Infrared & Thermography testing involves the use of temperature and heat flow measurement as a means to predict or diagnose failure. This may involve the use of contacting or non-contacting devices, or a combination of both.

**Spectro Latest Technologies in our Organization** and our culture of working in close association with our clients to develop them into world-class maintenance organization has made us a leader in the industry.

Thermography scans using latest IR technology, with a combination of digital cameras has emerged as one of the best techniques in determining the **exact locations of hot spots/areas and determination of reasons for their causes and/or source**. Infrared thermography is a kind of NDT technology.

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**Why SPECTRO?**

SPECTRO has a track record, with proven performance on new construction, pipeline installation, in-service inspection and expansion projects, as the total NDT solution provider in all over India.

Our service offering varies from the conventional NDT techniques to advanced methods like Risk Based Inspection, Time of Flight Diffraction, Positive Material Identification, Magnetic Flux Leakage, Leak Testing, Electromagnetic Testing, Digital Radiography etc.

Our Non Destructive Testing Services also offer the necessary guarantees when quality, cost savings, business security and safety are needed, for both existing and new installations.

**Applicable Industries**

- Aerospace
- Medical
- Power plants
- Utility industries

**The Objective**

Vast losses in the industrial sector are caused by malfunctions that could be prevented. Although damages and degradation of isolation materials and other materials are not visible, in most cases they can be solved through preventive measures. The temperature of an object is often a sufficient indicator of the performance of the installation. SPECTRO can offer you inspection technology to make temperature differences visible.

Infrared Thermography maps the temperature differences of any object in a range from -50ºC to 1500ºC.

Instead of detecting the temperature point by point, our camera is able to detect the temperature across a complete surface.
High and low voltage installations tend to get hot before they fail. Thermal imaging allows corrective action to be taken before they fail.

**Mechanical**

Pumps, bearings, engines, early detection of winding damage, overheating, lack of lubricant, defective components, misadjusted bearing and drives it can be detected with a thermal imaging camera.

**Buildings**

Thermal imaging is the ideal tool for detecting missing insulation, constructional defects, pinpointing of leaks.

**R&D / Research**

Thermal imaging cameras are widely used for both fundamental and applied research. It helps product developers to bring products faster to market.

**Automation / Process control**

In production environments thermal imaging can be used for increasing production output and quality control.

**Gas Detection**

Thermal imaging cameras allow to detect harmful gases that can lead to explosions and accidents but also gases that are harmful to our environment.

**Border Security**

Borders need to be protected against intruders, smugglers and other unwanted intrusions. Thermal imaging cameras can spot a man-sized target at a distance of 20 Km.

**Security**

Thermal imaging cameras are the perfect tool for securing any perimeter 24/7.

**Traffic**

Thermal imaging cameras are widely used for traffic light management and incident monitoring.
Law enforcement
Police and other law enforcement officers use thermal imaging for spotting suspects in total darkness. They see without being seen themselves.

Fire Fighting
Firefighters use thermal imaging for finding people in smoke filled rooms and for many other applications.

Major Activities
- Reverse Engineering
- Automation
- R&D
- Inspection
- Training
- Calibration
- Testing

- Metals & Alloys
- Non Destructive Testing
- Rubber & Polymers
- Food and Agro Products
- Coal, Solid Fuels & Petroleum
- Electrical & Electronics
- Pharmaceuticals & Drugs
- Building Materials
- Minerals & Chemicals
- Leather & Textiles
- Water & Environment
- Paper & Packaging Materials
- Hazardous Substances
- Clean Room Validation

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