

OMNITEK ENGINEERING, INC.

CONSULTING ENGINEERS

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CURRICULUM VITAE TODD A. LAVIERI CONSULTING ENGINEER

PERSONAL:

Residence: 26506 County Line Road
Kansasville, Wisconsin 53139-9643

Date of Birth: October 13, 1957
Chicago, Illinois

EDUCATIONAL BACKGROUND:

Northern Illinois University 1975-77
DeKalb, Illinois

Southern Illinois University 1981
Carbondale, Illinois
B.S. Mechanical Engineering Technology

American Institute of Chemical Engineers 1982
Continuing Education Program
Fundamentals of Fire/Explosion Hazard Analysis

Society of Automotive Engineers 1987
Continuing Education Programs - Glass Workshop

University of Wisconsin - Milwaukee 1988
Center for Continuing Engineering Education
Basic Engineering Refresher

University of Wisconsin - Milwaukee 1988
Center for Continuing Engineering Education
Mechanical Engineering Refresher

University of Wisconsin – Madison 1989
College of Engineering
Department of Engineering Professional Development
Product Safety and Liability Prevention:
The Role of Warnings and Instructions

University of Wisconsin - Madison 1990
College of Engineering
Department of Engineering Professional Development
Automatic Fire Suppression Systems

International Association of Arson Investigators 1993
Wisconsin Chapter, Annual Seminar

Investigation the Black Hole
Monty McGill, California Fire Marshal

Spontaneous Combustion of Forage Material
Professor H.D. Bruhn, P.E.

Legal Aspects of Fire Investigation
Attorney Robert Burrell (Civil),
Borgelt, Powell, Peterson & Frauen. S.C.
Attorney Gael Hoffman (Criminal),
Assistant U.S. Attorney

New Realities in Fire Investigation
Barker Davies, President, Barker & Herbert Laboratories

High Temperature Incendiaries
Dr. R. Henderson, Pre. Southeast Research Laboratories
Bill Dietz, Chief, ATF Forensic Laboratory

Investigator Safety and Motivation
Bruce Varner, Chief, Carrollton, Texas Fire Department

International Association of Arson Investigators
Wisconsin Chapter, Annual Seminar 1994

Scene Investigation
David H. Campbell, Special Agent
North Carolina Bureau of Investigation

Basic Fire/Arson Investigation Course
Wisconsin Dept. of Justice, Division of Criminal Investigation
Investigation from the Defense View
Gerald Boyle, Attorney, Gerald Boyle, S.C., Milwaukee, WI

International Association of Arson Investigators
Wisconsin Chapter, Annual Seminar 1996

Legal Aspects of the Black Hole Investigation
William R. Cathcart, Attorney
Cathcart, Gofton & Fraley, Oklahoma City, Oklahoma

Importance of Processing the Black Hole
Kirk McDaniel, Mississippi Farm Bureau Insurance Company

Foundation Fires - Processing the Scene
John M. Richardson, Oklahoma Farm Bureau Insurance Company

What's New in Electrical Fires?
Gary Hacker, G.L. Hacker & Associates

Fire Scene Safety
Terry Linsen, Lakeshore Technical College

University of Wisconsin - Madison
College of Engineering
Department of Engineering Professional Development
Wisconsin Building Code Refresher 1998

International Association of Arson Investigators
Wisconsin Chapter, Annual Seminar 1998

Building Construction and Fire Travel
Mark Newell and Jeff Fennig, Milwaukee Police Dept.
NFPA 921 Chapter 2 and Overview of 1998 Edition

University of Wisconsin - Madison College of Engineering Department of Engineering Professional Development Wisconsin Building Code Refresher	2001
University of Wisconsin - Madison College of Engineering Department of Engineering Professional Development Wisconsin Building Code Refresher	2004
International Association of Arson Investigators Wisconsin Chapter, Annual Seminar	2004
Origin and Cause Jack Sanderson, Fire Findings, LLC	
Gas Appliances Jack Sanderson, Fire Findings, LLC	
Heat Transfer Products, Inc., Munchkin Stainless Steel High Efficiency Boiler Installation and Troubleshooting, Hot Water Products, Auer Steel, Sturtevant, WI	2007
Carrier Variable Speed, Two Stage Electronic Condensing Furnace Installation and Troubleshooting, Auer Steel, Milwaukee, WI	2007
Investigating Residential Dryer Fires, Fire Findings Laboratories Benton Harbor, Michigan	2008
International Association of Arson Investigators Wisconsin Chapter, Annual Spring Seminar, June	2008
International Association of Arson Investigators Wisconsin Chapter, Annual Fall Seminar, November	2008
International Association of Arson Investigators Wisconsin Chapter, Annual Spring Conference, June	2009

