

SENIOR MECHANICAL ENGINEER

Position is in Salt Lake City, UT; employer will pay for relocation

Contact missi@humanelementcompany.com

Position Summary

The Senior Mechanical Engineer position will work with the Mechanical Engineering team in providing support for development of a radioisotope production facility. This includes the development of a heavy ion linear accelerator beamline, solid and gaseous target stations, radiochemistry equipment and machinery, and laboratory design. This role will be held responsible for autonomous execution of high-level Mechanical Engineering tasks and projects handed down by the team and the of Mechanical Engineering. The role will be asked to complete tasks that require a familiarity with advanced Mechanical Engineering tools and solutions. The ideal candidate will enthusiastically explore the different aspects of our business and will receive thorough technical and soft-skills training to continue their personal and professional growth, with the goal to eventually become a Mechanical Engineering leader.

Responsibilities

Spearhead the mechanical efforts involved in the alignment of a linear accelerator beamline and subsystems
Partake in the design and engineering of an ion linear accelerator, target irradiation stations, hot cells and surrounding laboratory infrastructure

- Assist in the assembly of linear accelerator and beamline
- Create detailed 3D models and 2D engineering drawings
- Simulate and analyze models for both flow and thermal performance
- Perform vacuum conductance calculations
- Work with outside vendors on the manufacture and sourcing of components
- Develop and conduct formal acceptance procedures for outsourced components
- Provide trouble reports as part of a continuing improvement process to enhance system reliability
- Coordinate with Facilities & Operations Management to schedule maintenance and upgrade activities
- Continuously strive for highest level of performance
- Perform with a personal safety mindset at the forefront of all work
- Deliver breakthrough solutions

Minimum Requirements

- Related professional work experience (10+ years)
- Experience in a lab or research environment (4+ years)
- Demonstrated experience with precision measurement, inspection, and fine alignment
- Proficiency with SolidWorks CAD modeling and simulation (2+ years)
- GD&T and P&ID proficiency within ASME Standards
- Hands on work with vacuum, high-power RF, electromagnets, or particle accelerators in general
- Basic computer proficiency (Microsoft Office, Google, etc)

Preference will be given to candidates with:

- Bachelor's Degree in Mechanical Engineering or Physics
- Experience in precision alignment of particle accelerators or complex machinery
- Experience designing and working with high or ultra-high vacuum components
- Experience designing for and working within radiation environments
- Experience with hot cells and manipulators

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- Manufacturing (welding, brazing, machining, assembly)
- Proficiency using simulation software such as SolidWork and ANSYS
- Experience working with a quality program and quality standards
- A love for Salt Lake City
- Leadership experience
- Demonstrated analytical thinking and rapid learning

Physical Requirements

- Respond to emergency calls to support 24/7 operations
- Must be comfortable working as a radiation worker
- Work to be conducted in both an office environment and the production facility.
- Must be able to sit for long periods of time.
- Frequent use of computer with repetitive use of keyboard, mouse and manual dexterity.
- 2-8 weeks of travel per year for site visits, visiting vendors, and attending conferences