
EDUCATION

2000 **Bachelors of Science, Mechanical Engineering**
University of Wyoming, Laramie, Wyoming

EXPERIENCE

December 2025
to Present **Engineering Design & Testing Corp.**
Lenexa, Kansas

Consulting Engineer

Analysis of mechanical equipment design, equipment specification and material selection; investigation and analysis of mechanical fractures/failures of materials and components; assessment of fire damage related to mechanical equipment; assessment of fire protection systems; assessment of vehicle damage; mechanical evaluation of vehicle systems; preparation of repair/replace cost estimates; fire origin and cause investigations.

October 2020
to December 2025 **City of Olathe – Olathe Fire Department, Kansas**
Olathe, Kansas

Fire Protection Engineer

Responsibilities encompassed the following: review of construction plans to ensure compliance with the International Fire Code and the International Building Code prior to the issuance of a building permit; review of deferred construction plans, including fire sprinkler installation plans, fire alarm installation plans, and the associated calculations mandated by NFPA standards; rendering opinions on Code Modification Requests related to proposed construction projects; Hazardous materials code enforcement regarding the storage and use of hazardous materials in commercial building occupancies.

Additional responsibilities included: representing the Olathe Fire Department's interests and Fire Code requirements on the City of Olathe Development Review Committee (DRC); providing initial technical review and City requirements to Real Estate Developers, Construction Companies, Civil Engineering Companies, and Architects with regards to Fire Code and Olathe Municipal Code; reviewing significant changes between 2018 and 2024 in the International Fire Code with the objective of providing recommendations for its adoption in Olathe, Kansas.

May 2012
to August 2020 **Black & Veatch Corporation**
Overland Park, Kansas

Fire Protection Engineer

Responsible Fire Protection Engineer for Fire Protection Code Requirements and Fire System Design for Gas Insulated Switchgear (GIS) Buildings (including transformers, controls room and battery room protection and detection systems), combined cycle power plants, fire pump selection specifications (new and existing replacement). Developed technical specifications for the procurement and installation of the fire protection and detection systems by a subcontractor. Fire protection equipment proposal reviews and bid leveling. Review and administration

of the work product delivered by the subcontractor. Owner's Engineer review and reporting code requirements related to a facility. Fire Protection Engineer on the following projects:

- Potomac Electric Power Company (PEPCO), Mt. Vernon Station No. 230 Upgrades - New GIS Hall and 230kV GIS, Washington, District of Columbia (Gas Insulated Switchgear (GIS) Building)
- Potomac Electric Power Company (PEPCO), Harvard Substation No. 13 Upgrades - New GIS Hall and 230kV GIS, Washington, District of Columbia (Gas Insulated Switchgear (GIS) Building)
- Potomac Electric Power Company (PEPCO), White Flint Substation No. 229, New 69/13.8kV Substation, Rockville, Maryland (Gas Insulated Switchgear (GIS) Building)
- Public Service Electric & Gas (PSE&G), Vauxhall 69/13kV GIS Substation, Union, New Jersey (Gas Insulated Switchgear (GIS) Building)
- Public Service Electric & Gas (PSE&G), Maywood 230/69kV Switching Station, Maywood, New Jersey (Gas Insulated Switchgear (GIS) Building)
- Public Service Electric & Gas (PSE&G), Hillsdale Area 69kV Network, Hillsdale, New Jersey (Gas Insulated Switchgear (GIS) Building)
- Public Service Electric & Gas (PSE&G), Toney's Brook 69KV Substation, Bloomfield, New Jersey (Gas Insulated Switchgear (GIS) Building)
- Lansing Boards of Power and Light, Delta Energy Park - Delta Township, Michigan (250 MW two-on-one and one-on-zero Combined Cycle)
- CPS Energy, J.K. Spruce 2 - Calaveras, Texas (Fire Booster Pump Replacement)
- Northern California Power Agency, Lodi CT-1 - Lodi, California (Existing Simple Cycle Power Generation Facility)
- Confidential Client, Gordon Butte Energy Park - Gordon Butte, Montana (Pumped Storage Hydroelectric Generation Facility)

Consulting Mechanical Engineer

Imergy Power Systems, Fremont, California; On-site consultant to Imergy Power Systems on loan from Black & Veatch for the ESP 350 Product Development. Provided design support and expertise related to the development of Imergy ESP 350 electrolyte power system pump and piping systems. Also reviewed and provided design recommendations with regards to overpressure protection of the system piping and components.