International Association of Arson Investigators
Wisconsin Chapter, Annual Spring Conference, June 2010

Understanding Post-Flashover Fires, The Importance of Ventilation
Special Agent Mike Marquardt, Bureau of Alcohol, Tobacco & Firearms

South Carolina Case Study
Bureau of Alcohol, Tobacco & Firearms

Midwest Subrogation Seminar, Cozen O'Connor 2010

Fire Spread Theories

Unsafe by Design? Metal Halide Lighting

Inverse Condemnation: An Advanced Theory of Subrogation

Lean On Me-Toyota Recall Strategy for Efficient & Effective Recovery

Coming to America: Bring Foreign Manufacturers to US Courts

Investigating Electrical Fires

International Association of Arson Investigators
Wisconsin Chapter, Annual Spring Conference, June 2011

Daubert in Wisconsin- Assistant Attorney General Dave Pearlman

Wisconsin Crime Laboratory - Wisconsin Crime Laboratory Staff

Street Smart Safety for Fire Investigators-Mike Callan, Callan and Company

REGISTRATION:

Registered Professional Engineer 1989
State of Wisconsin Certificate No.: E - 26229

PROFESSIONAL AND TECHNICAL SOCIETIES:

American Society of Mechanical Engineers	1984
National Fire Protection Association	1986
National Society of Professional Engineers	1989
Wisconsin Society of Professional Engineers	1989
International Association of Arson Investigators	1993
International Association of Arson Investigators - Wisconsin Chapter	1993
American Society of Heating, Refrig. & Air-Conditioning Engineers, Inc.	1998

TECHNICAL PRESENTATIONS:

“On Site Fire Investigation and Laboratory Investigation and Testing” Related Sciences of Fire Investigation Seminar Sponsored by R. Schwarz & Associates and the Glenbrook Fire Dept.	1984
“The Importance of Scene Examination of Mechanical Equipment Involved in Fires” Western Loss Association - Annual Meeting/Seminar	1997
“Fundamentals and Investigations of Gas Explosions” International Association of Arson Investigators Wisconsin Chapter, Annual Seminar	1998
“Fundamentals and Investigations of Gas Explosions” International Association of Arson Investigators In cooperation with University of Illinois Fire Service Institute Illinois Chapter, 17th Annual Fire Investigation Training Conference	2000
“Fundamentals and Investigations of Gas Explosions” International Association of Arson Investigators Wisconsin Chapter, Annual Seminar	2007
"Gas Fuel Systems-Identifying Mechanical Systems and Components" International Association of Arson Investigators Wisconsin Chapter, Annual Spring Conference, June	2010
"Gas Fuel Systems-Identifying Mechanical Systems and Components" International Association of Arson Investigators Indiana Chapter, Annual Seminar, August	2011

"Corrugated Stainless Steel Tubing (CSST)-Fire Investigation Overview" 2011
International Association of Arson Investigators
Wisconsin Chapter, Annual Fall Conference, November

CONFERENCES:

National Conference on Fire Investigation 1990
Instruction, First Annual

SUMMARY OF EMPLOYMENT HISTORY:

Omnitek Engineering, Inc. 1986-present
6304 - 22nd Avenue
Kenosha, Wisconsin

Hazard Engineering, Inc. 1981-1986
6208 Lincoln Avenue
Morton Grove, Illinois
Consulting Engineer

Southern Illinois University 1977-1981
Carbondale, Illinois
Full time student

Northern Illinois University 1975-1977
DeKalb, Illinois
Full time student

The Spot Restaurant Summer 1976
Evanston, Illinois
Kitchen & delivery

Peter Hand Brewery Summer 1975
Chicago, Illinois
Bottling line, box factory, fork lift operator

Inhalation Plastics, Inc./Inhalation Therapy, Inc. 1970-1975
Niles, Illinois
Assembly line, delivery, injection mold machine operator

PROFESSIONAL EXPERIENCE:

Omnitek Engineering, Inc. - Consulting Engineer

Provide mechanical engineering consulting services in the field of Forensic Engineering. Responsibilities include the following:

Examination of mechanical equipment involved in fires and explosions including residential and industrial heating, ventilation and air conditioning equipment and other fuel fired equipment and appliances.

Examination and testing of industrial machines, commercial equipment, consumer products and vehicles.

Examination of piping and plumbing systems and fixtures.

