

WI 230 - Introduction to Infrared Thermography

Recommended for

Reliability personnel, predictive maintenance engineers, inspectors and technicians whom wish to understand, become familiar with and use infrared thermography in their plant-wide predictive maintenance program.

Course objective

The course objective is to provide a practical approach to monitoring both electrical and mechanical equipment with the use of infrared thermography predictive maintenance tool.

Course description

Thermal / Infrared Physics:

- The Nature of Heat & Temperature Heat Transfer Mode Familiarisation
- Conduction Fundamentals
- Fourier Law (concept)
- Conductivity / Resistance Basics
- Convection Fundamentals
- Radiation Fundamentals
- Newton's Law of Cooling
- Film Coefficient / Film Resistance

Infrared Equipment Operation:

- Introduction to Thermography
- How Images Work
- Equipment Overview / Features
- Operation of Equipment
- Select the Best Perspective
- Image Area and Lens Selection
- Use of Filters
- Optimising the Image

Temperature Measurement:

- Performing Accurate Temperature
- Emissivity Measurement
- Compensating for Distance and Small Object
- Electrical Inspections Mechanical Inspections
- Furnace Inspections
- Static Equipment Inspections
- Rotary Equipment Inspections

Course length

2-days including hands-on practicals. SKF shall bring onsite as part of the practical training sessions a thermography camera for demonstration purposes.