Project Discipline Engineer - Mechanical

New Fortress Energy, Micro Liquefied Natural Gas (LNG) Ship Unloading Facility, San Juan, Puerto Rico. Responsible for design review and design activities related to the vacuum jacketed piping design and equipment specifications. Responsible for coordinating piping design with process engineering requirements.

Project Discipline Engineer – Mechanical

Ameren Missouri effluent discharge projects. Projects converted wastewater streams a treatment system to eliminate bottom ash ponds at the power plants. Responsible for the system design collecting the plant wastewater flows and transferring to the water to the treatment system basins. Directed the mechanical engineering team in preparation piping and instrument diagrams (P&ID), and general arrangement drawings (GA) based on the preliminary design and equipment submittals. Directed the mechanical engineering team in design activities for the new wastewater treatment system, including piping design, pump design and specifications. Development detailed design calculations as required for design, equipment sizing and material selection and preparation of construction drawings and construction specifications. Developed detailed cost estimates to support Ameren Missouri budgeting activities. Direct the engineering team in the installation and construction specification for the Ameren Missouri and issue for quotation. Review Construction Contractor and Vendor bid submittals. Project Discipline Engineer - Mechanical on the Ameren Missouri following projects:

- Ameren Missouri, Labadie Energy Center Units 1, 2, 3 and 4 - Labadie, Missouri.
- Ameren Missouri Rush Island Energy Center Units 1 and 2 - Fenton, Missouri
- Ameren Missouri Sioux Energy Center Units 1 and 2. - West Alton, Missouri

Project Discipline Engineer – Mechanical

Kansas City Power & Light (now Evergy, Inc.), Sibley Station Coal Yard Sample House Replacement, Sibley, Missouri. Determined project scope of work and budgetary estimates for Kansas City Power & Light projects. Supported project manager in report writing and budgetary estimate developments. Including a complete design for the replacement of coal yard sample house systems, including spray water systems for dust suppression and belt deicing. Developed, reviewed and consolidated specifications for pumps skids, storage tanks and aboveground construction. Supporting Owner activities related to the management of the above ground construction contractor. Supervised engineering activities of mechanical engineers and mechanical designers on the project.

Lead Mechanical Engineer

Kansas City Power & Light (now Evergy, Inc.), LaCygne Unit 1 Startup Boiler Feed Pump Addition, LaCygne, Kansas. Project for the addition of a startup boiler feed pump to a supercritical pulverized coal unit boiler. Project included determining the Boiler Feed Pump sizing, capable of providing sufficient flow and pressure for starting the supercritical unit without the use of the auxiliary steam. Reported with recommendations regarding the installation of the new boiler feed pump. Developed specifications for the procurement of the pump and the ancillary equipment and piping. Supporting Owner activities related to the management of the pump vendor contract. Supervised engineering activities of mechanical engineers on the project design engineering team.

Lead Mechanical Engineer

Kansas Board of Public Utilities; Nearman Creek 1 Air Quality Control Project; Kansas, United States; Completed detailed engineering and design, procurement, and construction management for selective catalytic reduction, circulating dry scrubbers with pulse jet fabric filters, new induced draft fans, FGD byproduct

handling, and reagent preparation equipment for the 256 MW pulverized PRB coal unit of Nearman Creek Unit 1. This project was executed as EpCM. Developed process flow diagrams and system definitions. Developed Dry Flue Gas Desulfurization Specification, Pulse Jet Fabric Filter Specification, Powdered Activated Carbon Specification, Fly Ash and Byproduct Handling Specification. Directed detailed design of Balance of Plant equipment and piping.

Mechanical Engineer

Golar Gimi Front End Engineering Design (FEED) - Floating Liquefied Natural Gas (FLNG) Processing Ship. Steam Process Engineer responsible for the steam balance for natural gas process steam users and steam turbines for various operating scenarios. Specifying four heat recovery steam generators and two steam turbines to supply heat and power to four LNG processing trains aboard a LNG carrier ship.

