

Credentials

Professional Engineer

Maryland License #14938 Virginia License #21539

Education

Bachelor of Civil Engineering

University of Florida, 1961

Graduate Courses in Naval Architecture, Engineering Mathematics, Strength of Materials
University of California, 1962 - 1964

Continuing Education courses in Shock Design of Naval Equipment, Thermodynamics, Dynamics of Ocean Structures and numerous computer programming languages.

Publications

NUREG-1296, Thermal Overload Protection for Electric Motors on Safety-Related Motor-Operated Valves - Generic Issue II.E.6.1, USNRC, June 1988.
Principal Author and Project Engineer for Generic Letter 89-10 to all nuclear power plant licensees, "Safety-Related Motor-Operated Valve Testing and Surveillance", June 28, 1989.
Paper "In Situ Testing of Motor-Operated Valves in Nuclear Power Plants", 17th Water Reactor Safety Meeting, October 1989.
NUREG/BR-0112, Volume 3, Number 1, "In Situ Testing of Motor-Operated Valves in Nuclear Power Plants", USNRC, January, 1990.
Principal Author and Project Engineer for Draft Regulatory Guide DG-1020 and Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants", (Implementation of the Maintenance Rule", 10 CFR 50.65)", USNRC, June 1993.
Article "NRC test results and operations experience provide insights for a new gate valve stem force correlation", Nuclear Engineering and Design 152 (1994) 67-78, February 1994.
DOE Report, "Independent Oversight Review of the DOE QA Program for Suspect/Counterfeit Parts, Revision 1, USDOE, May 1996.
NUREG/CR-6654 (INEEL/EXT-98-00383), "A Study of Air-Operated Valves in U.S. Nuclear Power Plants, USNRC, February 2000.
ICONE-8380, Summary of a Study of Air-Operated Valves in U.S. Nuclear Power Plants for the 8th International Conference on Nuclear Engineering, Baltimore, MD, April 2-6, 2000.

Areas of Concentration

Structural engineering
Civil engineering
Naval architecture
Building construction
Shipbuilding

Construction codes & standards
Building design & defects
Building inspection
Building materials

Specific Experience & Interest

Crane design & failure
Rigging
Apartment buildings/complexes
Cargo ships
Commercial buildings
Concrete construction
Concrete failure
Concrete repair
Construction fasteners
Guardrails
Handrails
Ladders
Marine corrosion
Metal corrosion
Metal structures
Municipal buildings
Nrc regulations
Nuclear power plants
Office buildings
Parking garage construction

Parking structures
Precast concrete structures
Retaining walls
Roof failures
Roof leaks
Scaffolds
School construction
Ship components
Stairways
Steel design/defects
Steel erection
Steel structures
Structural failure
Structural inspection
Truss erection
Truss failures
Wind forces
Wood structures
Wood trusses

Professional Experience

Institute for Products, Engineering & Construction

2000 to Present

Consulting and forensic engineering services for attorneys and insurance companies. Projects involve the disciplines of structural and civil engineering and naval architecture. Issues addressed include Rigging and crane operation and safety, construction site safety, product liability involving structural or material failure, construction of buildings and other structures, and shipbuilding.

Idaho National Engineering and Environmental Laboratory

Nuclear Operations Support Programs Department

1993 to Present

Consulting Engineer. Wrote and produced a report for the Nuclear Regulatory Commission (2.5 year project) on operability issues of air-operated valves in U.S. commercial nuclear power plants (NUREG/CR-6654). Wrote and produced the program plan for identification of Suspect/Counterfeit Parts for the Department of Energy. Participated as a team member in updating the Standard Review Plan for the Nuclear Regulatory Commission. Wrote portions of the Department of Energy Generic Issues Program and the Department of Energy Defense Program Operations Manual. Participated in the audit of the CE System 80+ Technical Specifications for the Nuclear Regulatory Commission. Thoroughly familiar with NRDC regulations and guidance documents.

U.S. Nuclear Regulatory Commission

1980 - 1993

Senior Task Manager for the Generic Issues Branch in the Office of Research. Major projects included writing and producing the original Generic Letter 89-10 for motor-operated valve operability improvements, and producing Regulatory Guide 1.160 for implementation of the Maintenance Rule, 10 CFR 50.65. Coordinated several issues between the Maintenance Rule, license renewal, and diesel generator reliability and resolved technical conflicts. Sponsored, monitored and participated in research on the operability of motor-operated valves in nuclear plants.

Task Manager and Mechanical Engineer for the Mechanical Engineering Branch of the Office of Nuclear Reactor Regulation. Major assignments included review of nuclear power plant in-service valve testing programs, particularly with respect to pressure-isolation valves at the reactor-coolant pressure boundary, as well as research on operability of motor-operated valves, review and analysis of LERs and other licensee documentation, and preparation of SERs.

Structural Engineer for the Structural Engineering Branch of the Office of Nuclear Reactor Regulation. Major assignments included revision of the applicable portions of the Standard Review Plan, investigation and root-cause analyses of anchorages to concrete structures, investigations of designs of masonry wall in nuclear power plants, and reviews of spent fuel pool re-racking proposals from licensees.

United States Navy (Civilian Employee)

1961 - 1980

Design Section Supervisor, Project Manager and Naval Architect at Hunters Point Naval Shipyard, Mare Island Naval Shipyard and Naval Sea Systems Command. Major assignments included design of large portions of the structures and equipment supports for the USS Midway Conversion, baseline design of the hull structure for the FFG-7 class of patrol-frigates, arresting gear support design, catapult support design, nuclear submarine pipe support design and sound isolation, and nuclear submarine equipment support design. Designed rigging, slings and strongbacks and conducted rigging tests for heavy lifts as well as Navy boats.

Allison, McCormac and Nickolaus, Structural Engineers

1978 - 1990

Structural Engineer. Performed design and analyses of conventional building structures including office building, warehouses, schools and hotels throughout the Washington metropolitan area. Participated in the restoration and addition of floors to the Mayflower Hotel and renovation of the Pennsylvania Building. Wrote several structural engineering programs in Fortran and Basic.

Dewberry & Davis, Civil Engineers

1990 - 1994

Structural Engineer. Designed water and sewage treatment structures, performed analyses of building structures and designed modifications for building structures at Bolling Air Force Base. Performed root-cause analyses for several as-built structural defects and conditions.