

Case of use: Detection of malfunction in control system.

Summary: After performing an operation analysis of a Rotork IQ3 actuator, two electrical anomalies and more than 1000 dangerous operations were detected. A detailed analysis of the data, revealed that all dangerous operations where external orders to the actuator, leading to an inspection of the cabling between the control system and the actuator.

Findings: Damages were found in the cabling, near of the actuator. This damages were caused by excessive heat from de surroundings of the cable, and produced false close orders to the actuator, causing several overheating to the internal contactor of the actuator.

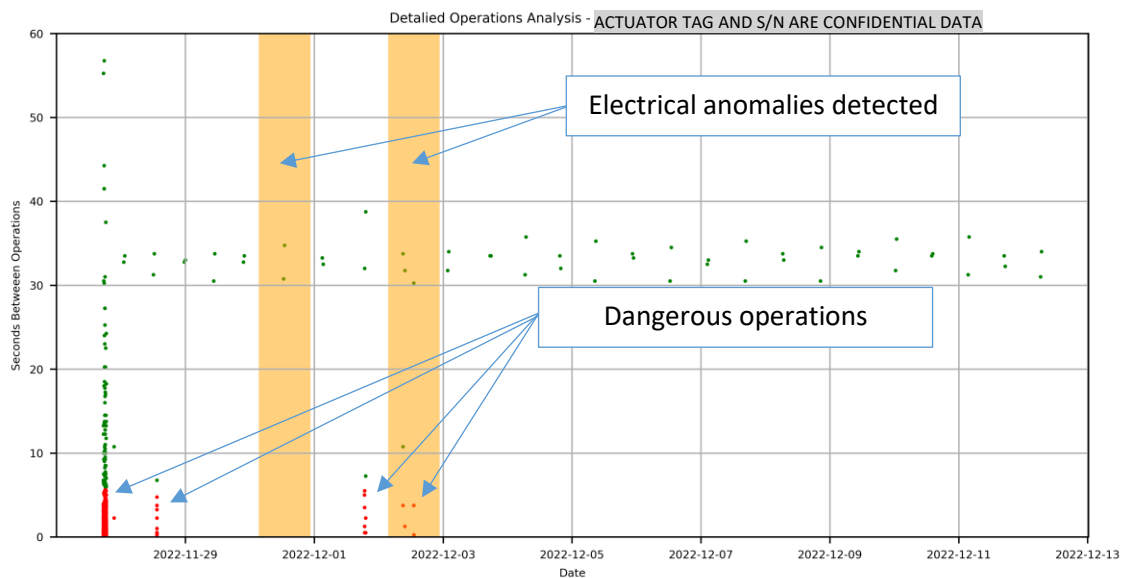


Fig. 1. Detailed operations analysis in the electric actuator.

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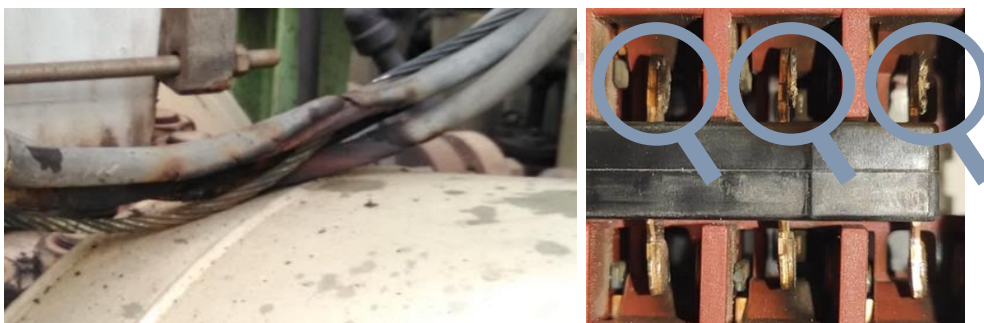


Fig. 2. Damaged cabling and internal contactors

Results: Damages were repaired in a planned way during normal operation of the plant, avoiding a potential TIER 1 incident and a several profit loss.