



Edwards Vacuum Inc.

www.edwardsvacuum.com

JobTitle: Sr. Mechanical Engineer

Location: Chelmsford, MA

Manager's Job Title: Core Technology Manager

<https://career5.successfactors.eu/sfcareer/jobreqcareer?jobId=41500&company=atlascoP>

Description of the Job:

The Edwards CTIP Core Technology team is looking for a highly qualified Mechanical Engineer with creativity, technical expertise and a passion for hands-on development and experimentation. The candidate will be responsible for the design, development and introduction of the next generation cryopumps, cryocoolers, cryogenic and vacuum products.

While the individual will be expected to be self-directed and highly motivated, s/he will interface with all levels and functions in the organization, and will develop strong working relationships with both cross-functional colleagues.

The individual is expected to travel both nationally and internationally in support of projects and collaborations according to the current travel safety guidelines.

Main Responsibilities:

- New technology development in the applications of cryogenic vacuum pumps and helium compressor systems
- Design/development, modification, and evaluation of primarily mechanical systems, equipment and packages
- Design and execution of hands-on experiments in a laboratory setting utilizing state-of-the-art technologies and analytical tools
- Contribute to total systems engineering design, including other eng. disciplines
- Conduct feasibility studies and test new and modified designs
- Be involved in all phases of product development from initial concept to manufacturing
- Direct supporting personnel in the preparation of detailed design, design testing and prototype fabrication
- Maintain current on technical advances in the discipline and related fields
- Mentor and train junior engineers and technicians

Requirements:

- Minimum MS in one of: Mechanical / Systems / Chemical Engineering or Physics; PhD highly desirable
- 5+ years design experience in thermo-mechanical systems or components, ideally involving precisely toleranced parts and properties
- 5+ years of advanced structural and/or fluids simulation using ANSYS or equivalent FEA commercial packages
- Working familiarity with ProE / Solidworks Modeling for subassembly and system design
- Experience with developing specifications and identifying critical parameters for core components such as seals, heat exchangers, motors, valves, compressors
- Experience in material selection to achieve specialized functions such as low friction, sealing, and extreme temperatures
- Hands-on experience troubleshooting and diagnosing mechanical assembly performance issues and failures.
- Experience in Design for Six Sigma and/or comfort with statistical methods such as hypothesis testing, DOE, and SPC
- Strong problem solving skills, utilizing fishbone diagrams and other quality tools to guide investigation
- Intellectual curiosity for vacuum and/or refrigeration system
- Excellent verbal and written communication skills
- Demonstrated ability to work in a team environment
- Experience in semiconductor capital equipment or adjacent markets is a plus
- Strong leadership, organizational, communication, and prioritization skills
- Demonstrated ability to successfully work in multi-disciplinary teams to accomplish aggressive goals
- Ability to work effectively in a fast-paced, dynamic environment

Scope of the job:

- ✓ This role sits within Edwards Vacuum, the CTIP Product company in Chelmsford which is part of the newly formed Semi Chamber Solutions Division within Atlas Copco's Vacuum Technique business area
- ✓ It provides a complete range of Equipment and value-added services for customers in a range of applications & processes, depending on the market
- ✓ The customers vary from very large global accounts to small diffuse customers.
- ✓ The division provides products under the Edwards brands