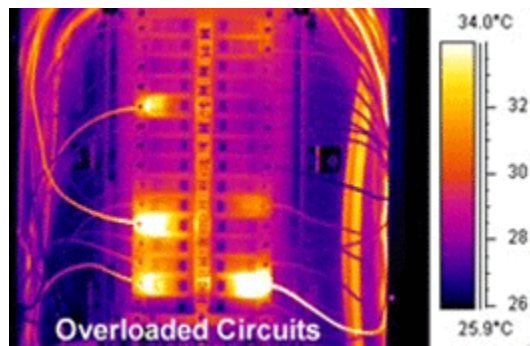


## Liberty Electric's Electrical IR Inspection Service

Our electrical thermal infrared inspections are used to survey your facility's designated electrical equipment in order to find and pinpoint defective components and elevated temperatures within your power distribution system. If unfound or undetected these thermal "hot spots" can cause- potential fire, arc flash, or an electrical service interruption. Thermal hot spots are typically caused by **unbalanced** or **overloaded** electrical circuits, **loose connections**, or **broken** equipment. These conditions are often overlooked during routine evaluations of facilities and can result in the release of heat that will be visible only through infrared thermography detection services.



### BENEFITS

Our electrical infrared survey can save thousands of dollars, depending on the number and category of anomalies found. In addition to the direct financial savings, valuable time is saved by incorporating an annual infrared electrical survey into your PM program. Providing accurate information regarding the integrity of your electrical system's components cuts down on maintenance time, prevents costly replacement of equipment and can eliminate unforeseen outages and downtime.

An infrared (thermal) electrical inspection survey can help:

1. Maintain the integrity of your facility's electrical system
2. Reduces electrical fire hazards
3. Provide uninterrupted power to production operations
4. Detect faulty connections/overloaded circuits
5. Provide a snap shot in time of the condition of your mechanical systems, motors, bearings, etc.
6. Preventative or predictive maintenance programs save money by reducing
  - Premature equipment failure
  - Emergency overtime
  - Overnight shipment of parts
  - Insurance premiums (Check with your insurance company for discounts for performing regular infrared inspections)
  - Loss of revenue due to downtime

## **WORK PROCESS**

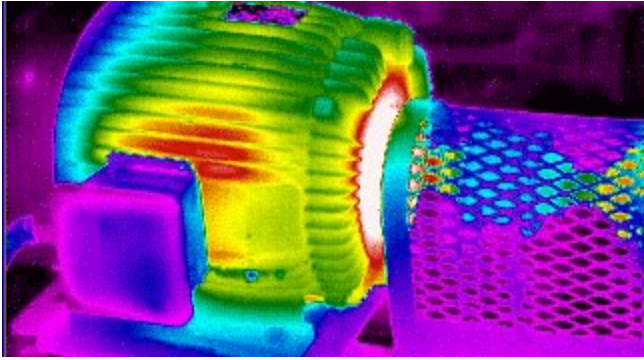
Liberty Electric's certified thermographers quickly and non-destructively find and pinpoint electrical and mechanical problems that cannot be seen with the naked eye, such as loose connections, faulty breakers, disconnects, overloaded circuits, imbalanced loads, weak motor windings and bearings, and much more. Detection and imaging of thermal problems are done using modern thermography cameras. During the electrical infrared survey, our team will generally inspect the following equipment, but can provide inspection and imaging on any electrical or mechanical components according to your specification.

- Switch Gear
- Transformers
- Service Disconnects
- Transfer Switches
- Overhead Busways
- Motors / Pumps / Bearings and Belt Alinement
- Motor Control Centers
- Breaker Panels
- Starters
- UPS Equipment
- Chillers and Roof Top HVAC Equipment
- Lineside of VFDs

## **DELIVERABLES**

Liberty Electric's electrical infrared reports are concise and to the point, making anomaly location easy to determine and facilitate repairs. Each report includes: A detailed easy-to-read inspection report including:

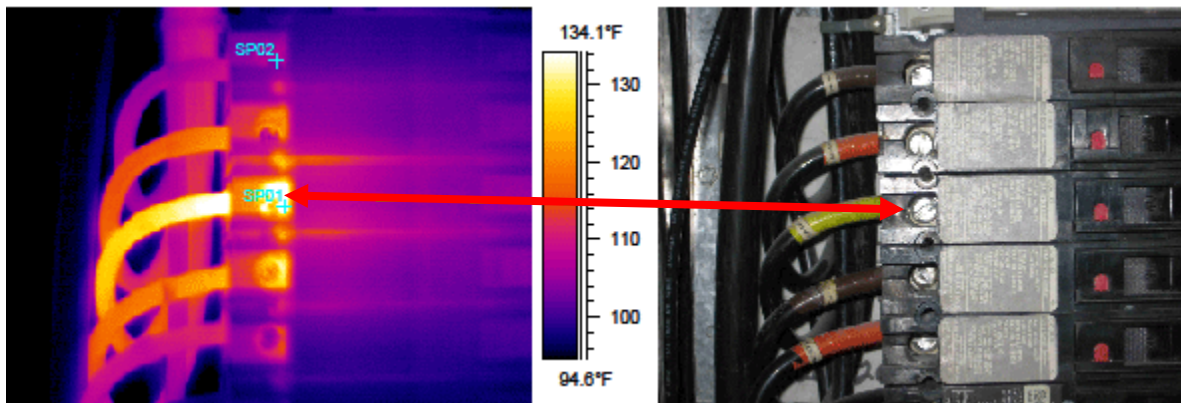
- Complete list of equipment inspected
- Written narrative of the survey
- Report form for every anomaly detected during the inspection
- Recommended corrective action



**Infrared Image showing motor bearing end bell overheating**

A report sheet accompanies each problem which includes:

- digital visible light photograph & color thermogram (thermal infrared) picture
- severity category of problem
- potential cause of problem
- physical location of problem
- problem area temperatures
- Recommended corrective action



**For more information on how Liberty Electric Inc. can help you make your facility a safer facility and OSHA compliant with a Thermal Infrared Audit use Liberty Electric's Contact Tab on our home page.**