Preparing Your Facility for an Infrared Electrical Inspection

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Discussion

In most facilities across the midwest, regularly scheduled shutdown periods allow for all kinds of repairs, improvements, and preventive maintenance that are vital to the efficiency of the facility.

Arguably, the most important system in any facility is the electrical system. As the backbone to every facility process, electrical systems must be maintained regularly. One of the best ways to help maintain electrical systems is through the use of electrical infrared inspections performed by qualified infrared thermographers.

There are many ways to prepare your facility for an infrared inspection of your electrical system. Here are a few infrared electrical inspection preparation ideas to consider applying before your next scheduled IR scan.

Follow 2018 NFPA 70E Requirements

As you're most likely aware, the 2018 edition of *NFPA 70E: Standard for Electrical Safety in the Workplace* is out and has been in effect since August 2017. With the 2018 edition, some changes put more emphasis on a company's electrical safety program including arc flash and shock hazard assessments, and job safety planning.

Prior to having an infrared inspection company working on-site, make sure to update and prepare your electrical safety program. Some areas to highlight for the IR company would be how you have addressed the risk assessment procedure.

Many facilities have performed arc flash and shock risk assessments where their electrical equipment has all been properly labeled. Ideally, electrical hazards must be identified, risks assessed, and risk control implemented prior to the arrival of the IR company.

Another key requirement of the 2018 edition is that a job safety planning and job briefing meeting is performed before work on energized equipment begins. This must be done with the infrared inspection company when they arrive but before they conduct an inspection.

Prepare All Electrical Rooms / Areas

From experience working in facilities with less-than-organized electrical areas, we have found that a little preparation prior to our company showing up on-site would have saved time and created a much safer environment.

Electrical rooms are inherently hazardous areas that should be kept clean and organized. To make your electrical areas free of hazards, make sure to:

- Follow National Electric Code (NEC) guidelines for working clearances by keeping the immediate areas around the equipment clear, especially anything set on top and in front of equipment.

- Label all equipment such as MCC buckets, panels, disconnects, control panels, etc. clearly with a name that corresponds to your computer database as well as appropriate arc flash and shock hazard labels. This also helps us establish an inspection route.

- Keep the electrical areas well lit. Replace any lamps that are out or add lighting to brighten the areas up.

- Generally clean the floors and eliminate tripping hazards.

- Keep safety cones and barriers close to help the infrared thermographers keep unqualified employees away from open and energized equipment.

A little organization goes a long way when it comes to electrical safety and efficient infrared inspections.

Schedule Well Ahead of Plant Shutdowns

Scheduling an infrared inspection at least a month ahead of a planned shutdown is a detail that gets little attention and that needs to change. Infrared inspections are most effective as part of a predictive maintenance plan when followed by timely repairs. The key word here is ‘timely’.

The reason IR inspections of electrical systems should be scheduled that far in advance is because it gives your maintenance employees time to order parts and materials needed for repairs.

Depending on the infrared problems found in the electrical system and the equipment needing repairs, lead times to order parts may cut it close if the items are non-stock or made from factory. Give your maintenance department plenty of time by scheduling IR scans well ahead of planned shutdowns (at least a month in advance).

When preparing for an electrical infrared inspection, make sure to consider all the little details that make a big difference for an efficient IR scan. By updating your electrical safety program to follow the 2018 edition of NFPA 70E, preparing the electrical equipment in all of your electrical rooms, and scheduling at least a month in advance of a planned shutdown, you'll ensure that your facility is ready to realize all the benefits an electrical infrared inspection has to offer.