Design analysis and evaluation which may include load and stress computations, fluid dynamics, heat power and heat transfer, stability, material selection, human factors, electric, hydraulic and pneumatic control circuit characteristics, research and computer modeling.

Laboratory testing which may include the development of test procedures and the design of test fixtures.

Familiarity with National Fire Codes (NFC), American National Standards (ANSI), Occupational Safety and Health Administration Standards (OSHA) General Industry and Construction and Underwriters Laboratories Standards (UL).

Preparation of technical reports, presentation of findings to clients, and deposition and courtroom testimony.

Hazard Engineering, Inc. - Consulting Engineer

Provided mechanical engineering consulting services in the field of Forensic Engineering.

Responsibilities included the following:

Investigations of mechanical equipment involved in fires and explosions

Investigations of consumer product injury incidents

Investigations of industrial injury and property loss incidents

Investigations of construction injury and property loss incidents

Investigations of vehicle collisions and roll-overs

Preparation of technical reports and presentation of findings to clients

Provided deposition and courtroom testimony

PARTIAL LIST OF INVESTIGATIONS SINCE 1981:

Mechanical equipment involved in fires and explosions:

Natural Gas and LP-Gas appliances and equipment including gas pressure regulators, gas controls, fuel gas piping systems, furnaces, hot water and steam boilers, space heaters, residential and commercial water heaters, construction heaters, unit heaters, residential and commercial cooking equipment, outdoor grills, residential and commercial clothes dryers, distillation equipment, process dryers, pollution control incinerators, pool heaters, decorative gas-fired appliances, fireplace log lighters and gas log sets, bakery ovens and equipment carts.

Wood-fired appliances including fireplaces, stoves and boilers, smokers, crematories, commercial wood grills and pizza ovens, and associated wood-fired equipment chimneys.

Automobiles, trucks, heavy equipment, fork lift trucks, gasoline fueled electric generators, and gasoline powered equipment.

Kerosene- fired space heaters

Rotary screw air compressors

Tub grinders

Manure and waste fired boiler systems

Carbon Monoxide incidents.

Automatic Restaurant Fire Suppression Systems and building fire sprinkler systems.

Water supply and plumbing systems including piping, water supplies, valves, water softeners, sump pumps, dishwashers, fixtures and appliances.

Control systems, safeguards, instructions and warnings of industrial machines and equipment and consumer products, including:

Table saws, routers, cut-off saws, grinders, trim presses, power presses, die casting machines, injection molding machines, conveyors, printing presses, power lawn mowers, snow throwers, chopper/shredders, stump grinders, power nailers, aerial work platforms, scaffolds, ladders, hoists, food processing equipment, HVAC and refrigeration systems, power painting equipment, and packaging machines.

Failure of glassware - glazing, carbonated beverage bottles, coffee pots, and sight glass.

Vehicle accidents involving collisions and roll-overs.

COURT EXPERIENCE:

1. Circuit Court of Cook County
Illinois County Department, Law Division
Richard J. Daley Center, Chicago, Illinois
2. The Iowa District Court
County of Polk, Des Moines, Iowa
3. Circuit Court for the Sixteenth Judicial Court
County of Kane, Geneva, Illinois
4. Circuit Court for the Fourteenth Judicial Circuit
County of Whiteside, Morrison, Illinois
5. State of Wisconsin
Circuit Court, Eau Clair County
6. State of Wisconsin
Circuit Court, Kenosha County
7. Circuit Court
County of Du Page, Wheaton, Illinois
8. State of Indiana
Sullivan Superior Court, Sullivan, Indiana
9. State of Wisconsin Circuit Court
Winnebago County

10. State of Michigan Circuit Court
Grand Traverse County, Traverse City, Michigan
11. State of Illinois
Circuit Court of Thirteenth Judicial District
Will County, Joliet, Illinois
12. State of Wisconsin
Circuit Court Branch 17
Dane County, Madison, Wisconsin
13. State of Wisconsin
Circuit Court
Barron County, Barron, Wisconsin
14. United States District Court
Eastern District of Arkansas, Little Rock, Arkansas
15. Court of Common Pleas
Cuyahoga County, Cleveland, Ohio
16. State of Wisconsin
Circuit Court
Walworth County, Elkhorn, Wisconsin
17. State of Wisconsin
Circuit Court
Juneau County, Mauston, Wisconsin
18. State of Wisconsin
Circuit Court
Brown County, Green Bay, Wisconsin
19. State of Wisconsin
Circuit Court
Washington County, West Bend, Wisconsin
20. State of Wisconsin
Circuit Court
Racine County, Racine, Wisconsin