

Case Study:

Failing Insulated Case Circuit Breakers



Continual Faults Cause Significant Loss for This Food & Beverage Customer

Objective

- Diagnose continual outages in food and beverage plant.

Solutions

- Planned a 3-day outage with rolling blackouts to minimize disruptions and maximize equipment service.
- Immediately addressed issues such as failing circuit breakers that pose an immediate threat to personnel and equipment.
- Documented remaining problems so another planned outage can be conducted to resolve outstanding issues.

Results/Benefits

- Restored a safe working environment for plant personnel.
- Improved safety for equipment to avoid costly breakdowns.
- Virtually eliminated downtime due to faulty breakers and saved the customer overtime and equipment replacement costs.
- Helped the customer to understand the benefits of preventive maintenance.

Background

The Quad Plus team was called out to this customer in the food and beverage industry to get to the bottom of their continual faults and outages. Because the customer runs a continuous process, if one part of the process goes down, it results in exponential losses. The outages impacted their production schedule and cost tens of thousands of dollars in gear replacement and overtime labor for maintenance personnel and contractors.

The main problems for the industrial circuit breaker repair team included:

- Insulated case circuit breakers with faulty trip units that would not open during an actual fault.
- Breakers with mechanical damage from rough handling or age
- Breakers in need of lubrication that were no longer operating as expected.

The low-voltage distribution breakers spanned a number of makes and models such as Siemens WL, GE AKRU, ABB SACE, and ITE K-Line.

Quad Plus Solution

We planned for a three-day outage of rolling blackouts in the plant. The objective was to resolve the issues that posed an immediate danger to plant personnel and equipment, along with those that would bring production to a halt. By staggering the outage, we could work around other trades and crafts to maximize the amount of equipment serviced while minimizing the impact on other work.

We then documented the remaining issues so proper action could be taken during the next scheduled outage. The customer now understands that intentionally taking a plant down for several days is costly and inconvenient. However, doing so allows for the outage to be planned and has an expected time of completion.



Quad Plus®