




Short Course Programme

Thermography – Failure Detection, Inspection and Prediction Methods	
Introduction	
<p>This Non Destructive Testing method is based on the practice of making Images from thermal radiation emitted by objects within the infrared range of the Electromagnetic spectrum. Therefore, this technique is based on the instrumentation designed to measure emissions of infrared energy radiation as a means of determining the operating condition of a system. The amount of radiated energy normally changes as system operating conditions change. This course is designed to provide a general understanding of thermography methods used to detect impending system failures, schedule inspection maintenance tasks and to deliver desirable reliability and availability levels at least cost.</p>	
Designed For	
<p>This course has been designed for practicing engineers, technicians, analysts and managers to provide a general understanding of thermography principles, methods and management of related failure processes and events that should be used in design and operational processes to assure continuous delivery of reliability and availability of business systems, at least cost and maximum effectiveness.</p>	
Objectives	
<p>By the end of this course you will be able to:</p> <ul style="list-style-type: none"> ■ Learn the principles behind the main applications of infrared thermography and study how industries incorporate this technology into different businesses models, risk assessment criteria and reliability programmes. ■ Effectively Use infrared instruments on selective examples ■ Perform Reliability Analysis of failure data ■ Calculate the frequencies of inspections and to decide when maintenance action is required. 	
Content	
<ul style="list-style-type: none"> ■ Scientific Principles <ul style="list-style-type: none"> • Thermal / Infrared Physics • Temperature, How It Is Measured remotely • The Nature of Heat and Temperature • Heat Transfer Mode Familiarisation • Infrared Equipment Operation • Calibration • Infrared Applications • Radiosity Concepts • ■ Infrared Inspection Method <ul style="list-style-type: none"> • How To Prepare for Infrared Inspection • How to Perform An Infrared Inspection • How to Interpret Data Obtained • How to prepare Report Documentation • Support Data Collection • Elements of A Good Infrared Image 	<ul style="list-style-type: none"> ■ Infrared Measurement & Quantification <ul style="list-style-type: none"> • Image Processing • Active Applications • Filtered Applications • Transient Applications • Resolution Test and Calculations • Special Equipment and Inspection Techniques ■ Frequencies of Inspections <ul style="list-style-type: none"> • Delivering required Reliability Level • Delivering required Availability Level ■ Reliability Analysis of Failure Data <ul style="list-style-type: none"> • Weibull Method <ul style="list-style-type: none"> • Analytical • Graphical ■ Durability Prediction <ul style="list-style-type: none"> • Expected Time To Failure • 5% and 95 % Life expectancy ■ Hands-on experience and Case Studies provided by Institute of Infrared Thermography, (www.infraredinstitute.co.uk)
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Key Information	
Length	3 days
Dates	Please see www.mirceakademy.com
Time	0900 – 1700
Venue	Woodbury Park Hotel, Golf and Country Club, Woodbury, approximately eight miles by road from Exeter (the nearest major city).
Cost	Please see www.mirceakademy.com
Accommodation	<p>Accommodation is not included in the course fee. Participants are responsible for the arrangement and payment of their accommodation. Reduced rates are available at Woodbury Park Hotel – contact Woodbury Park Hotel Reservations direct requesting the 'MIRCE' rate. Contact details are:</p> <p>Woodbury Park Hotel, Golf and Country Club, Woodbury, Exeter, EX5 1JJ, United Kingdom</p> <p>Tel +44 (0) 1395 233 382 Fax +44 (0) 1395 233 384 Email enquiries@woodburypark.co.uk Web www.woodburypark.co.uk</p> <p>A list of alternative accommodation in other hotels and guesthouses in the area of the course venue is available from MIRCE Akademy on request.</p>
Booking	Please complete a Booking Form for each participant and return it to MIRCE Akademy – available to download at www.mirceakademy.com under heading Communication and Training.

Contact us

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