



Roger W. Griffith, P.E.

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Curriculum Vitae

PROFESSIONAL CREDENTIALS

Over 30 years experience as a mechanical engineer in design, maintenance, and operation of mechanical systems. Expert Witness/Consultant since 2004 **specializing in HVAC and plumbing design, hot water scalding, gas appliances and venting, legionella, construction defects, and failure analysis of mechanical and plumbing equipment.**

Registered Professional Engineer in: Alabama, Arkansas, Arizona, Florida, Georgia, Indiana, Kentucky, Louisiana, Minnesota, Mississippi, North Carolina, Ohio, Tennessee, and Virginia

Licensed commercial mechanical contractor, 2004 (expired).

PROFESSIONAL EXPERIENCE

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| 1997 to
present | Griffith Engineering & Consulting, Inc.
<i>Principal</i> <ul style="list-style-type: none">• 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.• Expert witness and litigation support related to failures of building mechanical and plumbing systems. |
| 1983 to
1997 | Tennessee Valley Authority
<i>Various Positions</i>

<i>Quality Manager (1994-1997)</i> <ul style="list-style-type: none">• 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 re-engineering.• Presented paper at the Federal Quality Conference in Washington, D.C. on problem-solving for quality teams. |



Roger Griffith, PE

- 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, valves, 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 MEMBERSHIPS AND AFFILIATIONS

American Society of Mechanical Engineers (ASME)

American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE)

American Society of Plumbing Engineers (ASPE)

- past Vice-President of Technical and past Vice-President of Education for local chapter

National Fire Protection Association (NFPA)

National Society of Professional Engineers (NSPE)

International Code Council (ICC)



CODES AND STANDARDS

American Society of Plumbing Engineers (ASPE) Technical Standard 15 – Hot Water Temperature and Control. This is a national design standards committee that provides industry guidelines for hot water temperature limits and control for plumbing systems to prevent scalding.

American Society of Sanitary Engineers (ASSE) Scald Awareness Task Group. This group is developing guidelines on the proper setting of water temperature control devices for showers and tubs. The goal is to reduce potential scalding hazards from domestic hot water at these fixtures.

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

Problem Solving Techniques; Instructor, TVA University course, 1993 - 1997

Fault-Tree Analysis; Instructor, TVA University course, 1996 - 1997

EDUCATION

B. S. Mechanical Engineering, *magna cum laude*. Tennessee Technological University; 1983