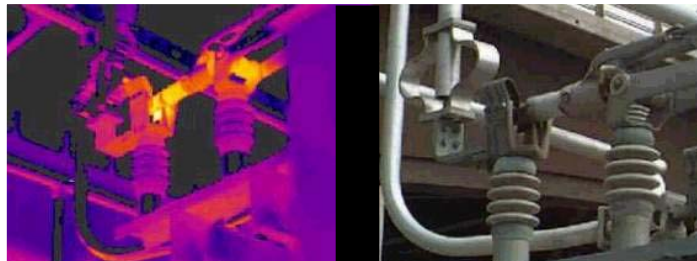


# A GIANT STEP TOWARDS FIRE PREVENTION



## THERMOGRAPHY



## SNAP SHOT LOSS PREVENTION

CORPORATE RISK CONTROL LTD.

## ***What is Thermography?***

**Thermal radiation, heat, is constantly being emitted by all objects around us, including ourselves.**

**It is below the spectrum of visible light and above microwave spectrum.**

The technique for making energy visible is called

### ***Infrared Thermography.***

The thermal image produced by the infrared instrument allows for meaningful interpretation of the thermal properties of various objects.

The image, along with the temperature data it contains is digitally stored and processed with a computer for later evaluation and analysis.

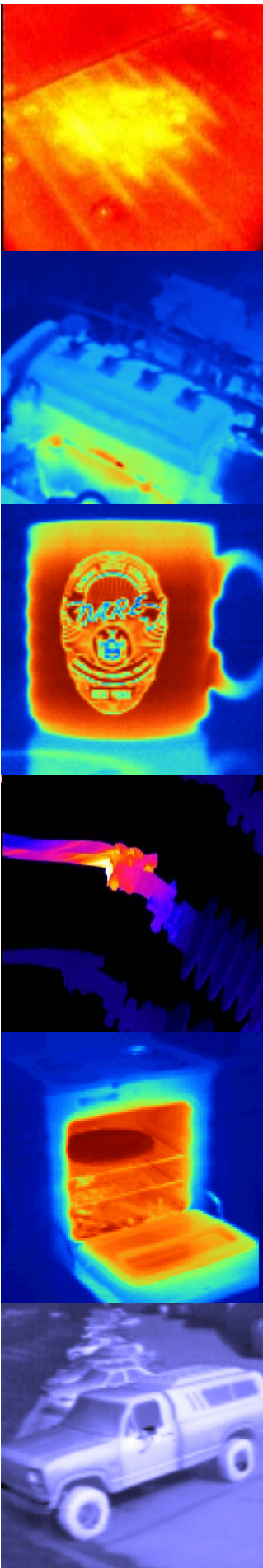
This information will form a database that can be recalled for future reference and trending.

### ***WHY DO A THERMOGRAPHIC INSPECTION?***

The intent of the Thermographic Inspection is to assist in the prevention of equipment failure by detecting and measuring abnormal temperature signatures of selected electromechanical equipment, bridges (delamination), airplanes, sports injuries, process equipment.

*Evaluating the operating condition of such equipment, potential problems are located and their severity determined as part of a predictive maintenance program.*

**By identifying these potential problems, the client is able to schedule outages and repairs rather than wait for failure to occur. Personnel safety is also increased.**



## THE PRINCIPLES OF INFRARED SCANNING

One of the most important factors for any company is the knowledge that the building, all the services and systems that have been constructed and installed to the correct standard are operating as they are designed.

In many areas this can be seen visually.

**But with electricity, it is a different matter.**

**It is not possible to feel it and it certainly cannot be seen until it is too late.**

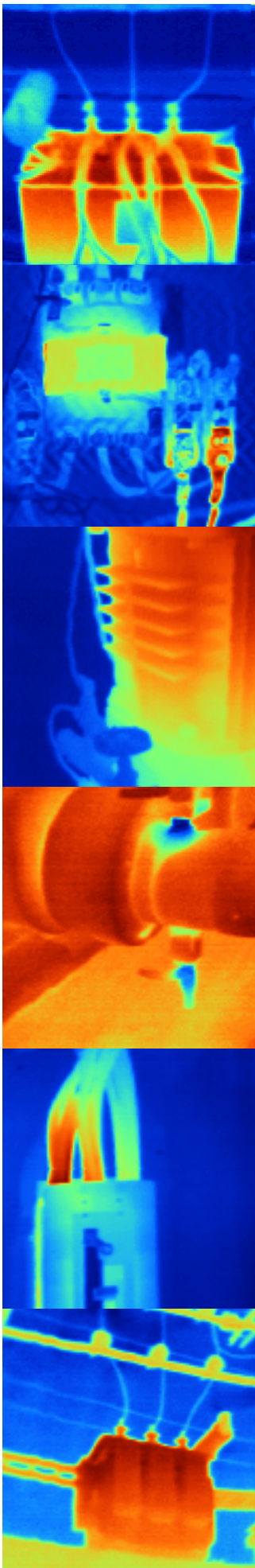
However, it is now possible to identify where heat is being generated before it gets into a dangerous situation. This is achieved by infrared inspections.

