

ENGINEER: MECHANICAL

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EDUCATION

- 1983-1984 Navy Nuclear Power School and prototype duty
- 1980-1983 **Post Baccalaureate Studies, Mechanical Engineering Graduate Program**
North Carolina State University
- 1980 **Bachelor of Science, Materials Science and Engineering**
North Carolina State University, Raleigh, North Carolina

EXPERIENCE

- April 1997
to Present **Engineering Design & Testing Corp.**
Birmingham, Alabama
Consulting Engineer
Failure analysis of materials, including polymers, rubbers, metals and ceramics. Medical equipment assessment and failure analysis. Machinery problems and fractures. HVAC evaluations. Metallurgical analysis and processing. Industrial incident investigation and reconstruction. Cause and origin of fuel gas explosions and fires. Corrosion modes analysis and evaluative testing. Marine surveying. Crane stability assessments. Crane and lifting equipment evaluations. Wire rope failure analysis. Mechanical systems failure analysis. Product testing for litigation.
- May 1988 to April 97 **Accident Reconstruction Analysis** to April 1997 **Raleigh, North Carolin**
- May 1980
to March 1983 **Senior Staff Engineer**
Failure analysis of materials and structures, including physical, chemical and mechanical testing. Aircraft accident reconstruction and aircraft component failure analysis. Accident reconstruction in all modes of transportation. Technical analysis of machinery accidents in industrial settings. Cause and origin investigation of explosions and chemical/incendiary fires. Marine surveying. Inspection, failure analysis and reconstruction of elevator accidents. Slip, trip and fall incidents, Crane and aerial lift accident reconstruction.(12 months active duty for Gulf War)
- March 1983
to May 1988 **United States Navy**
Officer on Fleet Ballistic Missile Submarines
Description Maintenance and repair supervision of shipboard power generation and transmission equipment, atmospheric control equipment including oxygen generators, carbon dioxide scrubbers, carbon monoxide burners and combustible gas indicators. Coordination and supervision of damage control preparation, training and execution during onboard emergencies such as firefighting, flooding, and ship repairs.

Retired from reserves service in June 2004.
- May 1979
to September 1979 **Carolina Power and Light Company**
Raleigh, North Carolina
Welding Engineering Assistant and Welding Laboratory technician

REGISTRATIONS and CERTIFICATIONS

Registered Professional Engineer in Alabama (#21951)

Registered Professional Engineer in Florida (#64862)

Registered Professional Engineer in Kentucky (#29767)

Registered Professional Engineer in Louisiana (#35412)

Registered Professional Engineer in Michigan (#6201311309)

Registered Professional Engineer in Mississippi (#19648)

Registered Professional Engineer in New York (#108298)

Registered Professional Engineer in North Carolina (#015502)

Registered Professional Engineer in South Carolina (#31084)

Registered Professional Engineer in Tennessee (#118537)

Registered Professional Engineer in Texas (#115023)

Examined and Registered in dual disciplines: Metallurgical and Civil Engineering

National Council of Examiners for Engineering and Surveying (#40437)

PROFESSIONAL ORGANIZATIONS

American Society for Metals; National Association of Corrosion Engineers (expired)

CONTINUING EDUCATION

2025	Forensics Engineering
2025	Professional Ethics
2025	Bearing Capacity of Soils
2025	Creating Process Industry Drawings
2025	Use of Data & Analytical Tools in Root Cause Analysis
2025	Inverter Issues
2025	Use of EL to Evaluate Solar Panels
2025	Cathodic Protection Refresher
2024	Large Loss Root Cause, and Scope
2024	Vehicle Fire Investigations
2024	Failure Analysis of Common Plastics
2024	Combustion Turbine Power Plants
2024	Utility Scale Solar Farms; Curtailments and Operating Issues
2023	Fire Investigations
2023	Large Loss Case Studies
2023	Additive Manufacturing and Forensic Engineering
2023	HVAC Design Consideration for Corrosive Environments
2023	Organic Chemistry; IUPAC Nomenclature and Modeling

2022	Thermal Analysis of Polymers; DSC
2022	Circuit Breakers
2022	Hydraulic Systems & Components
2022	Rotating Equipment Failure Modes
2022	Investigating Internal Combustion Engine Failures
2021	Fundamentals of Welding Procedures
2021	Fluid Flow Fundamentals
2021	Fire Alarm Systems
2021	Failure Analysis of Threaded Fasteners
2021	Photovoltaics & Energy Storage
2020	Petroleum Pipelines
2020	Investigating Internal Combustion Engine Failures
2020	Analysis of Cross-Linked Polyethylene
2020	Welding Processes, Techniques, Standards, Inspections and Failure Modes
2020	Defining Voltage Surges and Sags
2015	Glass Fractography Presentation
2011	Infrared Spectra® Interpretation; Eastern Analytical Symposium, Inc.
2010	Non-Linear Finite Element Analysis
2010	Fatigue Analysis
2006	Cathodic Protection
2004 – 2009	Confined Space Entry Certifications
2002	Cathodic Protection of Pipelines; Diesel Failure Analysis Investigations
1989	Instructor, Marine Vessel Fire Investigation
1983	Naval Nuclear Power School, Officer Program
1980-1983	Post Graduate Studies, 29 credit hours, Mechanical Engineering, North Carolina State University