

RESUME SUMMARY

Name: Michael B. Plunkett

Education: BSME, 1969 University of New Haven
MSME, 1972 University of Rhode Island
P.E. Licenses: Rhode Island, Massachusetts & Connecticut

Summary of Experience:

Thirty years experience in the design analysis, inspection and auditing of piping, pipe supports, pressure vessels, tanks and other mechanical products. Extensive experience in performing design reviews, failure analysis, field inspections and reviews, rate cases, and ***expert witness testimony***. Experience on Power Plants, Industrial Facilities, Chemical Plants and Manufacturing Facilities.

10 years - Experience in developing litigation rate-case exhibits and detailed supporting testimony for utilities and law firms. Areas involved were: piping, pipe supports, structural failure of products, failure analysis, seismic analysis, fire protection, pressure vessel, tanks, construction, fire protection, heat transfer analysis, environmental qualification of equipment, welding, product design, and patent information.

5 years - Experience in quality assurance and related disciplines. Performed numerous technical NRC & DOE audits to assure compliance with ANSI N45.2.11, ASME Section III licensing requirements. Consultant to the Department Of Energy concerning the Hanford Wastewater treatment facility.

10 years - Experience in design, analysis and field engineering of piping, supports, structures Pressure vessels and mechanical equipment considering thermal, deadweight and earthquake in accordance with ASME, ANSI, AWS, and NRC requirements. As Director of Research, Development and Engineering, was responsible for the development and qualification testing of a new line of hydraulic snubbers designed for extended life.

5 years - Experience performing system design and analysis for naval nuclear submarine piping systems. Duties included on board system evaluation during sea trials. Used finite element analysis techniques to evaluate special design considerations.

MIKE PLUNKETT LITIGATION EXPERIENCE

LAW FIRM	CONTACT	TYPE OF WORK PERFORMED
Kahrs, Nelson, Fanning, Hite & Kellogg 200 West Douglas Avenue Wichita, Kansas 67202-3089	Legal Counsel James Robinson	Retained as expert witness to perform evaluation on underground piping load bearing insulation failure.
Bollinger, Ruberry & Garvey 500 West Madison Street Chicago, Illinois 60661	Legal Counsel Marc A. Quinlivan	Scope included reviewing the integrity of the structural steel on the Marble Hill Project including product failure. Expert opinions included, Project Management, Structural steel integrity, and Code compliance. Also reviewed design of the duct work to precipitator for design Errors & Omissions.
O'Melveny & Myers 400 South Hope Street Los Angeles, CA 90071	Legal Counsel John Crose	Retained as technical experts to support rate case. Testified as expert witness for piping and pipe support issues to the Public Utility Commission.
Snell & Wilmer 3100 Valley Bank Center Phoenix, AZ 850733100	Legal Counsel George Lyons	Retained as technical experts to support overall rate case, pipe support, construction issues, etc. Testified as expert witness.
Kirkland & Ellis 200 East Randolph Drive Chicago, IL 60601	Legal Counsel Jim Cusick	Retained as technical expert for review of the effect of Mark II changes on the design of the reactor during litigation.
Siegel, Kelleher & Kahn 426 Franklin Street Buffalo, NY 14202	Legal Counsel Philip Abramowitz	Retained as technical expert to support gas well accident which injured two people during replacement. Accident involved product failure.
Nuclear Regulatory Commission (NRC) Comanche Peak	Larry Shao	Prepared for Atomic Safety and Licensing Board (ASLB) hearings for granting of operating license to Comanche Peak Nuclear Station. Provided testimony at hearings.
Womble, Carlyle, Sandridge and Rice P.O. Drawer 84 Winston Salem, NC 27102	Legal Counsel Gene A. Dickey	Retained as expert witness on a storage tank failure. Provided expert testimony relating to tank design adequacy
Weston Hurd Fallon Paisley & Howley 2500 Terminal Tower Cleveland, OH 44113-2241	Legal Counsel William H. Baughman, Jr.	Retained as expert witness on a valve failure in a high pressure steam piping system which was struck during excavation resulted in the death of three people.
Foley & Lardner Firstar Center 777 East Wisconsin Avenue Milwaukee, WI 53202-5367	Legal Counsel Jim McKeown	Retained as expert witness to perform evaluation on pressure vessel analysis and attachments including thermal evaluation of revolving equipment.
Morrison, Mahoney & Miller 250 Summer Street Boston, MA 02210	Legal Counsel Liz Waterfield	Retained as expert witness to perform evaluation on the design and construction of building structures.
Murphy & Beane 3 Center Plaza, Suite 500 Boston, MA	Legal Counsel Sean Teehan	Retained as expert witness to perform evaluation on pressure piping failures at Major Power Plant.

