Senior Mechanical Engineer

JOB DESCRIPTION

As a senior mechanical engineer, you will be responsible for design and implementation of mechanical components in Multibeam’s electron-beam lithography system. This role requires experience in engineering specification, analysis, design, simulation, procurement, integration, and test of precision mechanical parts and assemblies. The ideal candidate will have at least 5 years of experience in precision design and analysis, as well as proficiency in Pro-E/PTC Creo.

FUNCTIONS and RESPONSIBILITIES

- Teamwork role on projects holding to a strict and highly competitive schedule
- Design, develop, and implement high-precision mechanical parts and assemblies operating in high vacuum (HV) and ultra-high vacuum (UHV) environments for capital/semiconductor equipment
- Define engineering objectives, conduct design reviews, and track schedules
- Use Pro-E/PTC Creo to create detailed engineering drawings, assemblies, and 3D models
- Create bill of materials
- Design and implement tooling, fixtures, and/or procedures for inspection, test, assembly, and alignment of parts
- Test, and characterize mechanical components
- Develop calibration procedures
- Use advanced problem solving/root cause analysis
- Create and improve engineering documentation
- Provide reports and share technical information with team
- Work hands-on in the cleanroom and lab

SKILLS and EXPERIENCES

- Excellence in Pro-E/PTC Creo is a must
- Understand GD&T and Tolerance stack up analysis
- Strong analytical problem solving skills involving first order calculations as well as FEA methods
- Experience in heat transfer analysis
- Experience in designs involving ceramic and metallic materials
- Experience in design of semiconductor equipment or similar capital equipment
- Skilled at hands-on testing and data analysis
- Able to work in a fast paced environment
- Exceptional root cause analysis skills
- Ability to influence others using supportive data
- Ability and willingness to work hands-on in cleanroom and lab

EDUCATION and TRAINING

- M.S. in Mechanical Engineering or related field (Ph.D. preferred but not necessary)
- Design for manufacturing, manufacturing methods and production processes
- Structural mechanics; solid mechanics; finite element analysis (FEA or FEM); CFD

ABOUT MULTIBEAM

Multibeam is the leader in multi-column e-beam technology and is building a platform that enables new applications in semiconductor IC production, including Direct Electron Writing (DEW) and Complementary E-Beam Lithography (CEBL). Multibeam is led by Dr. David K. Lam, founder and former CEO of Lam Research Corporation (Nasdaq: LRCX).