

DRIVES UPGRADE REDUCES ARC-FLASH RATING

Pieper Automation and Metro Power work together to insure a successful turnkey drives replacement.



SOLUTION

- All new wiring and components were in place and tested prior to the outage
- All existing components and wiring needing to be disconnected and removed were clearly identified
- All cables and components were on site prior to the outage
- Existing drives were site cleared and replaced with new drive system
- New drive control system was installed along with operator interfaces and safety control - (E-Stop/Coast Stop) systems

RESULTS

- New drive control system was installed along with operator interfaces and safety
- The Arc-Flash rating for all components was reduced to PPE Category 2 (8 cal/cm²) or below
- The new drive interface gave operations greater insight and control of the system

PROJECT SUMMARY

At Pieper Automation, we pride ourselves in our unique ability to provide complete industrial automation/controls solutions & services for our customers, including on-site support, integration of machines/systems, new equipment design and machine upgrades. Along with our custom assembly machine manufacturing and panel building, we deliver you a seamless solution – from one supplier.

Pieper Automation designed and installed a replacement for a paper machine drive system. The paper machine was currently powered by a 40 year old, open framed DC Drive System. This system was hard to maintain due to its exposed design, scarce availability of replacement parts and a Class Dangerous Arc-Flash Rating.

The customer contacted Pieper Automation to help tackle this project and provide a solution which to upgrade the system as well as ensure safety requirements were met. The customer outlined (3) main goals:

1. No safety incidents, Zero safety incidents for the installation
2. A safe and maintainable new drive system
3. Keep the outage and lost production to a minimum

Our engineers worked with the customer and their preferred drive system vendor to arrange the new drive system in a way that most of the large motor cables were to be reused, thus saving downtime and cable costs. A new breaker controlled infeed was specified for the substations feeding the drive system to reduce the Arc-Flash potentials. The team created a detailed engineering package, including all major components specified and purchased.

Pieper Automation enlisted the help of their sister company, Metro Power, to provide the electrical installation. Site reviews were conducted to assure the scope was clear and everyone understood the potential hazards and safety requirements of the mill. The team had new wiring and components in place and tested prior to the outage. Existing drives were site cleared and replaced. Three substations were upgraded to reduce Arc-Flash potentials.

The installation was completed with zero safety incidents. A new safe/maintainable solution was provided and completion was on-time and in budget.



WE ALWAYS FIND A WAY

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