



CONTROLS SYSTEM ENGINEER

DEPARTMENT:	Engineering	REPORTS TO:	Engineering and Manufacturing Manager
DIVISION:	SNIF	FLSA STATUS:	Exempt
JOB CODE:	9219	EFFECTIVE DATE:	12/08/2023

JOB SUMMARY

Generate and implement control system designs and complimentary Programmable Logic Controller (PLC) programming with a high standard of engineering expertise to fulfill commitments to customers. Coordinate with our panel builders to ensure manufactured panels match engineering designs. Quality check control panels prior to shipment.

QUALIFICATIONS

Education/Experience

Bachelor of Science in Mechanical or Electrical Engineering degree required; plus 3 years of experience in the design of industrial control equipment and associated PLC programming; or equivalent combination of education and experience.

Familiarity with applicable electrical design codes, manufacturing methods and drafting practices is preferred.

Knowledge/Skills/Abilities

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. Ability to apply a large measure of common sense to a variety of situations. Displays humility and adaptability. Ability to cultivate relationships and treats people with respect.

Communication Skills. Ability to speak clearly and persuasively in positive or negative situations, listen and obtain clarification, and respond well to questions. Proficiency in writing clearly and concisely and editing work for spelling and grammar. Ability to vary writing style to meet business needs. Must be able to effectively communicate in English and with people for whom English is a second language.

Computer/Applications Skills. Proficient computer skills using a variety of software applications systems, including Microsoft Office Products, Visio, and CAD. Ability to learn Autodesk Inventor.

Mechanical Engineering. Working knowledge of the practical 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.

Core Business Skills. Ability to exercise sound judgement and discretion in handling of proprietary and confidential information. Ability to work independently, without significant direction and to use resources effectively to “figure it out”. Strong critical thinking skills, judgment and keen attention to detail and accuracy. Exceptional prioritization, time management and organizational skills. Ability to write routine reports and correspondence. Highly organized, detail-oriented, and self-disciplined.



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. Comprehensive understanding of design and specifications for gas control system and piping schematics including working knowledge of control valves, mass flow devices, pressure transducers, etc.

Professional Investment. Demonstrated commitment to own personal professional development and learning.

Travel. Ability to travel by land and air up to 40% both domestically and globally. Valid driver's license and US Passport, or ability to obtain required.

ESSENTIAL FUNCTIONS/RESPONSIBILITIES

1. Continuously research market data and trends to leverage vendor offerings in apply the best available methods and materials when designing systems to continually improve SNIF® control systems. Develop and maintain a high level of engineering capabilities and familiarity with control system design techniques, PLC programming, components, and devices.
2. Develop accurate and precise designs and documentation of SNIF® control systems including standard and advanced systems for operation with computer interfaces. Drafting, checking and release for manufacture of control drawings, electrical schematics, wiring diagrams and piping schematics required for manufacture of SNIF® control system and inclusion in manuals.
3. Effectively design, prepare documentation for, test, and troubleshoot programs for Allen-Bradley PLCs, Siemens PLCs, and customer specified PLC systems as required.
4. Work in partnership with peers to continuously design and review the drafting of new and replacement parts, components, and assemblies in accordance with the replacement parts redesign procedures in effect.
5. Work collaboratively and effectively with purchasing and customer service departments using the materials management systems – VISUAL, to generate work orders and procure parts to supply manufacturing facilities and customers.
6. Work with panel vendors to ensure that control panels comply with their SNIF® control system design, and are built according to professional construction and appropriate electrical specification standards.
7. Visit vendor plants as required to inspect and test SNIF® control systems to ensure all products meet SNIF® and customer requirements. Promptly prepare and file complete and actionable written inspection and test reports, escalating issues as appropriate.
8. Ensure finished products meet international electrical design standards and schematic diagrams specifications including Conformance Europeenne (CE), Underwriters Laboratories (UL), China Compulsory Certification (CCC), Canadian Standards Association (CSA), Deutsches Institut für Normung (DIN), and Verband der Elektrotechnik (VDE).
9. Conduct effective training sessions for Field Service Engineers in the proper set-up, operation, and troubleshooting of new control system designs.



10. As needed or directed, travel to customer sites to provide support throughout installation or for troubleshooting control system problems.
11. Accurately perform design reviews of all mechanical and electrical systems and components for inherent safety and compliance with applicable codes and safety policy. Verify appropriate safety precautions, labels and nameplates are in place in accordance with company procedures and policy. Quickly take steps to rectify or escalate any issues of non-compliance.
12. Actively participate in the Quality System CAR process including reporting control system nonconformances encountered during panel checkout, resolving of actual or potential control system nonconformances reported in the field, and resolving of other CAR tasks that may be assigned by management.
13. Ensure adherence to ISO requirements by supporting the quality system through maintenance of an active working knowledge of processes, setting an example by following requirements, and participating in continuous process improvements and internal audits.
14. 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.
15. Maintain regular, consistent, reliable, punctual, and predictable attendance, as required to achieve internal and external customer satisfaction.
16. Actively and positively participate in problem resolution, demonstrating constructive communication, timely response, and effective resolution skills. Effectively work within team environments both within your department and across the organization.
17. Cooperate and fully comply with all Pyrotek policies and procedures. Actively support and follow the Pyrotek Safety Program.
18. Participate in company and department meetings, training activities, continuing education programs and other associated activities.
19. Consistently promote and communicate Pyrotek's core values through work performance and excellent customer service.
20. 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 and stand for long periods-of-time, bend, reach, push, use stairs, and lift up to 25 pounds occasionally. This position requires the ability to communicate effectively in English by telephone, in person and in writing, and utilize a personal computer and office equipment.



WORKING ENVIRONMENT

Generally, work within an office and/or manufacturing environment with regular exposure to noise, heat and/or cold conditions where Personal Protective Equipment (PPE) is required. Travel by land and air will be required both domestic and international.

Team Member's Signature

Date

Manager's Signature

Date