ENGINEERING ASSOCIATE SERVICES

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Michael B. Plunkett P.E.

Education: BSME, 1969 University of New Haven
MSME, 1972 University of Rhode Island
P.E. Licenses: Rhode Island, Massachusetts, Connecticut

Summary of Experience:

Thirty years experience in the design analysis, inspection and auditing of piping, pipe supports and other mechanical components. Extensive experience performing design reviews, safety and hazards analyses, field inspections for the Nuclear Regulatory Commission (NRC), Department Of Energy (DOE), rate case reviews and expert witness testimony.

- Experience in quality assurance and related disciplines. Performed numerous technical audits to assure compliance with ANSI N45.2.11, ASME Section III requirements and NRC and public utility license requirements.
- Experience in design, analysis and field engineering of piping systems including high energy steam, vacuum air systems for sludge removal, buried piping and seismic qualification in accordance with ASME, ANSI, AWS, NFPA 13 and NRC requirements. Extensive system experience on waste treatment plants including air and vacuum handling systems.
- Experience in piping and pipe supports (including Class IN), valves, pumps, equipment installation, manufacturing, Quality Assurance audits, ASME surveys, and field engineering. Extensive involvement in Generic Letter 89-10 Motor Operated Valve issues. Wrote the theory and provided the QA documentation for all EAS Weak Link Programs including job specific requirements.
- Certified ANSI/ASME N45.2.6 Level III Inspector for procurement surveillance for mechanical equipment including welded components.
- Experience in design, analysis and field engineering including mechanical equipment, air/vacuum systems, fire protection, and Environmental Qualification of Equipment (EQE) in accordance with ASME, ANSI, AWS, and NRC requirements. Experience using ADLPIPE, AUTOPIPE,STRUD, and numerous FEA Codes. Providing electric utilities with expert witness testimony for prudence and rate case hearings. Duties included providing a clear and concise report written in everyday language to support utility's rate case efforts.
- Performed review and oversight for the DOE Office of River Protection for the Waste Treatment Plant at Hanford, Washington. Responsibilities included review of the Contractor's Preliminary Safety Analysis Report(PSAR), review of design documentation such as reports, design calculations, studies, design drawings, and construction authorization requests particularly in the area of HVAC design and mechanical components & fluid systems design. Prepared various portions of the project SER.

EXPERIENCE:

2000 to Present Engineering Associate Services

SUMMARY OF WORK PERFORMED FOR DOE AT HANFORD

Performed Reviews and Evaluations on the Safety Analysis Reports (PSAR) for the Department Of Energy (DOE), Office Of Safety Regulations (OSR) Vitrification Facility.

Scope of work included performing reviews on the following buildings:

- Low-Activity Waste (LAW)
- High-Level Waste (HLW)
- Balance Of Facility (BOF)

Wrote Sections of the Safety Evaluation Report (SER) pertaining to Mechanical & Structural issues.

Detailed scope of Mechanical & Structural activities included:

- Ventilation Systems (HVAC).
- All Water, Steam and air Systems.
- Seismic Analysis on Mechanical Equipment & Structures.
- Piping, Tanks and Vessels.
- Melter Shell & Handling Cranes & Bogies.
- Offgas from Melter.
- Basemat
- Piping & Pipe Supports.
- Canister Drops & Glass Spills.
- Liquid Spills.
- Thermal evaluation of equipment Important To Safety.
- Fire Protection system
- Vessel Vent System
- Primary cooling water and chilled water system
- Natural Phenomena Hazards
- Spray Leaks

Detailed scope of work included, reviewing and accepting mechanical and structural Safety and Hazard calculations against the requirements of the Waste Treatment Plant Safety Requirements Document Volume II (SRD) and DOE Standard 1029-94. Also wrote dispositions on numerous mechanical and structural technical issues related to facility Safety and Hazards.

