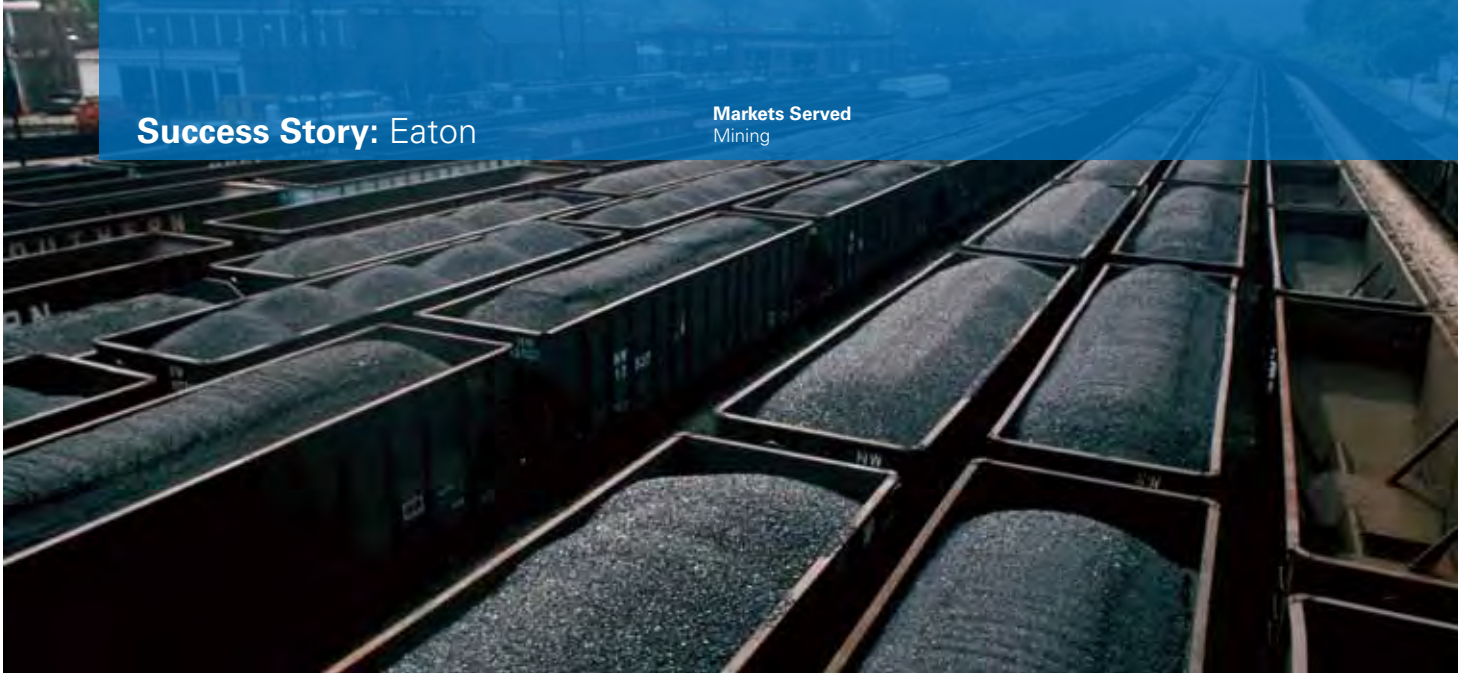
Success Story: Eaton

Markets Served
Mining



Power Xpert® CX and ARMS™ protection offer the latest safety technology for mining applications

Location:
NSW, Australia

Segment:
Mining

Products:
Power Xpert® CX, ARMS™, variable speed drives

Contact:
Ray Caparas

Senior LV project engineer

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Problem
High labor costs

Long lead times for equipment

Safety Concerns

Solution
Eaton used their latest Power Xpert® CX design with IEC 61439 and IEC 61641 compliance and ARMS protection to offer the latest in safety technology. Eaton also leveraged their manufacturing locations throughout Asia to pre-configure designs which reduced both design time and the amount of labor required on site.

