Case Study:

Annual IR Scans Optimize Preventative Maintenance Strategies

Quad Plus®

Annual NFPA 70B IR Scan Safeguards Adhesive Manufacturer's Electrical Systems

Objectives

- To comprehensively assess the effectiveness and benefits of Infrared Scanning (IR Scan) as a required and crucial element of electrical maintenance and preventative measures within facilities

Solutions

- Outdoor covers were replaced to avoid water/debris inside the disconnect
- Hot wires were replaced and connections tightened on the disconnects middle phase
- Torque phase connections were brought to manufacturer specifications
- Faulty heater inside agitator breaker was replaced
- Connections were repaired inside the Solvent pump breaker
- Spliced wire connections were repaired to ensure consistent temperature throughout all wires.
- Maintenance was scheduled for all facility equipment requiring cleaning to run at efficient capacity

Results/Benefits

- Avoidance of catastrophic faults that may occur
- Safeguarding the facility from down time and unnecessary outages
- Discovering faults that cannot be seen by the naked eye

Background

An adhesive manufacturing company contracted us to perform their required annual Infrared Scanning (IR Scan) of their electrical equipment. The scan revealed several critical issues that required immediate attention and were seen in various areas across the facility.

The first problem was discovered in the outdoor disconnect unit, operating at 480 VAC. It was found with its covers removed exposing wires to the outside elements. This presented a significant safety hazard that demanded urgent attention.

In another area, the middle phase of the pump disconnect had a problematic wire and connection. This raised concerns about the reliability and performance ability of the equipment calling for prompt intervention to prevent potential disruptions.

Additionally, a loose connection in one of the phases of the transformer feed was identified. This electrical instability had the potential to lead to power fluctuations and operational downtime.

Lastly, in the MCC room, the agitator displayed irregular heating patterns, with two heaters running warm while one remained completely cold. This hinted at possible equipment malfunction requiring a closer examination.

Quad Plus Solution

A comprehensive approach was taken to address the challenges found during this inspection to ensure proper electrical maintenance and adherence to safety measures.

Firstly, the outdoor disconnect unit was promptly secured with new covers to eliminate this hazard. For the problematic pump disconnect, the faulty wire and connection were repaired and replaced, ensuring reliable operation of this critical equipment.

In addition, the loose connection in the transformer feed was tightened to stabilize the electrical supply and minimize the risk of power fluctuations. In the MCC room, the irregular heating patterns of the agitator were resolved, ensuring continued equipment efficiency and safety.