Electrical Equipment Maintenance Services

Chautauqua Patrons Insurance Company
Firmly Rooted Since 1877

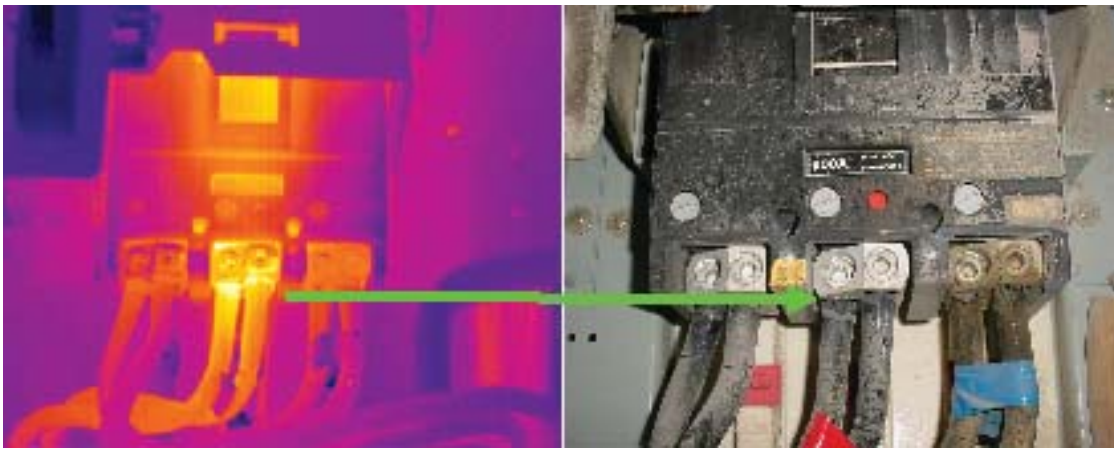
Electricity running through your electrical system can not be seen or heard. ***If your lights are on, the electrical system is fine, right?*** Our experience with electrical losses shows quite the contrary and points to the fact that electrical maintenance on key equipment is often overlooked. Over a recent three-year period of equipiment breakdown losses, electrical losses were the most prevalent; 52% by frequency and accounted for 60 % of the loss dollars (severity). Factors contributing to electrical system failures include: dust/dirt accumulation on equipment, humidity/corrosion, power surges, overloading and loose connections inhibiting electrical equipment's ability to conduct heat away from itself as part of its normal design and function. Preventive maintenance on electrical equipment is not only beneficial for identifying overheated terminal connections, overloaded circuits, and loose bus connections, it's downright necessary.

If equipment conditions like this are not identified and addressed by means of well planned maintenance, they will progressively deteriorate, with immediate consequences of property damage both at the source of failure, and possibly upstream or downstream to other equipment. In addition, loss of business income is a real possibility. Infrared scans should be performed by qualified technicians during peak electrical load demands at the facility on electrically energized equipment in order to uncover potentially serious problems and that would otherwise go undetected. Once problems have been identified, corrective action should be taken to improve existing conditions, or remedy conditions in time to mitigate loss to property, business income, and personnel safety.

The frequency of follow-up infrared inspections depends on the number of issues found during the initial service visit. Operations with a harsh working environment may need subsequent maintenance services at six-month intervals for the first two years. The frequency of additional maintenance services can be reduced to once every three to five years after initial action has been taken to remedy the most serious issues.

Make no mistake about it, an aging electrical distribution infrastructure coupled with older electrical equipment operating in an adverse environment with no history of electrical maintenance services performed will inevitably lead to electrical failure with a profound impact on the continuity of successful business operations.

Infrared **Original**



Loose connection

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Electrical Part	Source of Loss
Circuit Breakers	Arcing Lack of Lubricant Misalignment Corrosion Power Surge Worn Contacts
Liquid Cooled Transformers	Deteriorated Winding Insulation Loss of Blanket Gas Worn/Broken Bushings Dielectric Oil Deterioration Arcing Blocked Oil Cooling Ducts Blocked Air Vents Power Surge Persistent Swings in Current Moisture Overheating
Bus Duct	Arcing Dissimilar Connection (cooper to aluminum) Water Intrusion Corrosion Loose/Overtight Connections

While routine visual inspection may detect physical damage or deterioration to electrical components, it is just one part of a comprehensive electrical maintenance plan that should be complemented by the appropriate use of technology-based testing equipment and procedures. That is why we have teamed with electrical service vendors well known in the industry for their solid reputation as industry-leading providers of electrical equipment maintenance services. Electrical maintenance services are listed in the table to the right.

Electrical Maintenance Services
Infrared Scanning
Transformer Oil Testing