



Position –Mechanical Engineer - Subsea Systems

Employment Type – Term Employment, 18 months expected

Location - San Francisco Bay Area

Reporting to – Lead Mechanical Design Engineer

Application Deadline: March 27, 2015

Program Overview

Schmidt Ocean Institute (SOI) is a private non-profit operating foundation (www.schmidtocean.org) established in March 2009 to advance oceanographic research, discovery, and knowledge, and catalyze sharing of information about the oceans. SOI is developing a series of advanced undersea robotic research vehicles for use on SOI's research ship Falkor. The vehicles will support scientific research throughout the full range of ocean depths, including operations at hadal depths, thereby providing scientists with access to the deepest parts of the ocean. The vehicles will be outfitted with a suite of sensors and scientific equipment to support collection of a broad range of data and samples.

Purpose / Role

The Mechanical Engineer will support a range of tasks from initial mechanical and electromechanical vehicle systems testing through commissioning, sea-trials and may include some technical support for at-sea operations of multiple technical and scientific systems related to the goals of the Schmidt Ocean Institute (SOI) and collaborators. The Mechanical Engineer will work with the Lead Mechanical Design Engineer and technical team to contribute practical and innovative designs for SOI's new subsea vehicle systems.

Skills & Education

Bachelor Degree in Mechanical Engineering with 3+ years of experience with development of subsea systems. To include Requirements Analysis, Design Skills, Presenting Technical Information, Equipment Maintenance, Conceptual Skills, Quality Focus, Control Engineering, Production Planning and Employment Knowledge. Master's degree preferred.

Primary Responsibilities

- Evaluates mechanical and electromechanical systems and products by designing and conducting research programs; applying principles of mechanics, hydraulics, heat transfer, alloys and composite materials.
- Confirms system and product capabilities by designing feasibility and testing methods; testing properties.
- Develops mechanical and electromechanical products by studying system requirements; researching and testing manufacturing and assembly methods and materials; soliciting observations from operators.
- Develops manufacturing processes by designing and modifying equipment for fabricating, building, assembling, and installing components.



- Assures system and product quality by designing testing methods; testing finished- product and system capabilities; confirming fabrication, assembly, and installation processes.
- Prepares product reports by collecting, analysing, and summarizing information and trends.
- Keeps equipment operational by coordinating maintenance and repair services; following manufacturer's instructions and established procedures; requesting special services.
- Maintains system and product data base by writing computer programs and entering data.
- Contributes to team effort by accomplishing related results as needed.

Requirements

- Sound understanding of engineering principles.
- Experience in Design for Manufacturability (DFM), and Design for Assembly (DFA), statistical tolerance analysis techniques, functional dimensioning, and geometric tolerancing (GD&T).
- Teamwork: the candidate must be able to communicate well with cross-functional team members, be able to efficiently collaborate with team members to achieve project goals and contribute positively to the engineering community.
- Working experience and a firm grasp of FEM principles (FEA, CFD).
- Some experience with electronics packaging, routing, and connectors.
- Competent in use of CAD/CAM systems - e.g. SolidWorks (preferred), SolidWorks Simulation, AutoCAD, PRO-E or similar space frame design and analysis packages
- Proficient in Agile or PDM/PLM Works (or similar), Excel.
- A minimum of 3 years previous post-graduate experience in a design role preferably of low volume high-value machinery and/or equipment.
- Good understanding of pressure vessel design, analysis, and testing
- Good experience in creating detailed manufacturing drawings
- Excellent written and verbal communication skills (English)
- Valid passport

Compensation

Schmidt Ocean Institute offers a competitive salary and benefits package.

How to Apply:

Send a letter of interest and a resume / CV to: jobs@schmidtocean.org that clearly outlines how you meet the above requirements. References check will be conducted. Should a candidate make it to the formal interview stage, a design / project portfolio will be an asset.