MECHANICAL DESIGN ENGINEER, POWER GENERATION EQUIPMENT

Mitsubishi Power Aero LLC, Glastonbury, CT

About Mitsubishi Power Aero LLC

Mitsubishi Power Aero LLC is headquartered in Glastonbury, Connecticut, USA, and is a group company of Mitsubishi Power Americas, Inc. Mitsubishi Power Aero is the OEM and the exclusive provider of aero-derivative gas turbine packages based on the advanced technology of Pratt & Whitney® proven aircraft engines. For over 60 years, Mitsubishi Power Aero products and services have been the innovative solutions that our global customers require to deliver reliable, affordable electricity to their consumers.

Our customers rely on us to offer a true partnership for the entire life cycle of their gas turbines and to provide the best advice, monitoring, upgrades, retrofits, and repairs available to keep their operations running smoothly. We offer a rare level of customization, hands-on service, and responsiveness. Speed, flexibility, and durability are hallmarks of our products and customer support, as well as our culture.

Mitsubishi Power Aero has installed more than 2,000 gas turbines in over 50 countries. Our portfolio of aero-derivative gas turbine engines offers competitive, efficient, and flexible products that generate 30 to 140 MW of power in peaking, baseload, and on-demand power applications. As the demand for power expands, and more intermittent sources of power are introduced to power grids, Mitsubishi Power Aero will continue to play a vital role in providing energy security to customers worldwide.

We integrate resources and create synergies with other Mitsubishi Power companies, allowing us to deliver optimized technical and commercial solutions. Customers respect our rich heritage as an innovator and value our financial stability as part of Mitsubishi Heavy Industries Group, a global leader in energy. Mitsubishi Power Aero cultivates the full potential of employees to advance engagement, personal growth, and organizational goals. Connect with us at aero.power.mhi.com or LinkedIn.

Job Summary

The **Mechanical Design Engineer, Power Generation Equipment** is responsible for the mechanical design, analysis, and technical definition of supporting systems, site infrastructure, and auxiliary equipment required to transform a stand-alone aero-derivative gas turbine package into a functioning power plant. This role supports the integration of engineered equipment with the core generating unit and site infrastructure, ensuring proper mechanical, electrical, and structural interface coordination as facilitated through the EPC (Engineering, Procurement, and Construction) project engineer.

Key Responsibilities

- Develop mechanical designs and technical documentation for mechanical equipment and interfaces associated with aero-derivative gas turbine power plants, including gas compressors; fire protection systems; water, fuel, and waste storage and treatment systems; air filtration and ventilation systems; and selective catalytic reduction equipment.
- Perform mechanical engineering analyses including equipment sizing, structural and stress calculations, heating and cooling calculations, and design optimization studies to support development and finalization of conceptual designs.
- Support the development of process engineering documentation including process flow diagrams, heat and energy balances, and piping and instrumentation diagrams consistent with project requirements.
- Convert conceptual designs and process requirements into detailed engineering drawing packages, technical specifications, and supporting design calculations for use by the EPC firm responsible for field implementation.
- Assist EPC Project Engineer with vendor technical evaluations and support the review of vendor documentation to verify consistency with approved designs and project requirements.

- Participate in system design reviews to ensure designs comply with applicable codes, environmental regulations, industry standards (ASME, NFPA, ANSI), and customer contract requirements.
- Perform engineering assessments related to equipment health, safety, reliability, and maintainability of mechanical systems, and identify opportunities for design improvement.
- Provide engineering support during plant commissioning, start-up activities, and system validation as required.
- Develop design requirements and specifications for essential plant utility systems including compressed air, fire protection, and fluid storage and forwarding systems. Support the engineering design of plant mechanical systems to integrate with new or existing plant structures, including facility buildings, foundations, access roads, and drainage systems in coordination with civil and structural engineering.
- Support the engineering design of plant mechanical systems to integrate with below-grade infrastructure including electrical duct banks, fuel and water piping systems, and waste treatment systems.
- Coordinate with cross-functional engineering teams (electrical, controls, civil) to ensure proper interface with the aero-derivative gas turbine package and local utility grid.

Qualifications and Experience

- Bachelor’s degree in mechanical engineering (master’s degree preferred; PE desirable)
- 15+ years of experience in gas turbine power plants, industrial energy facilities, or utility-scale mechanical balance of plant systems
- Experience with power plant auxiliary systems including fuel systems, cooling systems, water treatment, emissions control, and rotating equipment support systems
- Working knowledge of plant-level control systems (DCS/PLC) and interaction with mechanical equipment
- Familiarity with ASME piping codes, pressure vessel standards, and environmental compliance requirements
- Experience supporting design efforts with external engineering and EPC firms involved in power plant infrastructure development
- Strong technical problem-solving skills and the ability to work effectively within a multidisciplinary engineering team
- Proficiency with engineering and business software tools required for EPC project execution, including a strong working knowledge of AutoCAD, Plant 3D, and Navisworks, Microsoft 365 applications, and a working familiarity with project scheduling tools such as Microsoft Project and/or Oracle Primavera P6
- Strong written and verbal communication skills

Additional Requirements

- Daily, in-person attendance at the company’s Glastonbury, CT office
- Approximately 10% domestic and international travel