

## DESIGN ENGINEER

Mechanical Design Engineer will design and document complex mechanical components, mechanisms and systems for rotating machinery and test equipment. He/She will layout assemblies and parts into assembly, part, and installation drawings. Support the technical interface with external suppliers on mechanical issues. Support the prototype and development group and provide clear documentation of designs. Support manufacturing in the design, development and documentation of mechanical fixtures and production equipment. Must have 2-5 years experience in mechanical detail drafting and be proficient in SolidWorks. Learn and use current company drafting standards for all related tasks. Self-check and correct all work prior to submitting to Designers. Provide drafting style consistency between similar parts for related and non-related projects. Manage CAD files and original plots per company standards. Translate drawings between various formats. Must be familiar with standard machining and assembly processes. Have a pleasant attitude with flexibility and willingness to learn. Candidate must be able to work independently with managers and Engineers on various projects producing detail, and assembly drawings for fabrication and component assembly.

- Demonstrated ability to design, develop, and document mechanical products and test equipment in precision mechanical systems.
- Demonstrated ability to create concepts for new designs.
- Demonstrated ability to layout mechanical systems and create clear and accurate drawings.
- Demonstrated ability to apply GD&T standards to mechanical drawings
- Demonstrated clear written documentation skills.
- Demonstrated ability to design and document complex parts.
- Demonstrated ability to use a 3D design software package (SolidWorks).
- Demonstrated ability to work with an interdisciplinary product development team.
- Develop detailed design drawings and specifications for mechanical equipment, dies, tools, and controls, using computer-assisted drafting (CAD) equipment.
- Coordinate with and consult other engineers and technicians to design, lay-out, or detail components and systems and to resolve design or other problems.
- Review and analyze specifications, sketches, drawings, ideas, and related data to assess factors affecting component designs and the procedures and instructions to be followed.
- Compute mathematical formulas to develop and design detailed specifications for components or machinery using computer-assisted equipment.
- Modify and revise legacy designs to correct operating deficiencies or to reduce production problems.
- Confer with customer representatives to review schematics and answer questions pertaining to installation of systems.
- Read and interpret blueprints, technical drawings, schematics, and computer-generated reports.
- Confer with engineers and other personnel to implement operating procedures, resolve system malfunctions, and provide technical information.
- Research and analyze customer design proposals, specifications, manuals, and other data to evaluate the feasibility, cost, and maintenance requirements of designs or applications.
- Specify system components or direct modification of products to ensure conformance with engineering design and performance specifications.
- Research, design, evaluate, install, operate, and maintain mechanical products, equipment, systems and processes to meet requirements, applying knowledge of engineering principles.
- Investigate equipment failures and difficulties to diagnose faulty operation, and to make recommendations to maintenance crew.

- Oversee installation, operation, maintenance, and repair to ensure that machines and equipment are installed and functioning according to specifications.
- Conduct research that tests and analyzes the feasibility, design, operation and performance of equipment, components and systems.

#### Skill Areas

- Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment — Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
- Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services. Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.