Mechanical Engineer

Liverpool Wastewater Biogas Project - Medina, Ohio, United States - Engineering design and construction management of anaerobic digesters, thermal hydrolysis units and centrifuges for recovery of biogas from and existing wastewater treatment facility. Responsible for steam piping design, pipe stress and overall plant construction installation specifications.

Mechanical Engineer

Bridgeport Harbor 5 Combined Cycle Project; Bridgeport, Connecticut. Responsible Engineer for system design of the Steam Turbine Area Vents and Drains, Steam Turbine Seals and Drains, Combustion Turbine Off Base Auxiliaries, Combustion Turbine Inlet Air Heating, Service Water, Potable Water, Compressed Air. Contract Responsible Engineer for equipment specification of the Field Erected Tanks, Severe Service Control Valves, General Service Control Valves and Pressure Regulators, Safety and Relief Valves, Compressed Air Equipment and Strainers. Responsible for equipment proposal reviews and bid leveling for Owner Review.

Mechanical Engineer

PowerSouth; Lowman JBR Internals Replacement Project; Leroy, Alabama. Slurry pump and piping replacement for a Jet Bubbling Reactor (air quality control equipment), developed specifications for slurry pumps and associated equipment. Developed construction site services specification for installation of the improvement project equipment.

September 2009
to May 2012

**Engineering Design & Testing Corp.
Lenexa, Kansas**

Consulting Engineer

Responsibilities include the following: analysis of mechanical equipment design, equipment specification and material selection; investigation and analysis of mechanical fractures/failures of materials and components based upon ASM Principles of Failure Analysis. Failure analysis included general procedures, techniques and precautions in failure analysis, identifying design-related failures and analyzing the factors that caused a failure. Determining environmental sources responsible for failures and ways to prevent them. Determining how stress systems related to fracture of ductile and brittle materials. Reading fatigue fractures by identifying typical fatigue characteristics by examining fractures.

Other projects include assessment of fire damage related to mechanical equipment; assessment of fire protection systems; assessment of vehicle damage; mechanical evaluation of vehicle systems; preparation of repair/replace cost estimates;

schedule analysis; origin and cause investigations related to fires, pumps, diesel generators, piping system, boilers and chillers.

January 2001
to July 2009

**Kiewit Power Engineers Co. (formerly Bibb and Associates, Inc.)
Lenexa, Kansas**

Consulting Engineer

Lead Process Engineer

Lead Process Engineer for Dave Johnston Units 3 and 4 AQC System Retrofit – Glenrock, Wyoming (762 MW from four Coal Fired Boilers). Responsibilities included sizing flue gas ductwork, slurry pipe sizing, induced draft fan specification and contract administration for an air quality control retrofit to two pulverized coal fired boilers.

Lead Process Engineer

Abbott Laboratories Boiler MACT Retrofit – Waukegan, Illinois. Responsibilities included drafting specifications for baghouse and ash handling equipment. Administered baghouse contract with regards to engineering deliverables. Supervised the production of final construction record drawings for delivery to the Owner.

Mechanical Engineer

Responsibilities included: determining the operating conditions for the purpose of sizing piping and associated equipment for power plant systems such as boiler feed water, condensate, cooling water, closed cooling water, compressed air system, service water, fire protection, etc. Mechanical Engineer on the following projects:

- Chouteau Power Plant Unit 2 – Pryor, Oklahoma (522 MW two-on-one Combined Cycle)
- St. Clair Energy Center – Sarnia, Ontario, Canada (570 MW two-on-one Combined Cycle)
- Hines Power Block 4 – Bartow, Florida (500 MW two-on-one Combined Cycle)
- Hines Power Block 3 – Bartow, Florida (555 MW two-on-one Combined Cycle)
- Santa Rosa Energy Center – Pace, Florida (240 MW one-on-one Combined Cycle)
- Afton Power Project – Las Cruces, New Mexico (145 MW one-on-zero Simple Cycle)

Warranty Engineer

Responsibilities included: supervision of the final construction drawings and record documents from all engineering disciplines for delivery to the Owner. Regular communication with the Owner's representatives to provide status updates. Addressed warranty issues that arose during the one-year warranty period. Troubleshooting and developing solutions to warranty issues. Warranty Engineer for all engineering related issues for the following power plant projects:

