Mechanical Engineer

Greensea IQ is a world leader in advanced robotic solutions for the ocean. We are a dual-use technology company that has pioneered the use of autonomous systems in critical defense applications and is now transitioning that mature technology to the commercial maritime markets. Greensea has a defense product portfolio called Bayonet that is focused in Mine Countermeasures, Explosive Ordnance Disposal, and Special Operations. Since 2017, we have pioneered the use of autonomous robots and artificial intelligence to create scale and safety in ocean warfare while protecting the warfighter.

Greensea's emerging EverClean product transitions defense technology to the commercial sector to create high impact and achieve significant growth within a large market. EverClean uses autonomous underwater robots to keep the hulls of ships clean, allowing ships to perform optimally. This Robot-as-a-Service business provides significant fuel savings, carbon emissions reductions, and increased vessel performance through a simple subscription program.

JOB DESCRIPTION

The Mechanical Engineer is an integral part of a dynamic and passionate engineering team. They are responsible for designing, developing, prototyping, and testing mechanical components, equipment, and systems to meet performance, quality, reliability, and manufacturability requirements. This role applies mechanical engineering principles, CAD modeling, material selection, and analytical methods to develop new products and improve existing designs. The Mechanical Engineer collaborates with cross-functional teams to define technical specifications, validate designs through testing and analysis, and resolve engineering challenges throughout the product development lifecycle. This role operates with a high degree of independence while contributing to complex projects under the general direction of the Engineering Manager

RESPONSIBILITIES

- Design, develop, and optimize mechanical components, assemblies, equipment, and systems to meet functional, performance, and reliability requirements.
- Create detailed engineering drawings, 3D models, assemblies, and technical documentation using CAD software and other engineering design tools.

- Develop engineering specifications, design concepts, and prototypes for new products and existing product improvements.
- Evaluate and select appropriate materials, manufacturing processes, and mechanical components based on performance, cost, durability, and manufacturability.
- Conduct engineering calculations, simulations, tolerance analyses, and other technical assessments to validate designs and ensure compliance with specifications.
- Plan and execute prototype testing, verification, and validation activities to assess product performance and identify potential weaknesses or failure modes.
- Analyze test results, investigate mechanical failures, and implement corrective actions to improve product quality, reliability, and performance.
- Collaborate with electrical engineers, manufacturing engineers, product development teams, suppliers, and other stakeholders to resolve technical issues and support product development.
- Support design reviews, engineering change requests, design revisions, and the release of engineering documentation.
- Ensure designs comply with applicable industry standards, safety requirements, quality guidelines, and internal engineering procedures.
- Identify opportunities to improve product designs, manufacturing efficiency, material utilization, and overall lifecycle costs.
- Manage assigned engineering tasks and deliverables, balancing technical requirements, project timelines, and resource constraints.
- All other responsibilities as reasonably assigned.

REQUIREMENTS

- Bachelor's degree in Mechanical Engineering or a closely related engineering discipline.
- 5–8 years of relevant experience in mechanical design, product development, engineering analysis, or a related field.
- Proficiency in 3D CAD software, such as SolidWorks, Creo, CATIA, or Autodesk Inventor, with experience creating complex parts, assemblies, and engineering drawings.
- Strong understanding of mechanical engineering fundamentals, including mechanics of materials, machine design, kinematics, thermodynamics, and material properties.
- Experience with material selection, manufacturing processes, tolerance analysis, and design for manufacturability and assembly (DFM/DFA).
- Demonstrated ability to develop prototypes and conduct mechanical testing, design verification, and product validation.
- Experience performing engineering calculations, root cause analysis, failure analysis, and design optimization.

- Familiarity with engineering simulation tools, such as finite element analysis (FEA), computational fluid dynamics (CFD), or other relevant modeling techniques.
- Ability to interpret engineering drawings, technical specifications, test data, and applicable industry standards.
- Proficiency in preparing technical reports, design documentation, test procedures, and engineering change documentation.
- Familiarity with quality management principles, product lifecycle processes, and configuration management practices.
- Strong analytical and problem-solving skills, with the ability to investigate complex technical issues and develop effective solutions.
- Excellent written and verbal communication skills, including the ability to present technical information to cross-functional teams and stakeholders.
- Strong sense of ownership, accountability, and continuous improvement in engineering design and product development.

To apply, please send your resume, salary requirements, and cover letter to careers@greensealQ.com as PDF documents. The candidate must be eligible to work in the United States. This position is based in Plymouth, MA and cannot be performed remotely. Annual salary range: $110-125k.

Greensea IQ (www.greensealQ.com) is an equal opportunity employer. We offer a casual and fun work environment and provide our employees training and continuing education opportunities. Greensea IQ offers competitive salaries and a complete benefits package, including full health insurance, 401(k), and paid vacation, holiday, and sick leave.