

SUN-STAR ELECTRIC, INC.

JOB DESCRIPTION

Job Title: ENGINEERING

Department: Engineering

Exempt Non-Exempt

Job Reports To: Engineering Manager

Job Summary:

Electro-Mechanical Engineer is responsible for design, analysis, manufacture, maintenance, repair and upgrade of electrical submersible pumping equipment and related products.

The Engineer in this role plans and designs product components & assembles and coordinates team projects. This includes development and review of specifications, mechanical and electrical designs, documentation packages, establishing program timelines and creating reports, technical support of preproduction builds and transfer to production.

Essential Duties and Responsibilities:

Engineering:

- Performs engineering assignments with clear and specified objectives with the application of sound professional judgement.
- Performs design analyses/calculations and prepares technical reports, engineering communications and dispositions, design documentation including equipment or material specifications.
- Ability to perform designs development using relevant computer software and analytical methods. Assignments require the investigation of a limited number of variables and supervisory assistance is provided in unusual problems.
- May supervise or coordinate the work of designers and other technical support personnel.
- Transition products from proposal development, concept, and detailed design development to production phase.
- Create detailed drawings, schematics, diagrams, bill of materials based on written and verbal descriptions.
 - Translate customer and government drawings and specifications to working shop instructions.
 - Create sketches and layouts, compute critical dimensional and performance parameters including allowable deviations and tolerances of developed products.
 - Work closely with other company departments and functions to ensure that technical documentation conveys correct information and is error free.
 - Review product design for compliance with engineering principles, industrial and company standards, customer contract requirements, governmental regulations and related specifications.
- Maintain documents: Drawings and Specifications, Part Lists, Procedures, Manuals, Instructions, Standards and Bill of Materials.
- Maintain change control system for document revisions.
- Update and correct drawings and bill of materials as required.

- Participates in project teams and all activities related to the development and launch of new products. Writes manufacturing and test procedures and reports.
- Assists in trouble shooting failures and issues investigation to help find root cause and corrective actions, formulate risk mitigation plans.
- Assist with OEM and reverse engineering activities, evaluate strengths and weaknesses of alternative designs.
- Generate and modify 2D drawings and 3D models, performs required supporting engineering analyses for manufacturing of new product designs, mechanical, electrical, and electronic components using CAD/CMA/CAE systems.
- Update product designs as required to meet quality and cost improvement goals.
- Ability to multi-task and deliver aggressive date driven projects.
- Excellent interpersonal and communication skills to be able to work effectively with others.
- Logical thinker who is not afraid to dive into difficult issues outside of their area of expertise.
- Estimate and establish timeframes and deadlines for tasks and projects completion.
- Provide guidance and clarifications to machine shop and electrical and mechanical assemblers as required.
- Leads and assists in production improvement projects.
- Ability to follow all safety policies and procedures of Sun-Star Electric, Inc.

Minimum Requirements

Education: Minimum Bachelor's Degree in Engineering. Preferably a combination Mechanical and Electrical Engineering.

Experience: 5 ± years' experience in electro-mechanical and control systems engineering is preferred, ideally in a manufacturing environment. Expertise in areas of electric motors and electrical submersible pumping systems technology is considered as a strong advantage. Working knowledge of CAD systems (AutoCAD/Inventor, etc.), engineering electro-mechanical modeling and electro-magnetic analysis tools (Ansys Maxwell or similar). Microsoft Office products and ERP systems such as Epicor.

Essential Mental Functions:

- Ability to read and interpret documents such as safety rules, operating and maintenance instructions and procedure manuals.
- Ability to write routine reports and correspondence.
- Ability to speak effectively before groups of customers or employees of the organization.
- Ability to work with mathematical concepts such as probability and statistical inference, fundamentals of plane and solid geometry and trigonometry.
- Ability to apply concepts such as fractions, percentages, ratios, and proportions or practical situations.
- Ability to perform tasks requiring exceptional attention to detail.
- Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standards exist.
- Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.
- Follow all safety policies and procedures of Company.
- Ability to handle stress related to the job: multi-tasking, working with others, tight schedules, changing priorities, etc.
- Ability to collaborate with others (vendors, partners, co-workers, etc.) effectively and in a professional manner.

Essential Physical Functions:

- Must be able to work at a computer workstation for extended periods of time.
- Combination of plant and office environment.
- Occasional exposure to elements such as odor, noise, dust, heat, cold or chemicals.
- Regularly required to sit, stand, bend, and lift up to 25 pounds.

Equipment Used:

- General office equipment: phone, fax, copier, computer, calculator, etc.
- Shop Equipment: measuring instruments

Additional Comments:

- Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities, and activities may change at any time with or without notice. Nothing in this job description restricts management's rights to assign or reassign duties and responsibilities to this job at any time.
- Willingness to perform other duties as requested, directed, or assigned.

Approved By: _____ Date: _____

Employee signature below constitutes employee's understanding of the requirements, essential functions and duties of the position.

Employee: _____ Date: _____

PHYSICAL REQUIREMENTS

JOB TITLE: Electro-Mechanical Engineer

In a normal work day, the employee may:

ACTIVITY	0%	1-3 HRS / 1-33%	3-5HRS / 34-66%	6-10HRS / 67-100%
STAND/WALK		X		
SIT				X
USE OF HANDS:				X
HEAR				X
TALK				X
VISION				X
LIFT:		X		
*MINIMUM		1LB		
*MAXIMUM		25LB		
STRESS LEVEL			X	