- Fluvanna Generating Station – Charlottesville, Virginia (890 MW three-on-one Combined Cycle)
- Haynes Generating Station – Los Angeles, California (571 MW two-on-one Combined Cycle)
- Hines Power Block 4 – Bartow, Florida (500 MW two-on-one Combined Cycle)

Resident Engineer

Responsibilities included: on-site troubleshooting and developing solutions to design conflicts during the construction and commissioning of the power plants. Support construction activities related to mechanical equipment, piping, pipe supports, operational conflicts and change orders. On-site Resident Engineer for the following power plant projects:

- Fluvanna Generating Station – Charlottesville, Virginia (890 MW three-on-one Combined Cycle)
- High Desert Power Project – Victorville, California (750 MW three-on-one Combined Cycle)
- Afton Power Project – Las Cruces, New Mexico (145 MW one-on-zero Simple Cycle)

Owner's Engineer Schedule Analyst

Crystal River Units 4 and 5 AQC System Retrofit – Crystal River, Florida (Two 717 MW Coal Fired Boilers). Responsibilities included: review of the Engineering schedule for the project Owner and reporting progress each week. Monitored schedule slips and critical path activities related to project completion. Addressed critical path activities and monitored recovery plan.

REGISTRATIONS and CERTIFICATIONS

Registered Professional Engineer in Arkansas (#14136)

Registered Professional Engineer in Colorado (#44708)

Registered Professional Engineer in Illinois (#62.063334)

Registered Professional Engineer in Iowa (#19655)

Registered Professional Engineer in Kansas (#18339)

Registered Professional Engineer in Missouri (#2009035162)

Registered Professional Engineer in Nebraska (#E-13093)

Registered Professional Engineer in Oklahoma (#24811)

Registered Professional Engineer in Wyoming (#11761)

National Council of Examiners for Engineers and Surveying Record (#16-891-25)

Inactive Registered Professional Engineer in Indiana (#PE11012242)

Inactive Registered Professional Engineer in Minnesota (#48645)

Inactive Registered Professional Engineer in Montana (#20415)

Inactive Registered Professional Engineer in Puerto Rico (#27655)
Inactive Registered Professional Engineer in South Dakota (#11205)
Inactive Registered Professional Engineer in Wisconsin (#41532-006)

PROFESSIONAL ORGANIZATIONS

Missouri-Kansas Society of Fire Protection Engineers (MOKAN SFPE)
Fire Marshal's Association of Kansas (FMAK)
International Code Council (ICC)
National Fire Sprinkler Association (NFSA)
America Fire Sprinkler Association (AFSA)
Automatic Fire Alarm Association (AFAA)
American Society of Mechanical Engineers (ASME)
ASM International (ASM)
National Fire Protection Association (NFPA)
National Association of Fire Investigators (NAFI)

PUBLICATIONS

"Getting Pump Up - The Big and the Small in the Movement of Fluids", The Stress Point, Volume 24, Number 3, Engineering Design and Testing Corporation, Columbia, South Carolina, September 2011.

"Seeing Sparks with Corrugated Stainless-Steel Tubing", Conference Proceedings, Materials Science & Technology 2010 Conference, Houston, Texas, October 2010.

PRESENTATIONS

"Seeing Sparks with Corrugated Stainless-Steel Tubing", presented at the Conference Proceedings, Materials Science & Technology 2010 Conference, October 2010, Houston, Texas.

CONTINUING EDUCATION

2024 *Hazardous Materials Code Enforcement*, National Fire Academy, National Emergency Training Center; Emmitsburg, Maryland.

2023 *Residential Fire Sprinklers*, National Fire Academy, Lenexa Fire Department; Lenexa, Kansas

2021 *Fire Code Plan Review*, National Fire Academy, Lenexa Fire Department; Lenexa, Kansas

2016 *Introduction to Project Management Professional Certification*, Black & Veatch Corporation; Overland Park, Kansas

- 2009 *Principles of Failure Analysis*, ASM International; Columbia, South Carolina
- 2005 *Flow-Induced Vibration with Applications to Failure Analysis*, American Society of Mechanical Engineers; Houston, Texas
- 2005 *Power Plant Engineering*, University of Missouri Kansas City; Overland Park, Kansas
- 2005 *Environmental Rules and Regulations*, University of Missouri Kansas City; Overland Park, Kansas