Results
Total installed cost reduction of 17%

Application

A global mining company, under extreme pressures to reduce installation cost and improve worker safety relied on Eaton's expertise. The company was interested in the latest safety features on the market, but needed to reduce installation costs and lead times associated with their low voltage equipment. Aware of the hazards associated with arc flash, the company had looked at many options on the market. In the end, they were impressed with Eaton's simple approach towards mitigating work hazards associated with low voltage equipment and decided to specify Power Xpert® CX with ARMS™ (Arc Flash Reduction Maintenance Switch) protection on the main circuit breakers. The customer also worked with Eaton's design team in Suzhou, CN to develop a series of pre-configured panel designs to reduce the design time required for subsequent phases of the project.

Industry Expertise

Australia's standards for both construction and arc-fault containment differ from IEC standards. Eaton's in depth knowledge of the standard and local industry experience helped the customer make a more informed decision about their equipment choice. Eaton offered several seminars to help the consultant and end user understand the advantages of using Eaton's IEC 61439 type tested design and IEC 61641 compliant equipment.

Eaton's Power Xpert® CX switchgear far exceeds the requirements of AS 3439 and our arc fault containment testing is more stringent what is required by Annex ZD of the Australian standard.

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Arc Fault Containment

Eaton's Power Xpert® CX assemblies are one of the first designs on the market to offer compliance to the new IEC 61641 standard. Testing to this standard is optional and focuses on worker safety and system reliability. Eaton has passed testing to all 7 criteria in the standard which includes containment of the arc within the switchboard compartment and the ability to restart the equipment after an arc fault.

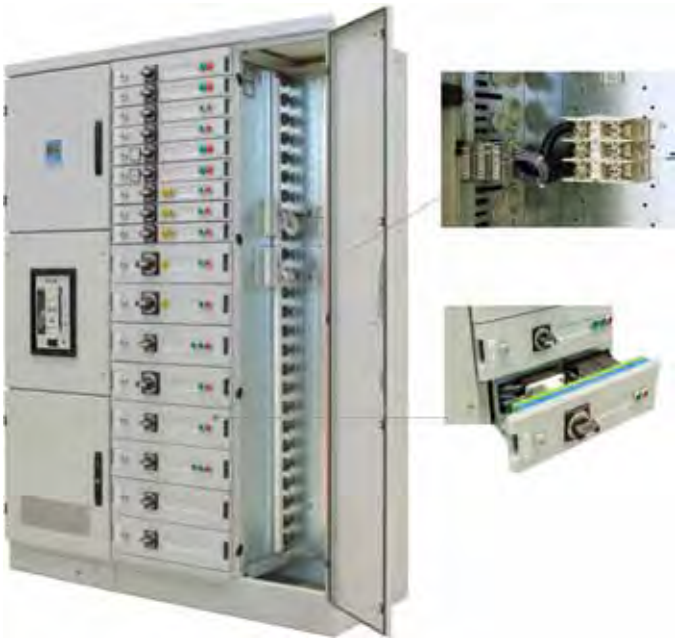
Direct ARMS™ activation on the circuit-breaker

Safety

Beyond testing, Eaton's "Prevent rather than Cure" approach to safety provides customers with simple features that can mitigate risk without a significant increase in cost. The ARMS™ trip unit for instance, allows workers to reduce breaker clearing times while performing maintenance. By activating ARMS, the likelihood of serious injury is reduced. In addition, Power Xpert® CX offers safeguards which prevent accidental contact with live parts and visual indication of hazardous voltage.

Cost Effectiveness

To reduce design expenses, Eaton's engineering staff developed standard cubicles which could be used throughout all five phases of the expansion. This design helped the customer standardize the switchgear installed at the site and helps reduce indirect costs like training.



Power Xpert® CX system is modular in construction. It is a self supporting sheetsteel structure, consisting of structure profiles and sheet-steel side walls and covers.

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