
Nate Holden, PE

Project Manager / Principal Owner



EDUCATION

Bachelor of Science in Electrical Engineering, University of Minnesota, 1997

CERTIFICATION

Professional Engineer, Multiple States

PROFESSIONAL COURSES

- PLC, HMI, DCS, and VFD; design and programming courses.
- Project Management Professional Course work and Certification

EXPERIENCE

In early 2014, Nate Holden and a group of colleagues formed Saginaw Power & Automation (SPA); a Systems Integrator and Electrical Services Provider. Prior to SPA, he helped build a multi-office consulting engineering group for a multinational automation company where he held various technical and leadership rolls. Prior to that, he worked as a project engineer for a Systems Integrator and a Pulp and Paper Company.

Mr. Holden has extensive experience in project management, electrical and control system design and integration, checkout and startup support, troubleshooting, budgeting and cost control, as well as contractor management.

REPRESENTATIVE EXPERIENCE

PROJECT MANAGEMENT

Flanagan South Pipeline, Enbridge Energy

Enbridge's Flanagan South Pipeline, L59, spans from south of Chicago to near Oklahoma City. This new pipeline project included terminal additions at both ends of the line, 8 new pump stations, and 60 new automated emergency isolation valves. The control system equipment included 87 new PLCs, 13 new PanelView Plus terminals, and supporting networking and SCADA system interface equipment. Mr. Holden served as the US pipeline control system project manager.

Chemical Cellulose Pulp Mill Expansion, Sappi Cloquet LLC

The purpose of this expansion project was to convert the Kraft Pulp Mill to allow for the production of both Kraft Pulp and Chemical Cellulose Pulp. The scope included additions and modifications to multiple areas of the pulp and paper mills. Mr. Holden served as electrical project and construction manager for modifications to the recausticizing plant, evaporators, recovery boiler, stock preparation, and #4 Paper Machine.

New Facility Control System, Mesabi Nugget

Team was responsible for the design, control panel supply, programming, commissioning, and startup support of this new 6000+ I/O point system. The system consists of Factory Talk View SE servers and clients, ControlLogix PLCs, and networked IntelliCenter MCCs. Mr. Holden served as project manager and lead engineer.

Offshore Oil Rig HVAC System Controls, IMECO Inc.

Team was responsible for the design, control panel supply, programming, and commissioning / startup support for this system. The system consisted of a ControlLogix PLC, Panelview Plus terminal, and multiple solid state contactors utilized as high speed controllers for duct heaters. Mr. Holden served as project manager and lead engineer.

Boiler & Dryer Controls Upgrade, Ainsworth Engineered

The team was responsible for upgrading the obsolete control system. The original system consisted of a Foxboro controller, PLC 5 controllers, single and 3-loop standalone controllers, and hardwired relay logic. The system was updated to ControlLogix PLCs and a Wonderware server/client based HMI system. Mr. Holden served as the project manager and lead engineer.

Wood Pellet Mill, Pro Pellet

The team was responsible for the design, control panel supply, programming, and commissioning and startup support for this new facility. The system consists of a CompactLogix PLC, Panelview Plus terminal, and 18 PowerFlex 525 VFDs all networked over Ethernet. Mr. Holden served as the project manager, design engineer, programmer, and startup engineer.

ENGINEERING**Automation Engineering, Essar Steel**

The team was responsible for providing electrical and control system design and installation documents for the new Pellet Mill and Concentrator areas of this new facility. These documents included instrument location dwgs, junction box dwgs, instrument lists, cable schedules, switchgear one-lines, electrical layout dwgs, MCC elevation dwgs, MCC one-lines, motor schematics, and UPS panelboard dwgs. Mr. Holden served as lead engineer.

Water Treatment Plant Upgrade, Sappi Cloquet LLC

The team was responsible for upgrading the obsolete control system. The original system consisted of PLC 5 controllers, PanelView Classic terminals, and outdated VFDs. The system was updated to ControlLogix PLCs, Panelview Plus terminals, an interface to the plant wide DCS system was updated, and new PowerFlex VFDs were added and controlled over Ethernet. Mr. Holden served as the lead engineer.

Great Ships Initiative Land-Based Research, Northeast Midwest Institute

This facility evaluates performance of systems intended to prevent the spread of invasive species via ships' ballast water systems. Mr. Holden completed the initial electrical design for this facility and continues to support design and programming changes on an annual basis as the facility continues to evolve.

Catalytic Converter Facilities, Delphi Automotive

The team was responsible for the control system design and implementation for a new batch process for mixing and distributing materials to high precision coaters for catalytic converters. The system consisted of networked instrumentation, ControlLogix PLCs, networked VFDs, and a custom batch system. Mr. Holden served as a design engineer, programmer, and startup engineer.

Catalytic Converter Coater, Delphi Automotive

Mr. Holden worked with a mechanical engineer on the design and implementation of a new high speed and high precision coater for catalytic converters. He completed the electrical design, programming, and supported startup and commissioning. Delphi distributed this design worldwide and Mr. Holden completed projects in France and South Africa.

Beverage Processing Facility, Slim Fast Foods

A new 450,000 sq. ft. processing and packaging facility was built to produce Slim Fast's dietary shakes. The team was responsible for the control system design and implementation. The system included 13 ControlLogix PLC systems, an RS Batch system, RS View servers and clients, IntelliCenter MCCs, and networked valves and instrumentation. DeviceNet, ControlNet, and Ethernet networks were utilized. Mr. Holden supported panel checkout, programming, and startup efforts.

Lime Kiln & Reausticizing Plant Installation, Potlatch Corp

A new lime kiln and liquor reausticizing plant was installed as part of an overall pulp mill replacements project. Mr. Holden served as lead electrical startup and commissioning engineer.

MAINTENANCE**Maintenance Supervisor, Potlatch Corp**

Mr. Holden led a team of 18 hourly electricians that supported the Pulp Mill. The team completed PMs, addressed emergency breakdown calls, and completed small projects.

Reliability Engineer, Potlatch Corp

After the pulp mill replacement project was completed and running at this facility, the focus shifted to improving uptime. Mr. Holden worked with a team of engineers in the new Pulp Mill, utilizing root cause analysis to determine the causes of downtime, and then implemented improvements to eliminate downtime.