*The term “infrared inspection” as used in this recommended practice, refers to a procedure of deriving approximate temperature measurements of electrical equipment and mechanical equipment, while they are in service and energized, by remote sensing of infrared radiation.*

Such infrared inspections, performed by qualified and trained personnel have uncovered a multitude of potentially dangerous situations.

Proper diagnosis and remedial action of these situations have helped to to reduce the number of costly and catastrophic equipment failures, unscheduled shutdowns and prevent numerous major losses. The term applied to describe all this is “Predictive Maintenance”

***It is recommended that where life risks are involved then a scan should be carried out twice a year and at least not less than annually.***



# WHAT CAN BE INSPECTED?

## *ELECTRIC INSTALLATIONS*

- Substations
- MDB's
- Circuit Breakers
- Phase Imbalance
- Transformers
- Cable Runs
- Defective Fuses
- Loose or Dirty Connections

## *MECHANICAL*

- Compressor Motors
- Gearboxes
- Pumps
- Chillers
- AHU's

## *EQUIPMENT (HOT)*

- Boilers
- Ovens
- Steam Cookers

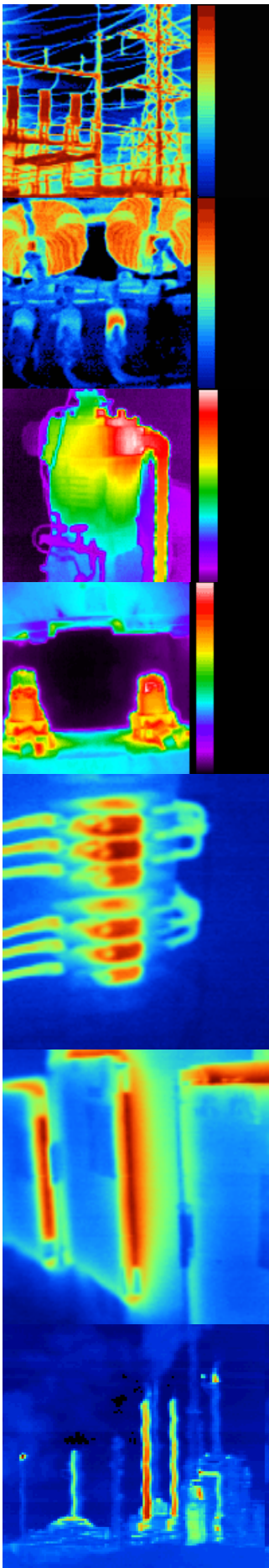
## *EQUIPMENT (COLD)*

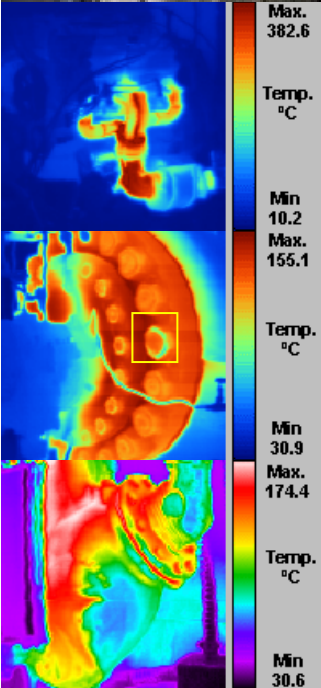
- Cold rooms
- Fridges
- Cold storage units
- Reefer Containers

## *PROCESSES*

- Paper making
- Plastic Extrusion
- Steel Sheet Production
- Oil Refining
- Chemical Production

**AND MANY OTHERS.**





The instrument used for infrared inspections, is an infrared digital camera, that uses a scanning technique to produce an image of the equipment being inspected. These devices display a picture where the hot spots appear as bright or brighter images.

Following the scan, a report identifying any areas of concern must be produced. The report should identify the items scanned and record the findings. Where an anomaly is located, a thermographics image should show the problem. Alongside the thermographics image, there should also be a photograph of the unit for comparison.

**An additional presentation can be a certificate denoting the scan, which can be used as part of the insurance program. Not all companies present this.**

At this stage it is fair to say that infrared inspections can be applied to almost any application.

*The range is governed only by the imagination of the operator.*

## An Infrared Snap Shot Can Save Lives and Damage.

**Risk is not an option - Management is.**

*For further information on our thermographics inspection, please contact us at [info@corporateriskcontrol.com](mailto:info@corporateriskcontrol.com) or telephone number (66)2 655-6731.*

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**Samples of Computerized Analysis of the thermographics images**

