

## Mechanical Designer at Oregon Physics

### Job Description

Oregon Physics develops and markets advanced ion and electron beam products for scientific and industrial applications. We are an innovative and fast growing company with exciting opportunities for career development. Oregon Physics currently has 15 employees and expects to grow to 20 employees in the next two years. Our employees get to work on state of the art products that are transforming industries. We work with a number of advanced technologies including ultrahigh vacuum systems, charged particle optical systems, inductively coupled plasma systems, RF systems and precise motion systems. We are looking for talented and experienced individuals to design new products and develop advanced manufacturing processes for charged particles sources that are used in cutting edge technology such as advanced electron beam lithography systems and ion beam analysis systems.

Oregon Physics is looking for a full-time Mechanical Designer whose responsibilities will be to:

- Develop and mechanically design new electron and ion source products using technical input from expert scientists and engineers. New products typically utilize a variety of specialized technology including advanced electron emitters, precision mechanics, ultrahigh vacuum, charged particle focusing systems, high voltage design, compact plasma systems, or radio frequency electronics.
- Develop 3D models and 2D part drawings in the Solidworks software environment.
- Develop tooling and processes for inspection and precise assembly of charged particle components with micrometer level accuracy.
- Develop expertise with a variety of advanced mechanical and metrology technology including coordinate measuring machine, cnc micro-mill, rotary alignment system, laser confocal microscope, optical dimension measuring system, scanning electron microscope.
- Develop processes and software for measurement and micron level alignment using Mitutoyo CMMs and custom made fixtures.
- Improve capabilities and processes on automated instrumentation for manufacturing and characterizing charged particle sources.
- Assist with thermal, optical, and electrical modeling using multi-physics software from Integrated Engineering and COMSOL.
- Maintain product documentation including BOMS, drawings, solid models, and engineering processes for multiple product lines.
- Coordinate company wide processes with other product designers, mechanical engineering technologists, and product engineers across multiple product lines.

### Position Requirements

- Undergraduate technical degree in Physics , Mechanical Engineering, or Industrial Engineering
- 5 Years or more experience with one of the major programs for 3D computer aided design such as Solidworks or PTC Creo.
- Ability to quickly learn new technologies and produce high quality designs incorporating a variety of advanced technology.
- Proven experience completing new product designs.
- High level of attention to detail on work processes.
- Excellent technical writing and verbal communication skills.
- Able to work in a clean room environment.
- Able to lift and move heavy (25lb) objects.

### Preferred Experience

- Graduate technical degree in Physics , Mechanical Engineering, or Industrial Engineering
- Experience developing automated processes with precision measurement and alignment systems such as CMM tools, optical inspections systems, CNC micro-milling stations. Experience programming CMM tools is desired.
- Oregon Physics is willing to provide specialized training to recent graduates with exceptional academic background.
- Five years experience with the design and assembly of charged particle systems and familiarity with associated technology and processes including ultra-high vacuum, high-voltage, thermal, cleanroom, and electrical test.

- Ten years experience using Solidworks for technical product design.
- Experience supporting engineering systems for mechanical design, measurement, and manufacturing including PDM systems, measurement databases, and CAD interfaces to mechanical machinery.

#### Benefits

- Medical/Dental/Vision Insurance Plan with family benefits.
- Paid Time Off: 3.5 weeks minimum.
- 401(k) retirement plan with 4% employer match and profit sharing.
- Please contact [jobs@oregon-physics.com](mailto:jobs@oregon-physics.com) with questions or resumes.