Selas Fluid Processing Corporation
Job Specification

Job Title:	Senior Electrical Engineer
Reports to:	Business Unit Manager- HyCO
Last Updated:	February 2010

Position Summary
The Senior Electrical Engineer is responsible for estimating, specifying, engineering, detailed design, and overseeing the supply & installation of electrical equipment for Hydrogen Plants and Air Separation Units in the NAFTA region and overseas. Must be familiar with and able to interpret the applicable local, national and international codes & standards, as well as company-specific and project-specific specifications. The Senior Electrical Engineer will work with and be supported by a team of electrical engineers and designers. Must interface with other technical disciplines as required, including but not limited to process engineering, instrumentation & controls engineering, and construction groups.

Key Areas of Responsibility
• Conceptually designs and develops plans for electrical distribution systems for industrial applications such as Hydrogen Plants and Air Separation Units, using recognized industry codes, standards and specifications.
• Performs system calculations and undertakes optimization studies for electrical power systems: load flow, voltage drop, motor starting, short circuit studies, and relay coordination studies.
• Develops shop and field test requirements and assists in planning and execution of electrical equipment checkout and startup.
• Reviews and checks all assigned project electrical drawings for compliance with all company and project instructions (Single-line diagrams, electrical equipment location drawings, plan drawings, details, schematics, wiring diagrams, etc.)
• Develops technical bid tabulation to support the selection of major electrical equipment by the Procurement Department.
• Assists the Project Manager and Scheduler in the development and updating of project schedules and manpower requirements.
• Reviews and checks technical submittals from sub-suppliers / vendors for conformance with purchase order requirements.
• Utilizes technical submittals from sub-suppliers / vendors to determine and specify final equipment installation requirements.
• Works with other engineering disciplines (instrumentation & controls, civil, structural, mechanical, and rotating equipment.
• As directed by Company management, performs other responsibilities from time-to-time as may be deemed appropriate.

Required Skills
• Working knowledge of NEC and IEC Codes, power distribution, short circuit calculations, wire & cable sizing, ISA Standards and International Codes.
• Effective computer skills; Microsoft Office software, Lotus Notes and other Company and discipline-specific software applications.
• Proven ability to delegate work. Provide subordinates with clear definition of scope boundaries, deliverables and schedule for delivery of completed work. Effective monitoring & control of delegated work
• Effective communication skills, both verbal and written, with supervisors, peers, subordinates, and colleagues & individuals inside and outside the Company.
• Effective trouble-shooting, analytical and problem-solving skills.

Education/Experience
• Bachelor's or Master's Degree in Electrical Engineering or an equivalent field is required. PE license preferred but not required.
• Minimum of 10 years' experience and working knowledge of power generation and power distribution, including but not limited to 480V, 4160V and 13,800V switchgear, motor control, protective relaying, power cabling, and single-line diagrams development.
• Minimum of 10 years' experience and working knowledge of electrical equipment design, specification, installation, repair and maintenance including Short-circuit, motor starting, load flow and arc flash analysis.
• Minimum of 10 years' experience and working knowledge in specifying equipment suitable for installation in hazardous areas (motors, lighting, panels, purging systems, and conduit & cable trays), rotating equipment, variable frequency drives and motors.
• Minimum of 10 years' experience and working knowledge of electrical power engineering facility design including construction methods and materials, as applied to industrial, production or petrochemical facilities.
• Minimum of 10 years' experience and working knowledge of programmable logic controllers (PLC's) as utilized in controlling & monitoring portions of industrial applications such as Hydrogen Plants and Air Separation Units
• Minimum of 10 years' experience and working knowledge of distributed control systems (DCS) as utilized in controlling industrial applications such as Hydrogen Plants and Air Separation Units
• Experience and knowledge in the power application of gas turbine and steam turbines, diesel generators, electric motors & drives.
• Ability to interpret regulations and industry codes.
• Prior participation in HAZOP's & other Process Safety Management reviews.
• Experience with engineering contractors and construction companies involved in the design & construction of industrial applications such as Hydrogen Plants and Air Separation Units.