



HRDF CLAIMABLE

Metallurgical Failure Investigation

Time: May 2017

Venue: Puchong, Selangor

- This two day course aims to equip participants with a broad background knowledge of failure investigation techniques and procedures
- The course has an emphasis on metallic materials but in varied industries e.g. Oil & Gas, Aerospace and Railways so participants can leverage on parallels
- Instruction will be given by lectures, interactive discussion, case studies and practical demonstration

Objectives

- To have an overall view of the techniques and procedures involved in Failure Investigation
- To understand site preparation, on-site metallography and sample extraction
- To illustrate methodologies for analysis of data
- To identify different failure modes

Course Content

- The standard procedures of an investigation
- The modes of failure including; the four fracture modes e.g. Dimple Rupture, cleavage, fatigue and decohesive rupture and their various mechanisms, corrosion, environmentally assisted cracking e.g. chloride stress corrosion cracking, sensitisation, hydrogen embrittlement
- Methodologies of data analysis
- Case studies
- On-site metallography and replication

Course Duration

2 days

Who Should Attend

- Engineers from all industries particularly Oil & Gas, Aerospace and Railways
- Material Scientists and Engineers
- Project Engineers
- Asset Integrity Engineers.

Certification

Certificate of attendance

Fees

RM 700.00 (Inclusive 6% GST)

Mode of Payment

Payment to be made by CDM (Cash Deposit Machine, Cheque, Telegraphic Transfer and Bank Draft to :

Account Name:

MATERIALS TECHNOLOGY EDUCATION SDN BHD

Account No :00100 311 204

Swift Mode :HLBBMYKL

Bank Name :Hong Leong (M) Berhad

Bank Branch :Kuala Lumpur Branch

Trainers



Dr Andrew Spowage graduated from The University of Nottingham with a PhD in Materials Engineering and Master Degree in materials chemistry. He has expertise in materials characterization & testing, metallurgy & materials science and project management. He has worked on over 100 industrial, research and consulting project around the world. The majority of these project involved the characterization of materials or products to identify process, materials or design faults that were hindering production. Some of his experience worked are in characterization and failure analysis of die cast magnesium alloys, corrosion behavior of ceramic coated magnesium alloy coatings and quality inspection of laser cut Brass switches. He is also work as Associate Professor at the Nottingham University Malaysia Campus, Visiting Professor at the Surey University (UK) and Associate Consultant at Amplios Consultants Pte Ltd (Singapore).



Assoc. Prof. Nigel graduated from The University of Sheffield with a Master Degree in advanced physical metallurgy and from Derby University with a post-graduate diploma in corrosion science and technology. He worked in the welding and fabrication industry for 10 years before joining Rolls-Royce where he spent 20 years in the nuclear submarine division and further 3 years in the aero-engine division as a metallurgist/ failure investigator. This also included working offshore on titanium heat exchangers in the North Sea for six years. Since retirement from RR, he has worked on broad range of projects for Intertek Services Ltd in the UK as a failure investigator including aerospace and railway track components. He is a Director of MTIS Sdn. Bhd. a subsidiary of Norimax Sdn. Bhd where he has worked mainly on offshore component failures. Nigel is also a part-time lecturer at Nottingham University Malaysia Campus giving advice on industrial design and manufacturing.

For more information, please contact:



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