



Mechanical Designer/Drafter

Company: **Energy Storage Systems**

Location: **Portland, OR**

Company Profile

Energy Storage Systems (ESS) is a fast-growing, venture-backed, clean technology start-up, located in Portland, OR. ESS has developed an advanced flow battery technology for commercial, industrial, and utility applications. With a team that boasts decades of experience in distributed power generation and energy storage technologies, ESS has developed an extremely cost-effective energy management system that combines a safe, abundant and non-toxic iron electrolyte with our patented flow cell design. This combination of high performance with low cost means that ESS's technology is ideally suited for applications that range in size from retail energy management to utility-scale renewables integration.

Position Profile

ESS is seeking a dynamic Mechanical Designer/Drafter with a strong background in 3D CAD systems, mechanical design, thermodynamics, fluid flow, and structural analysis. The role will focus on supporting the development of ESS's advanced battery technology to ensure product life, cost, and efficiency. The successful candidate will have excellent project management skills and an ability to manage multiple projects effortlessly. Candidates with knowledge of large and complex industrial products, containerized manufacturing & transport are highly desired. Experience in battery, fuel cell technologies or power generation systems are helpful.

The ideal candidate will have a passion for sustainability and the environment, will thrive in a fast-paced entrepreneurial setting, be self-motivated and have an interest in disruptive, cutting edge technology. Someone who understands the culture, the rigor and the challenges of a start-up environment.

Responsibilities

- Product development through research, design and evaluation of mechanical systems and processes utilizing engineering principles.
- Execute updates and redesigns of existing processes and related equipment that are feasible to manufacture or modify; accompanied by analysis, supporting information and recommendations.
- Actively communicate specific work requirements or needs to internal functions, such as purchasing and manufacturing to ensure expectations are understood as defined by engineering specifications.
- Interface with suppliers, manufacturing, sales and marketing in the product development process.
- Utilize 3-D CAD system, Autodesk Inventor, to prepare detailed drawings of multiple views

and apply mathematics and physics to compute load capacities, dimensions, material usage and Bills of Materials (BOMs).

- Prepare prints of parts and assemblies for manufacture using appropriate tolerance and GD&T practices.
- Design and build fixtures and tooling to support manufacturing needs.
- Operate drill press, grinders, engine lathe, or other machines to modify parts tested or to fabricate experimental parts for testing.
- Collaborate with mechanical engineers or other personnel to identify, define, or solve developmental problems.
- Use inspection and measurement equipment to ensure conformance of incoming parts and assemblies.
- Conduct research to test or analyze the design, operation and performance of equipment.
- Ensure engineering design and standards documentation is complete, accurate and sufficient in support of manufacturing and quality assurance activities, and compliant with customer specifications and regulations.
- Performs other related duties as assigned for the purpose of ensuring the efficient and effective functioning of the project team.
- Interface with and provide product specifications to suppliers.
- Design electrical and mechanical component assemblies to comply with functional requirements.
- Document and present designs for team review.

Requirements

- Associate's Degree in Mechanical Engineering or similar.
- 2 years' experience as a drafter or mechanical designer
- Proven proficiency in 2-D & 3-D CAD systems (Autodesk Inventor preferred) for design, documentation, and fabrication.
- Experience with CAD version control systems, Autodesk Vault preferred
- Understanding of a wide variety of manufacturing techniques and an ability to design parts and assemblies accordingly.
- Experience with designing and building fixtures, tools, machines, and prototypes
- Must have experience with creating drawings of parts and assemblies using standard tolerance practices and GD&T (ASME Y14.5).
- Experience in packaging assemblies
- Must be comfortable with thermodynamics, fluid flow and structural analysis
- Must be a "self-starter" and follow tasks through to completion with little guidance.
- Must be able to work in a Team environment to collectively solve problems.
- Must be able to multi-task several projects and prioritize workload to meet business specific deadlines
- Comfortable in fast-paced, collaborative work environment.
- Experience commercializing new technologies in a production environment is preferred.
- Strong communication and presentation skills, affable, and demonstrated maturity and professionalism
- Able to work in a cross-functional and geographically dispersed team environment.
- Experience interacting with Lab and Engineering operations.
- U.S. Citizenship or permanent residency required.