1978 to 2002 Engineering Associate Services

Senior Consultant:

Responsibility: For the design, analysis, inspection and auditing of piping, pipe supports, cable tray, pressure vessels, tanks and other mechanical components on nuclear, fossil and chemical plants. Also, extensive experience in ASME Codes Section III, VIII and IX, ANSI B31.1, B31.3, AWS D1.1 and field engineering assignments. Performing detailed ASME piping and structural calculation. Experience using ADLPIPE, AUTOPIPE, STRULD and numerous FEA Codes.

- Project Manager for the San Onofre NRC Generic Letter 89-10 MOV Weak Link analysis project.
- Responsible for implementation the Quality Assurance (QA) Program.
- Performed equipment reviews, vendor audits, calculation and specification reviews to insure compliance to FSAR. Included extensive on-site documentation review of mechanical equipment installation purchase and design.
- Performed detailed piping analysis in accordance with ASME III, ANSI B31.1, B31.3 and other applicable codes.
- Performed detailed pipe support designs and analysis in accordance with ASME, NF, AISC and other local building codes.
- Performed detailed piping transient (water hammer, thermal turbine trip, etc) analysis in accordance with detailed specifications.
- Performed independent structural and pressure vessel evaluations and reviews.
- Evaluation of seismic qualification of equipment.
- Performed structural analysis of motor operated valves (MOV) in accordance with GL-89-10.
- Field inspection of mechanical and structural components.
- Retained as NRC consultant for detailed inspections (see attached list).

1972 to 1978 ITT Grinnell Corporation

Vice President Of Engineering

Major Responsibility: Responsible for formulation, recommendation and direction of product development programs to meet company needs. Responsibility for development of new products in accordance with the market's needs including: Sales, Engineering, Production and Field Engineering. Responsibility for engineering functions of U.S.A. and Europe subsidiary which included performing engineering risk evaluations during the due diligence stages of an ITT acquisition. During my tenure at ITT I was involved in three acquisitions.

General Responsibility:

1. Total technical responsibility for existing product line in both U.S.A. and Europe.
2. Supported the sales and marketing effort by developing technical criteria which both aided and trained the sales force in their endeavor to sell.
3. Responsibility for developing both new and existing technical criteria for nuclear products.
4. Planned and directed approved development programs for improvement and cost reduction of existing products and for new products in accordance with approved product plans.
5. Responsible for establishment of uniform specifications for materials, equipment and product, and for authorizing substitute materials and parts.
6. Defined, developed, organized, supervised and coordinated the plans, problems and projects of the Product Development Department to ensure on- time completion within budgets.
7. Responsible for interface with ITT Grinnell Legal for patent activity to protect new products.
8. Responsible for definition of standard product requirements and specific technical specifications for each shock suppressor product application.
9. Provided to Unit Management guidance on pricing, terms and conditions of sales.
10. Ensured development of standard product designs to meet market requirements and ensured that each product for each application was properly designed to meet customer performance specifications.

1969 to Stone & Webster Engineering Corporation

1971 Boston, Massachusetts

Nuclear Consultant on various Power Plant Projects.

