Nel Hydrogen, Inc
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Job Description

Senior Automation Engineer

Hydrogen… the most abundant element in the universe is your ticket to a rewarding future. Every day there are reports of how hydrogen (produced by water electrolysis and renewable energy sources) is displacing fossil fuels, reducing greenhouse gasses, and helping to revitalize our planet.

Nel Hydrogen is the global leader in on-site hydrogen generation and the largest electrolyser manufacturer in the world. Armed with a full portfolio of water electrolysers and hydrogen fueling station technologies, Nel Hydrogen is leading the charge into the new green hydrogen economy and committed to our vision of empowering generations with clean energy forever.

If you are driven by personal initiative combined with loyalty and commitment to your team and the ability to convert complex issues into simple solutions, then we want to talk to you. Help make the world a better place. Join a company that is on the cutting edge of new energy innovations, with an energized, progressive culture.

About the job position

As Senior Automation Engineer in the Development and Engineering Americas Team, you will be responsible for programmable logic controller (PLC) programming and configuration for new and existing installations at customer sites. You will develop technical solutions for PLC-based control systems. You will work within an energetic team of disciplined engineers based in the San Francisco Bay Area. The Development and Engineering Americas team is part of a global development team centering around NEL's H2Station™ Factory in Herning, Denmark. As Senior Automation Engineer you will be part of the Software Team and have functional link to the Software Team lead to ensure cross-training and alignment of automation/software engineering. Your tasks will focus on supporting projects in the Americas region, including troubleshooting PLC-program based issues and solutions in support of our Service Team and Customers. In addition, you will work on product development and application equipment engineering to support NEL's initiatives to bring innovative products to the hydrogen fueling market. You will report to the Head of Development and Engineering Americas. 4 to 6 weeks of travel to Denmark will be expected during the first 6 months of employment to train in the structural text, object-oriented programming language of TwinCAT/Beckhoff PLCs, receive instruction on the product development process, and integrate into the Software Team. You will be encouraged to bring innovative strategies and approaches to software team for Hydrogen Fueling Stations.

Your tasks will include:

- Working on Engineering Change Orders for PLC Software changes and development
- Managing the IO and control system configuration for H2Station™ in the Americas Region.

- Provide inputs into the Variation Assessment Process
- Programming in the TwinCAT/Beckoff structured text language
- Troubleshooting software-related bugs and developing innovating solutions for control and data management
- Working with software application, information technology, and diagnostic teams that use the raw data from H2Station™ for data visualization that is key to service management, customer interfaces, and reporting.
- Supporting and leading document creation, including process control specifications, cause & effect matrixes, IO Lists, logic diagrams, and control narratives.
- Managing PLC communication interfaces, such as Modbus, Profibus, MQTT, and other industry standard communication protocols
- Training of new Automation Engineers
- Managing the IEC 61511-compliant (Functional Safety) Program for H2Station™ in the Americas Region, using ABB Safety PLC and IO, including communication with third party(s) regarding Functional Safety Management System Certification requirements, audits, etc.
- Supporting Engineering Management of Change (ECM) processes and workflow, including authoring change documentation, reviewing, and approving engineering changes.
- HMI development, support, and maintenance in TwinCAT HMI
- Working closely with Electrical and Controls Engineers for troubleshooting and development of low voltage control systems and equipment, including 24VDC control wiring.

Qualifications

You possess a relevant educational background and technical experience in Computer Engineering, Software Engineering, or Controls Engineering. You have a strong technical- and business-oriented mindset, are curious, and can quickly understand complex technical systems to find organizational and commercially good solutions. You are structured, resourceful, and innovative, giving you the ability to handle multiple projects simultaneously. You have work experience in industrial controls, relevant standards for industrial controls, and experience with controls for pressurized fluid systems. You excel at working independently and in teams and are highly skilled in both written and spoken English. You are good in communication with other technical staff, internal as well as external.

Requirements

- B.S. in Computer, Electrical, or Chemical Engineering
- Eight (8) or more years work experience in PLC-based control system programming and development
- Strong knowledge of control system safety design
- Familiarity with IEC 61511 and relevant standards for functional safety
- Strong knowledge of industrial control wiring and standards for machinery control
- Strong appreciation for Engineering Change Management (ECM) systems and processes
- Experience working with diverse team across international borders and remote workflow
- Fundamental knowledge of low voltage industrial (240-480V) three-phase AC power distribution and motor controls

- Strong knowledge of Process Control for Pressurized Fluid Systems; PID Control
- Experience with Human-Machine Interfaces (HMI) including alarm and message generation, machine status definition, and logging of such parameters for diagnostics
- Experience with Electrical Hazardous Areas, and control system design consideration for machine controls in Electrical Hazardous Areas (National Electric Code, NFPA 70 Article 505)
- Strong knowledge of fail-safe electrical design principles
- Communicate fluently in both written and spoken English
- Proficiency in MS Excel, MS Word, MS Visio

It will be beneficial if you have:

- Experience training people on new systems and technologies
- Experience in Industrial Machine Controls
- Experience in Oil & Gas Industry
- Experience Managing teams or working in dynamic teams of Software/Controls Engineers
- Proficiency in the California Electric Code, California Fire Code, California Building Code
- Fluent or elementary proficiency in a second language like Danish, Korean, German, or French
- Hydrogen Fuel or Compressed Natural Gas Experience

Application & Contact

To apply, please e-mail your cover letter and resumé to: recruitment@nelhydrogen.com

About Nel Hydrogen I www.nelhydrogen.com

Nel Hydrogen is a global, dedicated hydrogen company, delivering optimal solutions to produce, store and distribute hydrogen from renewable energy. We serve industries, energy and gas companies with leading hydrogen technology. Since its foundation in 1927, Nel Hydrogen has a proud history of development and continual improvement of hydrogen plants. Our hydrogen solutions cover the entire value chain from hydrogen production technologies to manufacturing of hydrogen fueling stations, providing all fuel cell electric vehicles with the same fast fueling and long range as conventional vehicles today.