

WILLIAM J. RHODES II, P.E., CFEI, CVFI, CMI

Consulting Forensic Electrical Engineer

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PROFESSIONAL SUMMARY

Areas of expertise:

- Expert Witness
- Structural fire cause investigations and analysis
- Marine loss investigations and analysis
- RV, construction equipment and HD truck loss investigations and analysis
- Lightning strike/power surge loss investigation and analysis
- Electrical construction defect investigations and analysis
- Electrical equipment and appliance failure analysis associated with personal injury and/or property loss due to fire, explosions, electrocution and/or loss of business revenues
- Intrinsically Safe and Explosion-proof Electrical equipment and installations in NEC and IEC hazardous locations
- Low voltage power distribution system analysis per the NEC; AC and DC low voltage electrical system failures
- Electronic circuit analysis
- Embedded software, software applications and software verification procedures
- Primary and secondary battery powered equipment; solar powered equipment; battery charging and testing systems
- Lift crane load-moment instrumentation
- Gas and liquid commodity custody transfer instrumentation and applications

EDUCATION

BACHELOR OF SCIENCE ELECTRICAL ENGINEERING

University of Houston, Main Campus (1969)

EMPLOYMENT RECORD

- 2001 - CONSULTING ENGINEER IN PRIVATE PRACTICE.
Consulting Engineer Areas of primary interest include electrical systems analysis, electrical fault analysis, electrocution, lightning strikes, electrical fires, explosions, protective devices and control systems, electrical equipment and appliance failure analysis, vehicle fires
- 2000 - 2001 HERNANDEZ ENGINEERING, INC.
Contract Electrical Engineer Designed and implemented electrical and electronic test facilities; specified circuit breakers, conductors and power panels; prepared schematics using AutoCAD; prepared shop instructions to build and test facilities per NASA requirements; and prepared single line drawings of 480v 3 phase power systems. Assured compliance with NASA safety requirements and National Electric Code.
- 1990 - 1999 DANIEL INDUSTRIES, INC.
Applications/Approval/Supervising Engineer Coordinated agency approvals of intrinsically safe and explosion proof equipment; prepared software specifications to assure product compliance and provide a standard for software verification; prepared technical proposals; Configuration, Engineering Change and Documentation controls; ISO 9000; prepared field wiring diagrams for hazardous location equipment for correct manufacture, testing and field installation; and configured hydrocarbon transport loading systems. Battery/solar powered hydrocarbon measurement systems. Battery testing/charging equipment. Transient voltage protection circuits. Production line testing to comply with agency approved apparatus.
- 1979 - 1990 MARKLOAD SYSTEMS INC.
Vice-President of Engineering Supervised entire electronic and mechanical product development from conception to documentation and preparation of service manual; domestic and international field service operations; trained and supervised field service, repair and quality control technicians; 8085 assembly language software; designed and developed bulk and truck weighing systems. Commissioned offshore crane load and anchor line monitoring systems.
- 1974 - 1979 MARK PRODUCTS, INC.
Project Engineer Design and developed products for oil exploration industry; evaluated geophones; developed lift crane safe load-moment computer; and 4040 assembly language software.

1972 - 1974 INPUT/OUTPUT, INC.

Staff Engineer Designed and developed several processes and systems; supervised the assembly, testing and service of new products; prepared operation and service manuals; designed active high cut, low cut, notch and aliasing filters for seismic data recorder.

1970 - 1972 WESTERN GEOPHYSICAL CO.

Electrical Engineer Designed and developed electronic equipment for oil exploration contracting business; designed active filters; evaluated hydro and geophones.

1969 - 1970 ACOUSTRON CORPORATION

Design Engineer Designed and developed tape recorder circuits; stereo and loudspeaker design and evaluation.

CONTINUING EDUCATION

IAMI Marine Fire Investigation - 2015

IAMI Marine Fire Investigation - 2014

Patco Vehicle Fire Investigation - 2013

Texas Fire and Arson Investigators Seminar - 2012

NFPA 921 2011 Update - 2011

Recreational Vehicle Fire Investigations - 2010

Scientific Protocols for fire Investigators - 2009

Three Phase Power Systems - 2008

Gas Explosions and Fires – 2007

Electrical Fires - 2007

Forensic Investigation of Lightning Strikes-2006

Electrical Transient Protection Systems-2006

The Engineer as an Expert Witness-2005

Engineering Ethics-2005

Vehicle fires-2004

Fire and Arson Investigations-2003

Lightning Strikes-2003

Electrical Fire Investigation - 2002

NFPA National Electric Code Seminar - 2000

Fuel Truck Loading Procedures and Apparatus - 1998

Transient Time High Pressure Gas Flow Metering - 1998

Liquid Flow Measurement - 1996

Flow Computer Configuration-1994

ISO 9000 Procedure Preparation - 1992

The Engineer as Manager-1991

Gas Orifice Flow Measurement - 1991

PROFESSIONAL ORGANIZATIONS

National Association of Fire Investigators

Institute of Electrical and Electronic Engineers

National Society of Professional Engineers

Central Texas Fire Investigators Association

National Fire Prevention Association

International Association of Marine Investigators

REGISTRATION/CERTIFICATION

Registered Professional Engineer in Texas - No. 37734

Certified Fire and Explosion Investigator – No. 10495-6512

Certified Vehicle Fire Investigator – No. 10495-6512v

Certified Marine Investigator – No. 03849-134

TX Licensed and Certified Voluntary Inspection Program (VIP) Inspector – No.28704111347