators Investigating Natural Gas Systems, 2017
International Association of Arson Investigators Preparation for Marine Fire Scene, 2017
International Association of Arson Investigators Residential Electrical Systems, 2016
International Association of Arson Investigators Digital Photography and the Fire Investigator, 2016
University of Washington Motor Vehicle Fire Investigations, 2016
Overview of Firewalls and the Use of Glass-Mat Gypsum Shaft Liner Panels, 2016
Access Door Considerations and Solutions, 2016
Supervisory Initiating Devices, 2016
Introduction to Specialized Fire Detectors, 2016
Central Station Fire Alarms, 2016
Notification Appliances, 2016
Fire Prevention Plans – OSHA, 2016
Emergency Action Plans – OSHA, 2016
Overcurrent Protection for Conductors and Equipment, 2016
Proprietary Station Fire Alarm Systems, 2016
Introduction to Specialized Fire Detectors, 2016
Introduction to the NEC, 2016
General Requirements of the NEC, 2016
Through Penetration Fire-stopping, 2016
Dust Hazard Analysis, 2016
Fans in Air-Handling Systems, 2016
The Plastic Pipe Solution to Water Infrastructure Failures Seminar, 2015

Sustainable HVAC Design: Using Air Movement in Air-Conditioned Buildings, Seminar, 2015
Rooftop Pipe and Equipment Support Systems Seminar, 2015
Fire & Smoke Protection with Life Safety Dampers Seminar, 2015
Introduction to Residential Ventilation Seminar, 2015
Firestop Systems for Maintaining Fire Ratings of Walls and Floors Seminar, 2015
Fabric Ductwork: The Metal Alternative Seminar, 2015
HVAC Flow and BTU Metering Seminar, 2015
Advanced Analog Circuit Design Seminar, 2015
International Association of Arson Investigators Arc Mapping Basics, 2015
International Association of Arson Investigators Process of Elimination, 2014
International Association of Arson Investigators Investigating Motor Vehicle Fires, 2012
Perimeter Fire Containment in Multi-Story Buildings, 2012
International Association of Arson Investigators Explosion Dynamics, 2012
Delaware International Association of Arson Investigators, Arc Mapping, 2011
National Fire Academy Forensic Evidence Collection, 2010
International Association of Arson Investigators Introduction to Evidence, 2010
International Association of Arson Investigators Physical Evidence at Fire Scenes, 2010
Delaware International Association of Arson Investigators Motor Vehicle Fire Investigations, 2010
Delaware International Association of Arson Investigators Fire Death Investigations, 2010
Delaware International Association of Arson Investigators Fires involving Corrugated Stainless Steel, 2010
International Association of Arson Investigators Certified Fire Investigator, 2009
Delaware International Association of Arson Investigators Basic Electricity for the Fire Investigator, 2009
Pennsylvania International Association of Arson Investigators Electrical Investigations, 2007
Department of Justice Post Blast Investigative Techniques, 2006
National Fire Academy Fire/Arson Investigator, 2005
National Fire Protection Association Certified 1033 Fire Investigator, 2004
Virginia Certified 1033 Fire Investigator, 2004

COMMITTEES

Alternate Member, Technical Committee on Fire Investigation (FIA-AAA), NFPA 921 2017-2021

NOTABLE PUBLICATIONS AND PRESENTATIONS

Wagner, C Tripp et al, "Forensic Engineering Overview" Webinar, May 2021
Wagner, C Tripp, "Cause of Fire vs. Cause of Loss" Webinar, September 2020
Wagner, C Tripp, Subro Sense Podcast – Forensic Investigation of Subrogation Claims During Covid-19, April 2020
Wagner, C Tripp et al, "Handling Claims During COVID-19" Webinar, April, May, September 2020
Wagner, C Tripp, "Arcs, Sparks, and Winter Fires" Cozen O'Connor, February 2020
Wagner, C Tripp, "Cause of Fire vs. Cause of Loss" Marshall Dennehey Warner Coleman Goggin, October 2019
Wagner, C Tripp, "Forensic Vehicle Analysis" Delaware Valley Chapter of IASIU, September 2019
Wagner, C Tripp, "Investigating Residential Dryer Appliance Fires" IAAI Fire & Arson Investigator Journal, October 2018
Wagner, C Tripp, "Are You a Qualified Fire Investigator?" *Firehouse Magazine Newsletter, Firehouse.com*, 2017
Wagner, C Tripp, "Introduction to Fire Investigation" Delaware State Police Academy 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
Wagner, C Tripp, "Search Warrants as an Investigative Tool" Delaware State Police Academy 2013, 2014, 2015, 2016
Wagner, C Tripp, "Introduction to Fire Investigation" New Castle County Police Academy 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
Wagner, C Tripp, "Introduction to Forensic Fire Investigation" University of Delaware, MEDT 220 Forensic Science, 2012, 2013, 2014, 2015, 2016
Wagner, C Tripp, "Search Warrants for Fire Investigations" City of Wilmington Fire Marshal's Office, 2014
Wagner, C Tripp, "Crime Scene Investigator II" Delaware State Police Academy 2013