

Infrared Services

Predictive Diagnostics



Benefits

Identify Potentially Damaging Electrical Degradation

Typically, traditional maintenance activities do not uncover these types of problems and most go undetected until there is an operating failure. Such failures can cause extensive damage resulting in significant business interruption and financial losses.

Annual infrared inspections can identify potential problems before an incident or failure occurs, avoiding costly unscheduled downtime and business interruption. When included as part of a planned maintenance program, it allows you to identify and deal with emerging problems early enough for maintenance to be performed, reducing emergency repair and maintenance costs, improving overall system reliability, and extending the life of the equipment.

- Reduced unplanned downtime through early detection of problems.
- Improved safety and compliance with applicable standards.
- Fewer emergency repairs and maintenance costs.
- Better overall system reliability.



Detect trouble spots while equipment remains energized, and take action before damage or an unplanned outage occurs.

Annual IR scans are part of the National Fire Protection Association's Recommended Practice for Electrical Equipment Maintenance (NFPA 70B) and are recommended by most insurance companies. They allow you to easily detect hot spots in your critical infrastructure.

However, not all infrared scans are the same. The electrical infrastructure experts from High Voltage Maintenance (HVM) use state-of-the-art cameras to clearly understand where electrical connections and components have degraded. The information gathered helps you determine how to best address these hot spots before they result in serious problems that can lead to unplanned downtime.



Our infrared services include:

- Online, non-intrusive testing.
- Expert analysis and advanced testing equipment.
- Comprehensive report of findings.

Expert Analysis & Advanced Testing Equipment

Two factors can significantly alter the accuracy of an infrared inspection: the testing equipment and the thermographer performing the test.

For these reasons, it is important to choose a reputable company with the necessary qualifications, equipment, and experience to perform an accurate infrared inspection. HVM has more than 50 years of testing experience. Combining the best technicians with the most up-to-date, well-maintained equipment allows us to detect even the smallest temperature differential quickly and efficiently.

Our experts routinely use infrared inspection to test the following types of equipment and components:

- Substation transformers
- Capacitors banks
- Switches
- Fuses
- Circuit breakers
- Busbars
- Cable splicing
- Motors
- Motor control centers (MCC)

Report of Findings

As a critical part of a complete predictive or condition-based maintenance program, infrared inspection findings are carefully documented in a comprehensive electronic and/or paper report that includes the following:

- High resolution, color digitized photographs and thermograms
- Recommendations for correction or repair
- Timely delivery of results prior to scheduled maintenance

Online, Non-Intrusive Testing

Infrared inspections are performed while equipment is energized and operating, avoiding any disruption to business. Unlike many predictive maintenance tests, infrared inspections do not require physical contact with the equipment.

Two simple requirements are necessary for testing:

- Enclosures must be open, allowing equipment to be in a direct line of sight (if infrared window/port is unavailable).
- Equipment must carry a load current during inspection.

Summary

Most electrical equipment generates heat during normal operation. Usually, this heat is safely dissipated on its own. However, problems can develop when excessive heat is generated due to corrosion, loose connections, or overload. IR services identify these abnormal hot spots in electrical and mechanical equipment before they cause an unplanned outage.

Experts In Electrical Reliability

Early detection from infrared testing can avoid unnecessary operational, safety, and financial losses. HVM's team of highly qualified personnel can help you reduce equipment failures, protect your assets and extend the equipment lifecycle.

Ordering Information

To learn more about HVM's Infrared Services, please contact us at 1 866-HVM-TEAM or visit HVMcorp.com.

