



ELECTRICAL CONTROLS ENGINEER

DEPARTMENT:	Engineering	REPORTS TO:	Chief Engineer
DIVISION:	Cortland	FLSA STATUS:	Exempt
JOB CODE:	9219	EFFECTIVE DATE:	2/27/2023

JOB SUMMARY

Perform electrical engineering & design of integrated thermal control systems for customer applications involving molten metal processing, heating designs and transferring metal in various metal treatment industries.

QUALIFICATIONS

Education/Experience

Bachelor of Science in Electrical Engineering required; experience designing engineering solutions for capital equipment manufacturers. Prior experience as a project engineer leading projects developing solutions to furnace control, hot metal industry is preferred; or equivalent combination of education and experience.

Knowledge/Skills/Abilities

Adaptability Skills. Ability to adapt to rapid changes in the work environment while managing competing demands.

Core People Skills. Ability to positively interact and work collaboratively with a diverse group of people at all levels of the organization. Genuine with high ethical standards and values and personal integrity and honesty. Progressive, flexible and team oriented.

Communication Skills. Ability to speak clearly and persuasively in positive or negative situations, listen, obtain clarification, and respond well to questions. Maintain a persuasive and credible presentation style. Ability to develop and lead effective formal presentations to both internal and external customers. Proficiency in writing clearly and concisely, editing work for spelling and grammar. Ability to vary writing style to meet business needs. Ability to present numerical data effectively. Ability to write routine reports and correspondence.

Computer/Application Skills. Proficient computer skills using a variety of software application systems. Proficient knowledge of Microsoft Office products, Visio, and 3-D CAD system. Ability to learn Autodesk Inventor.

Core Business Skills. Ability to exercise sound judgment and discretion in the handling of proprietary and confidential information. Use of resources, analytical skills and process focus to effectively "figure it out." Must be hands-on and maintain high energy to drive continuous improvement. Strong understanding of business implications of decisions and orientation of decisions to profitability. Strong critical thinking skills, judgment and keen attention to detail and accuracy. Ability to adapt to frequent changes, delays or unexpected events. Ability to synthesize complex or diverse information. Ability to collect and research data.

Technical Skills. Knowledge and hands on application of engineering science and technology including applying principles, techniques, procedures, and equipment to the design and production of various goods and services. Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods. Knowledge of design techniques, tools, and principals involved in production of precision technical plans, blueprints, drawings, and models. Ability to design workflows and procedures. Comprehensive understanding of designs and specifications from the utility distribution downstream to the specification of transformers, VFD's (Variable Frequency Drive), SCR's (Silicone Controlled Rectifier), etc.



Professional Investment. Demonstrated commitment to own personal professional development and learning. Ability to learn about and apply technical products to various industrial manufacturing processes.

Travel. Ability to travel by land and air, both domestically and internationally up to 20%. Valid US Passport or ability to obtain.

ESSENTIAL FUNCTIONS/RESPONSIBILITIES

1. Accurately and effectively design, and develop electrical engineering solutions and designs to meet the needs of customers in the thermal and hot material transport industries that may include but are not limited to:
 - a. Provide complete design specification from the utility distribution downstream to the specification of transformers, Variable Frequency Drives (VFD), and Silicone Controlled Rectifiers (SCR).
 - b. Design Programmable Logic Controller/Human Machine Interface (PLC/HMI) control architecture, PLC code, and HMI code.
 - c. Develop control algorithms for both direct and distributed control of process capital equipment using both digital and analog controllers.
 - d. Develop control schemes, Process Flow Diagrams, and P&ID logic to control furnaces other thermal capital equipment
 - e. Create system requirement tables to assure design compliance with customer bid documents.
2. Competently interface with customers to develop and/or clarify documents and specifications.
3. Efficiently manage electrical engineering projects to meet cost and schedule requirements.
4. Accurately calculate power requirements for capital equipment including motors, heaters, SCR's and other electrical equipment.
5. Effectively oversee designers developing control panel, Process Flow Diagrams, cable and conduit schedules, and other parts of industrial equipment fabrication and installation documents.
6. Collaboratively partner with other Controls Engineers, System Engineers and Program Managers to develop creative solutions that meet customer specifications.
7. Skillfully and professionally assist customers with the startup and commissioning of custom capital equipment control systems
8. Provide effective mentorship and training of new designers.
9. Promote positive team member and customer relations by supporting Pyrotek's commitment to a working environment of tolerance, acceptance and civility. Respond appropriately to inquiries, concerns and complaints by being professional, courteous and respectful at all times.
10. Maintain regular, consistent, reliable, punctual and predictable attendance, as required to achieve internal and external customer satisfaction.
11. Actively and positively participate in problem resolution, demonstrating constructive communication, timely response and effective resolution skills. Work effectively within team environments both within your department and across the organization.
12. Cooperate and comply fully with all Pyrotek policies and procedures. Actively support and follow the Pyrotek Safety Program.
13. Participate in company/department meetings, training activities, continuing education programs and other associated activities.
14. Consistently promote and communicate Pyrotek's core values through work performance and excellent customer service.
15. Perform other tasks as assigned.



PHYSICAL/SENSORY REQUIREMENTS

The following physical activities described here are representative of those required by a team member to perform the essential functions of this position. Reasonable accommodation, if feasible, will be made to enable individuals with disabilities to perform the functions of position.

Must be able to sit for long periods-of-time, bend and reach, use stairs, lift up to 25 pounds occasionally and communicate effectively in English by telephone, in person and in writing. Effectively use a personal computer, office equipment and telephone.

WORKING ENVIRONMENT

While performing the essential responsibilities of this position, team member will generally work in an office environment. Will be required to go onto plant floor occasionally as needs/issues arise where Personal Protective Equipment (PPE) may be required. Travel may be required both domestic and international.

Team Member's Signature

Date

Manager's Signature

Date