



Chief Mechanical Design Engineer

JOB # 425

We're a close-knit family that enjoys working with each other in an entrepreneurial environment. As a key member of our special team, you won't feel as if you're nothing more than a minor cog in the wheel of a large bureaucratic engineering department. Imagine being able to work on some of the most advanced improvements with optical tracking devices on a worldwide basis over the upcoming years.

Photo-Sonics, Inc. is an international leader in state-of-the art optical tracking systems in Chatsworth and has an immediate opening for a Chief Mechanical Design Engineer. We're seeking a multi-disciplinary candidate who is self-motivated and is able to set and meet goals.

The Chief Mechanical Design Engineer will lead the design and planning of electro-mechanical and optical systems. The Chief Mechanical Design Engineer will provide engineering focus, technical direction and leadership to a cross functional engineering team for all mechanical design engineering development and test activities. Individual will create new designs and design improvements of the Photo-Sonics product line and coordinate design reviews to ensure products can be manufactured and profitable while ensuring that the product meets or exceeds our customer's contract and quality requirements. The Chief Mechanical Design Engineer will lead product design through all phases of projects, from initial concept design through systems analysis/engineering, planning and execution, reviewing financial cost and ensuring company stays within budget and timelines.

Job Responsibilities include but not limited to:

- Develop and maintain the continuous improvement of department's technical standards, design guidelines, practices and procedures and responsible for communication and explanation of same
- Ensure the work products developed by the department are in compliance with engineering practices, procedures and standards and that department personnel are trained on a fully aware of procedures
- Plan, organize and control projects to ensure on time delivery, budget compliance, and quality of output. Evaluates all cost associated with each project including materials, costs of labor, and time expended
- Demonstrate ability and experience leading product development engineering teams and mentoring other engineers
- Design of both large and small high precision mechanical and opto-electro-mechanical products
- Design and manufacture of both large and small welded structures and castings
- Research and analyze customer specifications and other data to evaluate the feasibility, cost, technical budget. verification matrixes and requirements of the designs

- Implement system development from design through prototype completion by designing and modifying equipment for fabricating, building, assembling, and installing components; managing and documenting system configurations; developing specifications, supporting system integration
- Utilize modern best-practice design methods including finite element analysis, resonance analysis and stress analysis
- Research and test manufacturing and assembly methods
- Research and test new and innovative materials and processes
- Research outsourced products and services and make decisions as to whether to use in-house manufacturing or outsourcing
- Integrate and adapt Commercial-Off-the Shelf (COTS) products into the system Configuration to meet government system requirements or to achieve production cost goals
- Responsible for developing the structural design of the product, using expertise with SolidWorks
- Assist drafters in developing the manufacturing drawings, bills of materials and release documentation
- Responsible for creating test procedures to measure and qualify the accuracy/performance of the mechanical design
- Assure system and product quality by designing verification methods; testing the finished product and system capabilities; confirming fabrication, assembly, and installation processes
- Interact with customer and the development team as well as with other contractors in a multi-contractor development environment
- Work within the framework of large Government contracts
- Write technical reports; prepare product reports by collecting, analyzing, and summarizing information and trends
- Maintain a reference library
- Other duties and projects as assigned by management.

Qualifications and Experience Requirements:

- Position requires Bachelor's degree in Mechanical Engineering or Computer Science; preferably with 10 years of mechanical design experience in a manufacturing environment
- Ability to execute product design activities through all phases of projects, from initial concept design through systems analysis/engineering, planning and execution, reviewing financial cost and ensuring company stays within budget and timelines.
- Ability to design both large and small high precision mechanical systems as part of an overall opto-electro-mechanical system.
- Ability to package electronics boards, harnessing, and COTS electronics components for applications in harsh environments and tight packaging constraints.
- Demonstrated ability to perform force calculations and structural analysis for structures and mechanisms
- Experience with imaging camera and lens optical system mechanical and system integration desired
- Familiarity with thermal analysis and heat transfer principals for electronics packaging
- Familiarity with mechanical design aspects of electronics tray packaging for 19 inch electronics rack integration, desired.
- Demonstrated ability to utilize Solidworks for design and drafting and Solidworks Simulation tools for system analysis.
- Demonstrated ability to develop and review component drawings utilizing GD&T, per ASME Y14.5, and assembly drawings and associated engineering drawings.
- Demonstrated ability to perform tolerance stack calculations.
- Familiarity of engineering change control processes (ECN's), Solidworks PDM Professional experience desired.
- Experience with AutoCAD or Draftsight for 2D design and drafting desired
- Possess strong written and verbal business communication, excellent problem solving and organizational skills.
- Demonstrated ability and experience working with product development engineering teams.
- Working knowledge of Military standards and compliance rules and regulations mandated under the following quality and governmental standards: AS9100 & ITAR.

Physical requirements, ability to lift, stand, walk for long periods of time. Position may require some climbing.

Affirmative Action/EOE