

### Half-Day Talk on “Infrared Thermography Technology for Industrial Applications”

**Date** : **Saturday, 2<sup>nd</sup> March 2019**  
**Venue** : **IEM (Southern Branch) Training Centre, 24-B Jalan Abiad, Taman Tebrau Jaya, Johor Bahru**  
**Speaker** : **Mr. Maznan Ismon, Faculty of Mechanical and Manufacturing, Universiti Tun Hussein Onn Malaysia**

#### Synopsis

Infrared Thermography has been used in industrial applications to identify abnormally of Mechanical and Electrical equipment and components as well as Civil and Structural building elements. It is part of **Non-Destructive Testing (NDT)** that identify the risk and flaws of the installed and operated system without having a direct contact with the areas of concern. It takes advantage of the infrared radiation properties to extract useful conclusions for the condition of the equipment under test. The inspection report generated is to highlight the areas that require further attention by the Management and Maintenance Team to avoid unnecessary breakdowns and introduce safety awareness among the workers.

In mechanical rotating components, the excessive use of motors, pulleys and gears will have an impact on the bearings which in turn will show in the infrared camera the exaggerated heat that is being generated. Immediately following installation of a new component or within similar system, it is important to gather baseline data. Excess heat can be the result of friction, misalignment or improper lubrication. Electrical cabinets and motor control centers are regularly scanned to avoid possible heat built up and lead to breakdown. Thermal inspections can easily locate hot spots of cable termination with any loose connections, load imbalances or corrosion.

Infrared thermography is used for Condition Monitoring (CM) to optimize maintenance and keep production running smoothly and safety at the lowest possible cost. The application of CM can be extended up to Electrical, Buildings, Furnaces and boilers, Mechanical friction, Tanks and vessels and fluid flow problem. Locating the hot spots and identifying the severity of the problem may help to establish the frame in which the equipment should be repair.

As to conclude, the potential Infrared Thermography practitioner will highly benefit from this exercise in which data and report from the thermal imaging inspection will be a basis for any existing problems that require immediate action from the management or as a proof and reference for future undertakings and expansion programs. The objective of the talk is to give a better understanding for our young engineers and practicing engineers to get some insight on the above topic.

Time	Programme Tentative
8.30 a.m. - 9.00 a.m.	Registration
9.00 a.m. – 9.10 a.m.	Welcome Speech By IEM (SB) Organising Committee
9.10 a.m. – 10.30 a.m.	- Session 1: Infrared Thermography Technology – Introduction
10.30 a.m.- 10.45 a.m.	Coffee Break
10.45 a.m.- 12.15 p.m	- Session 2: Infrared Thermography Technology – Applications and Techniques.
12.15 p.m.- 12.45 p.m.	- Discussion - Questions & Answers Session
12.45 p.m.	End

#### Speaker Biodata

**Mr. Maznan Ismon**, a Certified Infrared Thermographer since 2010. He holds a bachelor’s Degree in Mechanical Engineering from UTHM in 1998 before received his Masters’ Degree of Mechanical Engineering from USM in 2013. He started his career with Southern Industrial Gas in 1998 before entering oil and gas construction company until 2000 as an Engineer. His vast 8 years of experience as a Maintenance Engineer in Malaysian Mosaics Berhad until 2008 before joining Seagate International Johor as a Senior Facilities Engineer. He is currently serving UTHM Johor as lecturer and Industrial Fellowship delivering knowledge and skills to growth future professionals. Also playing important role to Noise and Vibration Research Group (NOVIA) by producing papers, grants and consultations activities.

#### Participant Fees:

Grade	Online	Normal
IEM Corporate Member & Graduate Members (30 years and above)	RM 120.00	RM 140.00
IEM Senior Members (60 years and above)	RM 100.00	RM 110.00
IEM Graduate Members (Below 30 years)	RM 100.00	RM 120.00
IEM Student Members	RM 60.00	RM 80.00
Non-Member	RM 200.00	RM 220.00

**Closing Date: 25<sup>th</sup> February 2019**

For **ONLINE REGISTRATION**, payment **MUST BE MADE VIA ONLINE PAYMENT** (bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708) before the **closing date**.

Registration will be on a first-come-first-serve basis. Kindly return the Reply Slip to the IEM (SB) office before **25<sup>th</sup> February 2019** together with a non-refundable cheque for the participant fees made payable to ***The Institution of Engineers, Malaysia (Southern Branch)***. Alternatively, you could bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708), and to facsimile both the Bank-in and Reply Slips to the Institution. The Institution requests all members co-operation in ensuring fees are paid in advance to the seminar. Please also be reminded that fees will not be refunded to absent participants who have paid, and to also note that all reservations must be paid despite participant cancellations. Thank you for your continuous support of the Institution.

*Chairman, Sub-Committee on Seminar and Technical Talk, IEM (SB)*

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**REPLY SLIP**

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To: Hon. Secretary, The Institution Of Engineers, Malaysia (Southern Branch) **FAX: 07 - 331 9710**

## **Half-Day Talk on “Infrared Thermography Technology for Industrial Applications”**

Saturday, 2<sup>nd</sup> March 2019, 9.00 a.m. – 12.45 p.m. at the IEM (Southern Branch) Training Centre, Johor Bahru

I wish to attend the above talk. I enclosed herewith a cheque No. .... for the amount of RM.....as payment for the seminar fee.

Name of Member: ..... Membership No:.....

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..... Tel (H/P):.....

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Company's Name: .....

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