

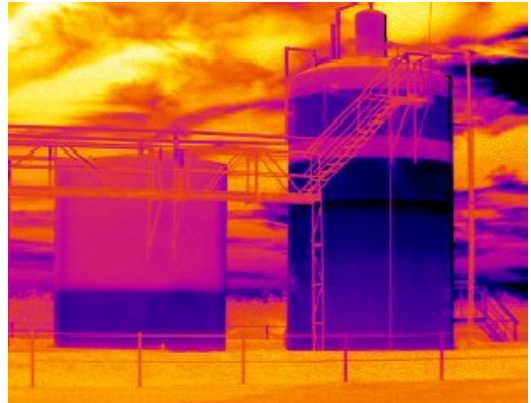
Predictive Maintenance Inspection with Infrared

Infrared cameras can be utilized to find equipment failure areas before the failure occurs. Predictive maintenance with Infrared cameras can be used for manufacturing industries, utilities, service companies, and electrical contractors.

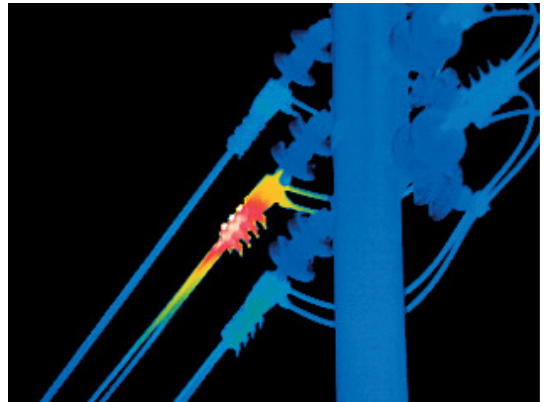
Manufacturing – The production equipment and electrical system is the life line of a manufacturing facility. If unplanned failure can result in down time, expense, and safety concerns. Predictive maintenance with infrared cameras can provide the maintenance personal with critical information about the condition of the manufacturing equipment and electrical system. Examples of equipment that can be inspected with thermography are:

- **Pipelines** – check for anomalies, such as scale buildup and leaks;
- **Storage Tanks** – sludge levels, leaks;
- **Process Valves** – position open/closed, leakage;
- **Pumps** – fuse problems, overloaded electrical wiring, bearings, and overheated connections;
- **Motors** – misalignment, overheated windings, overheated bearings;
- **Conveyor Belts** – overheated bearings, misalignment

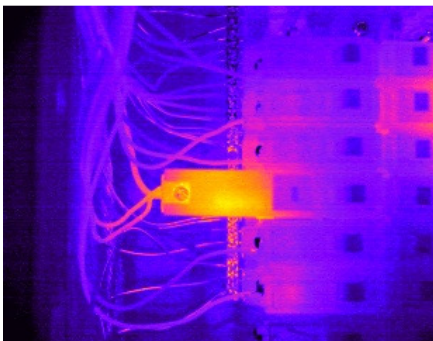
Utilities – Failures for electrical transmission lines are not an option for utility companies. Infrared thermography has become the core of utility predictive maintenance programs around the world. In order to avoid costly failures in power generation, transmission and distributions utility companies worldwide turn to infrared thermography to find anomalies before trouble strikes and service is affected. Poor electrical connections have heat signatures as a result of increased resistance that can be located with infrared cameras and repaired before failure occurs.



Sludge level inside holding tank



Transmission line anomaly



Electrical breaker heat signature

Electrical Systems – Inspection of electrical systems with infrared cameras allows detection of potential failure areas before they become real problems and measurement of temperatures in a non-contact mode. Electrical cabinets and components can be scanned to get an instant picture of potential problem areas. Most electrical problems can be repaired before they become real issues, such as fuses, electrical panels, bolted connections and switchgear. Temperature measurements can be taken from a distance and do not require contact with the electrical gear.

FDJ Engineering and Construction, PC has Energy audit, building envelope environmental specialist, and commissioning experts with experience and Level II certified thermographers to perform air barrier and Infrared (IR) scans on staff. Rectec Air Doors and a P 660 and BCAM Flir infrared cameras and software, and IMD in-house software assist FDJ personnel to take care of your commissioning, building defects identification, and preventative maintenance inspection needs. Our staff consists of Engineers and technicians with backgrounds in Civil, Mechanical, and Electrical Controls with licenses in Idaho, Oregon, and Montana. Visit www.fdjengr.com for company information.