Steven A. Mattson, P.E. Project Manager / Co-Owner

EDUCATION

BS in Electrical Engineering
University of Minnesota, 1989

CERTIFICATION

Professional Engineer, MN

PROFESSIONAL COURSES

- Power System Design, Analysis, and Modeling
- Arc Flash Hazard Analysis and Remediation
- PLC/DCS System Design and Configuration

EXPERIENCE

Prior to starting SPA in 2014, Steve Mattson worked at a pulp and paper mill in northern Minnesota for 25 years. Mr. Mattson held various positions in engineering and maintenance and acquired extensive experience in the following industrial areas:

- Power System Design
- Motor Control, VFDs
- PLC/DCS System Design
- Elect / Instrument Specification
- Project & Const. Management

Mr. Mattson was also responsible for the overall electrical power distribution system activities which included annual maintenance, design modifications, equipment installations, and arc flash hazard analysis and remediation.

REPRESENATIVE PROJECTS / EXPERIENCE

POWER SYSTEMS

Power System Revisions, Potlatch Corp.
Mr. Mattson served as an electrical project engineer responsible for the installation and commissioning of power system revisions project at a pulp and paper mill. Scope of project included 15kV breaker bifurcation, protective relay upgrades, medium voltage low resistance grounding systems, low voltage high resistance grounding systems, feeder breaker and motor ground fault protection. Responsibilities included equipment procurement, construction scope and schedule, commissioning activities, and overall project cost control. Final installation had to be coordinated with overall mill maintenance outage and was completed during a 3-day period.

49MVA Turbine Generator, Potlatch Corp:
Mr. Mattson served as the lead electrical engineer responsible for the design, installation, and commissioning of the #4 turbine generator. This project was part of a $550M pulp mill expansion at this facility. Worked with engineering firm to complete load flow, short circuit, and relay coordination studies. Drawing development included P&ID's, equipment layout, motor control schematics, and instrument loop sheets. Responsibilities also included electrical and instrument installation via contractor on the project.

Power System Model Development, Potlatch Corp.
Mr. Mattson served as the project manager responsible for the design, testing, and verification of a pulp and paper mill's electrical power distribution system into an EasyPower software model. Design included all distribution equipment including medium voltage motors and low voltage motor control centers. Load flow and short circuit analysis was performed with the new model. "Cold start" procedures were developed as part of the mill's Y2K contingency plan.

Arc Flash Hazard Analysis, Safety Program Development and Implementation, Potlatch Corp.
Mr. Mattson served as the project manager responsible for the design, testing, and verification of the arc flash hazard analysis for the pulp and paper mill. Responsibilities included developing safety program documentation (policies and procedures), field equipment labeling, electrical technician training, and general mill employee training.

POWER SYSTEMS (CONTINUED)

Arc Flash Hazard Remediation, Potlatch Corp.
Mr. Mattson served as the project manager responsible for the power system model update and arc flash hazard analysis of a pulp and paper mill power distribution system. Purpose of the model update was to determine remediation plans to eliminate extreme arc flash hazard areas. Remediation plans included protective relay replacements, low voltage breaker trip unit replacements, additional current transformers and protective relays, and medium voltage breaker upgrades.

INDUSTRIAL POWER/CONTROL/INSTRUMENTATION

Recovery Boiler, Potlatch Corp.
Mr. Mattson served as the lead electrical project engineer responsible for the electrical and instrumentation design, specification, procurement, installation, startup, and optimization of a new Tampella/Kvaerner recovery boiler as part of a $550M pulp mill expansion project. Scope of work included power system equipment, medium voltage and low voltage motor control centers, DCS and PLC system design, electrical and instrument equipment specifications. Project included multi-disciplinary coordination, overall project and construction schedule coordination, and cost control activities.

Evaporator Upgrade, Potlatch Corp.
Mr. Mattson served as the project manager responsible for all aspects of a black liquor evaporator set upgrade as part of a $550M pulp mill expansion project. Responsibilities included coordinating all disciplinary activities with respect to the design, procurment, installation, and commissioning of the upgraded evaporator set. Mr. Mattson directly coordinated all activities associated with the electrial and instrumentation design. Activities also included overall project and construction schedule coordination and cost control.

Chemical Cellulose Pulp Mill Expansion, Sappi Cloquet LLC
Mr. Mattson served as overall electrical project manager associated with a $170M pulp mill expansion that converted a kraft pulp mill to chemical cellulose. Scope of work included several projects in all areas of the pulp and paper mill, including a new woodroom rotary debarker, two (2) new batch digesters, new bleach plant ozone plant, new 3000gpm demineralizer plant, upgraded pulp dryer, new dry fiber storage facility and pulpers, and various paper machine upgrades. Three (3) DCS system were also upgraded from Fisher Provox to Honeywell Experion as part of the pulp mill expansion. Mr. Mattson was responsible for coordinating all electrical activities associated with the project, including design, specification, procurement, installation, commissioning, engineering and construction schedule coordination, and cost control.

Maintenance Superintendent, Potlatch Corp
Mr. Mattson served as maintenance superintendent for six (6) years and had 10-15 supervisors and planners as direct reports. Mr. Mattson was responsible for budget planning and cost control, resource planning and scheduling, and training activities. Best practices were implemented with respect to safety management, work planning and scheduling, predictive and preventative maintenance plans, standard procedures, and bill of material documentation.

Electrical Field Support Engineer, Enbridge Energy
Mr. Mattson worked with Major Projects personnel to successfully complete construction of a six hundred mile pipeline. Mr. Mattson primarily worked at six (6) pumping stations resolving engineering and construction related issues. Activities had to be coordinated with Enbridge personnel, site inspectors, construction contractors, and commissioning personnel. Updated cable schedules and red-lined drawings were issued throughout the course of the project.