



## **Robert A. Leishear, Ph.D., P.E., PMP, ASME Fellow**

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### **EXPERIENCE**

**Leishear Engineering, LLC, 2016, *Consulting Engineer – Troubleshooting, Design, and Failure Analysis***  
– Systems: *Fluid Systems, Structures, Piping, Pumps, Compressors, Fans, and Machinery.*

Expertise: *Water Hammer, Fluid Flow, Structural Analysis, Failure Analysis, Vibrations, Instrumentation, Explosions, Nuclear Engineering, Safety Analysis, Mixing, Thermodynamics, and Heat Transfer.*

**Savannah River National Laboratory (SRNL), S.C., 2007-2014, *Fellow Engineer, Principal Researcher***  
(4 SRNL Awards); *Research Engineer – Fluids, Mixing, Mass Transfer, and Robotics; Radioactive Packaging Engineer; Calibrations (Metrology) Engineer; Safety Analysis Engineer, and Quality Assurance Engineer.*

**Savannah River Nuclear Solutions, S.C., 2014-2015, *Fellow Engineer – SRS Piping Expert.***

**Savannah River Remediation (SRR), LLC, S.C., 1991-2007, *Fellow Engineer*** (1 SRR President's Award and 10 SRR Vice President's Awards, \$50,000,000 cost savings) - ***Shift Technical Engineer, Design Engineer, Plant Engineer, SRS Pump Expert, Test Engineer, Vibration Engineer, Pressure Vessel Inspector, Radiation Worker, Project Engineer, DCS, LabView and PI Process Software, and Process Engineer.***

**Westinghouse Defense and Electronics Systems Center - *Design Engineer and Inventor*, 1982-1991,**  
(President's Award - U.S. Patent) – Electronic packaging design – Drafting and machine shop supervision.

### **EDUCATION, TRAINING, AND OTHER EXPERIENCE**

***Ph.D., M.S., Mechanical Engineering***, 2005, 2002, University of South Carolina.

***Masters., Nuclear Engineering***, University of South Carolina (expected - 2023).

***B.S., Mechanical Engineering***, 1982, Johns Hopkins University.

***Nuclear Reactor Computer Design Codes***, 2017, Reactor Physics, Thermal Hydraulics, Accident Analysis, AFT Impulse, Reactor Uncertainty Analysis, Ansys, Autodyne, and Fluent – U. of Barcelona, U. of Illinois, Paris, Oak Ridge National Lab., U.S. NRC (410 hours).

***Combustion Engineering***, 2017-2019, Princeton University – Combustion Institute (180-hour classes).

***International Nuclear Law Essentials***, 2018, Singapore, Nuclear Energy Agency (40-hour course).

***International Radiological Protection School***, 2019, Stockholm, Sweden, Nuclear Energy Agency (40 hours).

***Nuclear Process Engineer Qualification Cards***, SRR, SRNL – Oral Boards - Nuclear Processes, Radiochemistry, Chemistry, Heat Transfer, Radioactive Waste Processing, Nuclear Fuel Reprocessing, Industrial Plant Equipment (compressors, pumps, diesels, heat exchangers, boilers, radiation detectors, steam systems), Instrumentation Principles and Calibration Techniques (Metrology, (3500 hours of classes).

***ASME, Piping and Pressure Vessels***, (210 hours of classes) Design, fabrication, inspection, and testing.

***National Codes - Standards***: NRC, IAEA, ANSI, API, ASME, ASTM, DOD, ISO, OSHA, NEC, GUM, and NIST.

***National Association of Corrosion Engineers***: (360 hours) Certifications: Senior Internal Pipeline Corrosion Technologist, Senior Corrosion Technologist, Level 2 Protective Coatings Inspector, Cathodic Protection Tester.

***Project Management Professional Training***: (95 hours) Project scope, risk, cost, quality, and schedule.

***Journeyman Sheet Metal Mechanic***: Apprenticeship – Indenture papers - Sheet metal construction (4 years).

***Machinery Electrician and HVAC Mechanic***: Savannah River Site, S.C. (280 hours of classes).

***Welder, Carpenter, Steeplejack, Iron Worker, and Steel Fitter***, 1971-1982, Welding classes - 1000 hours.

### **TEACHING (ASME and Savannah River Site)**

Water Hammer, Fluid Mechanics, Pumps, Piping Design, Vibration Analysis, and Failure Analysis.

### **PUBLICATIONS (170+)**

***ASME Engineering Text Book***, “*Fluid Mechanics, Water Hammer, Dynamic Stresses, and Piping Design*”,

***Technical Articles***, ASME Mechanical Engineering Magazine, Mensa World Journal, plus Conference and Honors Journal Publications (ANS, ASME, AIChE, AWWA, BHR Group, DOE, NACE, Pump User's Symposium, Science Publishing Group, and Elsevier).

### **PROFESSIONAL SOCIETY MEMBERSHIPS**

***American Society of Mechanical Engineers (ASME)*** - (4 ASME Awards for Service), B31.3 and B31 Mechanical Piping Design Committees, and Section VIII Pressure Vessel Committees.

Member: ***Combustion Institute, American Nuclear Society, American Water Works Assoc., National Assoc. of Corrosion Engineers, Project Management Institute, National Association of Science Writers.***

***Mensa*** - 2015 Copper Black, IQ = 161, Mensa Copper Black Award for Intellectual Achievement.