

PAC Machine Edition Enables Fast, Easy PLC Standardization/Migration for Large, Multi-site Mining Company

RESULTS

- Faster PLC upgrades with minimal impact on operation
- Reduced the complexity and engineering hours required for legacy PLC migration
- Completed an average of 15 migration projects per year
- Reduced total cost of ownership



APPLICATION

Aggregate mining

CUSTOMER

A leading U.S. supplier of building materials - including aggregates, cement, ready mixed concrete and asphalt.

CHALLENGE

A building materials company has been growing in the North American market through acquisition and expansion. This growth presents operational and maintenance challenges in that often acquisition sites will run on different automation platforms based on disparate PLCs. In addition, there are frequently no in-house personnel trained in the wide variety of automation platforms, which can present challenges for continuous operation, upgrades and maintenance. Furthermore, the complexity of overall maintenance increases with the need for managing critical spares for multiple vendors, while deployment of knowledgeable personnel becomes more complicated.

SOLUTION

To streamline operations, the company sought to standardize on a single PLC vendor. The choice to standardize on Emerson was made based on the ruggedness and quality of the hardware solution and the availability of a unique programming environment – PAC Machine Edition (PME). Emerson provided a comprehensive and cost-effective migration road map which reduced the total cost of ownership.

Standardizing on a single platform meant that each new site would have to be assessed and migrated to Emerson hardware. Because each new site presented unique challenges in terms of

Emerson's PAC Machine Edition allowed a leading supplier of building materials to implement faster PLC upgrades with minimal impact on operation, resulting in reduced total cost of ownership.

pre-existing PLCs, Emerson guided the customer to standardize on the PROFINET® protocol. Being an open standard, it allows integration of a variety of vendor products with the Emerson PACSystems™ RX3i control architecture.

Previously, the engineering design hours for replacing legacy PLCs could be excessive since vendors would require multiple programming tools. Emerson PME provided the customer with a single, integrated environment to configure and maintain control applications. This software supports the entire range of Emerson hardware, such as PLCs, VFDs, servos and edge devices. PME was critical in reducing the complexity and engineering hours needed for the migration of legacy PLCs.

In maintenance, change management was, and continues to be, a critical process. The change management functionality of PME helps track all PLC changes with associated audit stamps. The audit stamps prevent any unauthorized changes and provide better visibility for the entire maintenance team. All changes have to be approved from a central point. Additionally, PME change management allows the team to make backup copies and archive project history for future reference.

The customer has also leveraged the Tool Chest feature of PME extensively, as it provides a storage system for objects including their associated logic and data structures. Several applications specific to their operations were developed and stored to be easily deployed on future migration projects. This greatly simplifies the configuration time.

Because of the simplicity and ease of use of the Emerson integrated software tool for all PACSystems devices, the company has successfully completed an average of 15 migration projects per year. They also continue to see reduced lifecycle costs based on the PACSystems platform.

RESOURCES

PACSystems

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