# **Technical Capabilities**

# **Professional Engineering Services**

Disciplines

- -Mechanical
- -Electrical
- -Structural
- -Civil
- -Process Piping
- -HVAC

**Feasibility Studies** 

**Detailed Project Cost Estimates** 

Engineering & Utility Investigations, Reports & Design

**Procurement** 

- -Equipment and Materials
- -Trade Contract Bids
- -Bid Evaluations

Management and Control of Equipment Installation

Cost Control and Progress Reporting

Permitting

**Raw Material Sourcing** 

Process & P&ID development

**Process Investigation** 

**Process Improvements** 

Site Selections—Greenfield Sites—

**Brownfield Sites** 

## **Machine Safety**

Independent ISO 13849 Verification

Peer Risk Analysis

Safety Field Validation

Safety Reviews

Due Diligence Compliance

Risk Assessments

Safety Mitigation Planning

#### **Power Studies**

Arc-Flash Analysis

**Overcurrent Cordination** 

**Transient Stability** 

**Short Circuit Studies** 

**Power Quality Analysis** 

**Stability Studies** 

**Power Factor Correction** 

Harmonic Analysis

**Load Flow Studies** 

**Grounding System Studies** 

**Arc-Flash Corrections** 

### **Power Engineering**

**Substation Design** 

**Custom Substation Expansions** 

**Transformer Upgrades** 

Automatic Transfer Switch Design/

Supply

Synchronous Motor Field Application

System Retrofits

**Power Monitoring** 

Wound Rotor Motor Slip Recovery

**Systems** 

AC & DC Drive Retrofits

**One-Line Drawings Creation** 

Turn-Key Projects

PLC Systems LOTO Procedures

Creation

# **System Design and Integration**

Coordinated Drive Systems (AC&DC)

Low Voltage Drive Solutions

**Medium Voltage Drive Solutions** 

**Human Machine Interface** 

**Industrial Networking** 

**Generator Control Panels** 

eHouse Design and Supply

#### **Testing Services**

Low to Medium Voltage Circuit

**Breakers** 

Switchgear and Panelboards

Low, Medium and High Voltage

**Transformers** 

Solid State Relays

Electro-mechanical Relays

**Generator and Motor Testing** 

Low to Medium Voltage Cable Testing

Medium Voltage Cable Fault Locating

**Infrared Thermography** 

**Ground Grid Testing** 

Low to Medium Volt Switches

Vacuum Bottle Interrupters

**Automatic Transfer Switch** 

Metering

**Instrument Transformers** 

**Surge Arrestors** 

Low and Medium Voltage Bus-duct

**Battery Banks** 

Vista Switches

Oil Analysis

**Power Quality Analysis** 

**High Resistance Grounds** 

#### **Fabrication Capabilities**

**Custom Panel Design** 

**Custom Bus Bar Forming** 

UL, CE and CSA Certification

#### **Electronic Repair**

Authorized Drive Repair Center

Circuit Board Testing and Repair

AC & DC Drive Repair

Medium Voltage Drive Repair



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