MICHAEL PLUNKETT NRC EXPERIENCE			
OWNER	TYPE OF WORK PERFORMED	PLANT	YEAR COMPLETED
Texis Utilities Electric Co.	Design analysis and installation review of licensing commitments for pipe supports, mechanical components, cable trays, conduit electrical equipment, etc. Performed technical and licensing reviews to insure compliance to NRC Regulation and plant license requirements.	Comanche Peak	1990
Tennessee Valley Authority (TVA)	Performed independent design investigation on mechanical and structural components of plant emphasizing tanks, pressure vessels, piping and pipe support licensing issues. Review included a detail assessment of all operational procedures.	Watts Bar	1994
Several Nuclear Plants	Member of numerous inspection teams to evaluate FSAR compliance, operational readiness, responses to NRC Bulletins and licensing issues, etc.	Various Nuclear Plants	1984 to 1990
Tennessee Valley Authority (TVA)	Performed independent Design Investigation for mechanical components as part of inspection for the restart of Unit 2. Reviewed pressure vessels, various underground tanks to requirements of API standard 620.	Sequoyah	1987
Portland General Electric Co.	Pipe wall thinning review and root cause analysis included a detailed assessment of the normal operating history, abnormal events (i.e., pressure surges, steam/water hammer, etc.), flow velocity and temperature histories, and water/steam chemistry and stress distribution.	Trojan	1987
Generic Issue All Nuclear Plants	Reviewing response to unresolved safety Issue A-46 "Seismic Qualification of Equipment in Operating Plants". Involvement included reviewing the environmental and seismic qualification of safety related mechanical and electrical equipment, and required instrumentation. Equipment reviewed included pumps, motors, valves, tanks, motor control centers, generators, switches, relays, etc.	All Nuclear Plants	1987
Generic Issue PWR Nuclear Plants	Reviewed individual plant responses to IE Bulletin 88-11, "Pressurized Relief Line Thermal Stratification". Numerous plant inspections were performed together with audits of all these PWR owner's groups (Westinghouse, Babcock & Wilcox and Combustion Engineering). Technical evaluation reports were written for each inspection and audit.	All PWR Plants	1989
Philadelphia Electric Co. Entergy Operations, Inc. Omaha Public Power District Virginia Power Co.	Performed independent design investigation on mechanical and structural components of plant emphasizing licensing issues. Reviewed included pumps, valves, piping, supports, and building structure to AISC requirements.	Limerick Grand Gulf Ft. Calhoun North Anna	1984 to 1990
Northeast Utilities Independent Corrective Action Program (ICAVP)	Assess the licensee's ability to identify and resolve licensing-bases deficiencies and provide an additional assessment of the effectiveness of the ICAVP contractor(S&L). EAS focused on safe shutdown mechanical and structural system and components. An in -depth review of all operational procedures was performed.	Millstone #2&3	1997-1999
American Society Of Mechanical Engineers(ASME) & NRC	Member of Organizing Committee for NRC/ASME IST Symposium on Nuclear Power Facility Pumps and Valves	All Nuclear Plants	1989

ENGINEERING EXPERTS

For over 25 years Engineering Associate Services has been supporting law firms on their Litigation.

Extensive trial experience and supported multi- million dollar cases.

Latest computer technology used to recreate and resolve accidents and or misapplication of products.

Expertise in organizing case documents into easy-to-use computer data base for trial use.



Let us shed some light on your case

Engineering Associate Services

***Experience to support your
Project:***

Specializing in:

- O Design & Analysis**
- O Structural Failures**
- O Design Errors**
- O Safety, Hazard Analysis**
- O Construction Accident**
- O Accident Recreation**
- O Miss-Application of Products**
- O Product Failure**
- O Mechanical Systems**
- O Piping & Structural**
- O Tanks, Valves & Pumps**

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Engineering
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About EAS

Engineering Associate Services has been supporting the power industry for nearly 30 years.

Founded in 1974, EAS has established its reputation by providing quality engineering and related technical services in a manner that consistently exceeds client expectations.



Coast-to-coast : EAS has experienced Personnel throughout the country.

Michael B. Plunkett, PE

Mr. Plunkett has been performing expert witness services for over 25 years. He is recognized as one of the few experts in the power plant industry. He founded his mechanical / structural consultant engineering firm in 1974. Mr. Plunkett has ongoing consult activates with most of the major US Utilities, AE firms, including the Nuclear Regulatory Commission (NRC) and the Department of Energy (DOE)

Experience to support your case

Specializing in:

Product Failure

Product Related Injuries

Design & Construction

Industrial Accidents

Mechanical/Structural Evaluation

Patent Infringement

Failure Analysis

Power Plants

- *Piping*
- *Valves*
- *Tanks*

Client List

Kahrs, Nelson, Fanning, Hite & Kellogg

Bollinger, Rubery & Garvey

Murphy & Beane

O'Melveny & Myers

Snell & Wilmer

Kirkland & Ellis

Siegel, Kelleher & Kahn

Womble, Carlyle, Sandridge & Rice

Weston, Hurd, Fallon, Paisley & Howley

Pepe & Hazard

Foley & Lardner

Morrison, Mahoney & Miller

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