



SeaStar Solutions

Job Title:	Product Designer – Electrical
Job Purpose:	This position focuses on product development including design, verification, validation, launch and support of products and components used in boat control and diesel fired thermal products. Develop embedded electronic solutions within mechatronic products to meet cost and functional targets.
Reports To:	Engineering Manager
Direct Reports:	N/A
Version:	2.0 April 1, 2014

Education & Experience

- University or Institute qualifications in Mechanical, Electrical or Electro-Mechanical Engineering.

Responsibilities

- Prepare design documentation for new products and components such as drawings, engineering specifications and test reports.
- Design products and components utilizing prescribed tools such as QFD, CAD, DFMA and DFMEA's in accordance with SeaStar Solutions and ISO9001 requirements and procedures.
- Participate in the full development cycle, from requirements analysis, design, development, implementation, validation, documentation and ongoing support.
- Circuit design including schematic, layout and component selection.
- Support real-time firmware development team for micro-controllers.
- Hold design reviews and conduct validation tests (environmental, EMC, HASS / HALT, etc.).
- Maintain Bill of Materials for electronic assemblies.
- Participate in "make versus buy" decisions for components and/or assemblies.
- Provide estimates of product cost and development effort. Participate in creating development schedules and then work to these schedules.
- Develop project plans, coordinate activities and report on project status.



- Work in multi-function new product development teams, including program/product management, manufacturing engineering, supply chain management and production.
- Interact with customers and suppliers and represent SeaStar Solutions.
- Assist in applications support and troubleshooting as required.
- Complete additional job duties and assignments up to 15% of the time.

Skills & Abilities

- Well-developed organizational skills with the ability to manage a variety of tasks.
- Strong proficiency with MS Office programs including: Word, Excel, Access, Outlook and PowerPoint; and, the ability to learn other applications quickly.
- Excellent verbal and written communication skills in English.
- Ability to work well independently and as part of a strong team.
- Proven experience with electronics, analog, power and digital circuit design.
- Strong understanding of hardware/software interface issues and understanding of hardware system designs.
- Proven experience with full electronic and firmware lifecycles for high volume production.
- Proficient with Altium and familiar with firmware programming languages such as C, C++, and assembly for embedded controllers such as Freescale and ARM.
- Familiar with electromagnetic compatibility and data acquisition equipment and programming (National Instruments and LabView).
- Knowledgeable of sensors and various linear actuators, especially electric motors.
- Working knowledge of safety regulations (UL, CSA, CE and other regulatory requirements).
- Experience applying industry standards such as SAE, ASTM and ISO.
- Familiar with QFD, Design and Process FMEAs.

Deliverables

- Electrical design, verification, validation, launch and support of products and components.
- Validated electrical design solutions that meet requirements and cost targets in a timely manner.
- Approved electrical design and test requirements documentation, test reports, and reports for customers on design and test results.
- Maintain or increase internal and external customer satisfaction.
- As this position is constantly evolving, please speak with your supervisor/manager regarding daily, weekly and monthly objectives.