

Roger W. Griffith, P.E.
Mechanical Engineer

Curriculum Vitae

PROFESSIONAL EXPERIENCE

1997 to present **Griffith Engineering & Consulting, Inc.**
Principal

- Designer of mechanical, plumbing and fire protection systems for commercial and industrial projects. Engineer-of-Record on over 3 million square feet of commercial and industrial construction projects, such as convention centers, schools, office buildings, condominium projects, apartment buildings, hotels, manufacturing facilities, medical office buildings, restaurants, historic buildings, dormitories, fire halls, and maintenance facilities.
- Consultant for architects and owners to address deficiencies in building system design, construction or maintenance practices.
- Expert witness and litigation support related to failures of building systems.

1983 to 1997 **Tennessee Valley Authority**
Various Positions

Quality Manager (1994-1997)

- Trained personnel at all levels of the corporation in problem-solving, root cause analysis, statistical process control, failure modes and effects analysis, and business process reengineering.
- Presented paper at the Federal Quality Conference in Washington, D.C. on problem-solving for quality teams.
- Sponsored quality team that was selected as finalist in the RIT/USA Today Quality Cup competition for their problem-solving project.
- Advised quality teams on process improvement methods.

Maintenance Supervisor, John Sevier Fossil Plant (1992-1994)

- Supervised craft and engineering personnel at 800MW electric generating facility. Responsible for mechanical maintenance of plant equipment including boilers, piping, heat exchangers, pumps, and conveying systems
- Implemented total quality management program in maintenance department
- Utilized root cause analysis for accident investigations and hazard analysis.

Mechanical Engineer, Boiler and Heat Exchanger Group (1990-1992)

- Performed boiler inspections to determine root causes of failures at various fossil plants.
- Inspected fans, pumps structures, ductwork and other plant equipment and designed modifications and upgrades as required.

Maintenance Engineer, John Sevier Fossil Plant (1988-1990)

- Performed predictive maintenance and failure analysis of plant equipment
- Designed and coordinated equipment modifications and upgrades

Valve and Heat Exchanger Specialist (1985-1988)

- Designed upgrades and modifications for power plant condensers, feedwater heaters, and various heat exchangers to improve performance and reliability.
- Performed failure analysis on plant equipment including heat exchangers, condensers, valves, and piping.

Piping Analyst (1983-1985)

- Performed stress analysis on nuclear piping systems.

PROFESSIONAL CREDENTIALS

Registered Professional Engineer: Alabama, Arizona, Arkansas, Connecticut, Florida, Georgia, Kentucky, Minnesota, Mississippi, North Carolina, Pennsylvania, Tennessee, Virginia, West Virginia

EDUCATION

- B.S. in Mechanical Engineering, Tennessee Technological University, Cookeville, TN
Graduated *magna cum laude*.
- Design of Experiments, graduate course, University of Tennessee

EXPERT WITNESS & LITIGATION SUPPORT EXPERIENCE

Mann v. Torrence ... Pipe Failure, Plaintiff (Timothy Holton, Esq., Deal, Cooper & Holton) Memphis, Tennessee

Wilde v. B-Bry and Metro Heating & Air...Water Heater Failure, Plaintiff (Jennifer S. White, James A.H. White Law Firm) Knoxville, Tennessee

Schindel v State Industries, et al ...Water Heater Failure, Plaintiff (John Butler, Esq., Butler Vines & Babb) Sevierville, Tennessee

Spears Residence...Pipe Failure, Insurance Claim (The Harford) Dandridge, Tennessee

WORKSHOPS AND CONTINUING EDUCATION

Geothermal Seminar and Drilling Demonstration, Tennessee Valley Authority, 2007

National Electric Code Seminar, National Fire Protection Association (NFPA), 2007

Large Chilled Water System Design Seminar, ITT Bell & Gossett, 2005

HVAC Design & Analysis Training Seminar, Trane Company, 2004

Mold and Moisture Control in Commercial Buildings, Tennessee Valley Authority, 2003

Post Graduate Seminars on Engineered Products, Hydronics, Systems, Heat Exchangers, and Pumps, Armstrong, 2001

Designing Geothermal Heat Pumps for Commercial and Institutional Buildings, Tennessee Valley Authority, 2001

Geothermal Heat Pumps: Advanced Topics, Tennessee Valley Authority, 2001

How to Meet New ASHRAE 90.1 and 62 Standards, Tennessee Valley Authority, 2000
Geothermal Heating and Cooling - Reducing Costs Through Better Design, Tennessee Valley Authority, 2000
Automatic Sprinkler System Seminar, National Fire Protection Association (NFPA), 1998
Basic Fire Protection Seminar, P2 Fire Protection Engineering Consultants, 1997
Fault Tree Analysis Instruction Certification, Tennessee Valley Authority, 1997
Weibull Analysis Workshop, Tennessee Valley Authority, 1997
Advanced Weibull Analysis, Tennessee Valley Authority, 1993
Maintenance Management, Clemson University, 1992
Quality Improvement: Tools and Techniques, Tennessee Valley Authority, 1991
Boiler Tube Failure: Correction, Prevention and Control, EPRI and General Physics Corporation, 1990
Tubular Heat Transfer Equipment for the Process Industries and Utilities, Center for Professional Advancement, 1990
Vibration Analysis and Dynamic Balancing, IRD Mechanalysis, 1988
Vibration Training Seminar, Tennessee Valley Authority, 1988
Piping Design and Piping Stress Analysis, Texas A&M University, 1985

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

American Society of Mechanical Engineers (ASME), member
American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE), member
American Society of Plumbing Engineers (ASPE), past member of ASPE 15 Working Group - Hot Water Temperature and Control Committee, past vice-president of Technical for local chapter and past vice-president of Education for local chapter
National Fire Protection Association (NFPA), member
National Society of Professional Engineers (NSPE), member
Board of Examiners, Tennessee Quality Award, 1995, 1996

PUBLICATIONS, PRESENTATIONS AND TECHNICAL REPORTS

What is Meant by 'Feet of Head'? ASPE newsletter article, East TN chapter, 2004
Pipe Sizing, ASPE newsletter article, East TN chapter, 2005
Sizing Thermal Expansion Tanks, ASPE newsletter article, East TN chapter, 2004
"NFPA 96 and Building Code Requirements for Commercial Kitchen Hood Systems", presentation to Fire Officials and Building Officials, Sevier County, Tennessee, 2004