Life Management Foundation
(LMF1, LMF2, LMF3)
Training Courses in Power Plants

Three stand-alone but inter-linked courses

TRAINING FOR SUCCESS

Course Contents

LMF1) **Power Plant Operation, Maintenance, Materials and Remaining Life Assessment.**

LMF2) **Understanding of Welds and Welded Component Behaviour in Power Plants Assessment.**

LMF3) **Damage, Defect and Crack Assessment under Creep and Fatigue Conditions.**

Course Dates: **18 –25 February 2014**
Repeated: **17 - 24 June 2014**

Course Venue: **European Technology Development Ltd**
Fountain House, Cleeve Road, Leatherhead, Surrey, UK
(just south of London)
Optional attendance via ***Video Conference***

This brochure gives the outline of the three courses and the Registration Form, including hotel information in Leatherhead and central London.
Detailed information on course programs can be seen at the ETD website.

Introduction

Within the arena of power plant management, there has been an increasing emphasis on maintaining plant and equipment in productive use beyond its original design date. This must be achieved without increasing the risk to plant safety, personnel or the environment. Increasingly, these run/repair/replace decisions must be made for plant components containing service induced and design allowable damage or defects. These are based on the use of state of the art analysis and life assessment techniques, including newer NDT and computational analysis methods.

As a Consulting company working within the power and process plant industry worldwide, ETD, from years of experience working with a wide range of different systems in this field, allows it to gather, critically analyse and disseminate this expertise to its customers. Although operating different types of power plants under different operating conditions, many of the problems being faced have similar origins and patterns, which can be solved using the same tools and knowledge.

ETD are offering a **series of valuable three 2-day** stand-alone courses (called **LMF1, LMF2** and **LMF3**) based around the subject of service life management of power plants. All courses are designed to complement one another. The courses can be taken individually or as one combined course package over a six days.

Our team of highly trained and experienced engineers will provide a full set of course notes and examples together with a future point of contact for any ongoing advice and support that may be required. In the past we have conducted these courses in London and elsewhere for high temperature plant engineers from Europe, USA, Canada, Middle East, Asia and elsewhere.

Your engineers can attend these courses **either at our Leatherhead venue** (40 minutes frequent commuter train journey from central London), **or remotely via our videoconferencing facility**. **So you could be sitting in the comfort of your offices in the USA, South Africa, Singapore or Saudi Arabia etc., joining the courses, seeing the speakers and asking questions like all other delegates.**

Our courses include a variety of interactive elements and practical examples, to ensure that the attendees obtain the maximum benefit. The delegates are encouraged to discuss their own experiences, and share their knowledge. A summary listing of the modules is shown below with related course content. Full course descriptions are contained within the separate programmes attached.

Course Content Summary

LMF1- **Power Plant Operation, Maintenance, Materials and Remaining Life Assessment**

Topics Include:

- Understanding of Power Plant Operation, Maintenance, Materials and Related Issues
- Materials and Damage Mechanisms
- Plant Life Management
- Life Assessment Workshop

LMF2- **Understanding of Welds and Welded Component Behaviour in Power Plants**

Topics Include:

- Introduction to Component Failure
- Understanding Welds
- Assessment of Welded Components
- Life Assessment Workshop
- Principles of Weld repairs in new and aged plants
- Practical examples of weld repairs
- Integrity and Life Assessment of Weld Repairs

LMF3- **Damage, Defect and Crack Assessment under Creep and Fatigue Conditions**

Topics Include:

- Continuum Damage Mechanics
- Fracture Mechanics Concepts
- Creep and Creep/Fatigue Crack Growth
- Defect Assessment Procedures

Feedback from delegates who attended earlier ETD courses

"The course was exactly what I was looking for and was well executed."
Robert Anderson, Progress Energy, Florida, ***USA***

"Thank you for your interesting classes (and practicals /calculations) and the time we were in London." Lumbreras Jimenez, Iberdrola, ***Spain***

"Please thank colleagues for a great course, very enjoyable"
Kevin Easby, BASF, ***UK***

Who Can Benefit From These Courses

- *Plant managers* requiring an overview of the techniques available to them.
- Those involved in *high temperature component damage assessment*.
- Plant *maintenance engineers*.
- Engineers from *service/consulting companies.*
- *Inspection* personnel seeking an appreciation of the use of defect survey results.
- *Planning* personnel seeking a better understanding of state of the art technologies.
- *Insurance* personnel wishing to increase their knowledge of practical problems and revise established techniques.
- *Researchers* involved in high temperature crack assessment needing to know industry procedures.

If you would like to discuss the course in more detail, or if you have any other questions, please don't hesitate to contact our team at **enquiries@etd-consulting.com** or,
Telephone: **+ 44 1372 363 111**

Who Are We

European Technology Development Ltd *(ETD)* is a UK based engineering advisory and consulting company specialising in high temperature plant life assessment, maintenance, materials and other engineering issues in power generating and chemical processing plants. ETD has experience organising workshops, courses and conferences in the UK, Europe, North America and Asia, on issues such as: plant life assessment, high temperature plant materials, component safety and durability, in-service weld performance, power plant cycling and risk based maintenance (RBM) in power and petrochemical plants.

Our staff originates from a range of scientific and engineering backgrounds, bringing together a wide variety of technical knowledge and practical expertise, and ETD has used this to produce novel examination and analytical techniques.

In addition to our consultancy work for power and process plant worldwide, ETD is co-ordinating a number of large initiatives (supported by industry from North America, Japan, Europe and elsewhere, including funding agencies such as the European Commission) on issues related to the assessment and improvement of high temperature plant performance, materials and design, maintenance and inspection strategies. Our course contents and lectures are based on our consulting experience, technology development project work and collaboration with international industry.

Further information about ETD, its consulting projects for power and process plants, courses offered, conferences and other services we can offer are available at:
www.etd-consulting.com

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REGISTRATION FORM *(Please copy and e-mail / fax / post)*

Three Training Courses: LM1/ LMF2/ LMF3

18 –25 February 2014 (Repeated: 17 – 24 June 2014)

REGISTRATION FEE: Registration Fee is quoted in pounds sterling. Please note that overseas attendees also pay VAT (Value Added Tax) for events held in the UK

Courses	Reduced Fee Until 24 Jan. / 24 May 2014	Full Fee From 25 Jan. / 25 May 2104
LMF1 LMF2 LMF3	£750 + £150 VAT = **£900** *(each course)*	£800 + £160 VAT = **£960** *(each course)*

Note: A 10% discount on all course fees will apply if either a)

a) two or more attendees from the same organisation attend the same course, or

b) a delegate attends more than two courses.

A maximum discount of 10% will apply.

Special rates available for delegates attending from academic institutions. Please enquire with ETD.

Please sate how many attendees for which courses and the fee payable. Please also state if attending Feb. or June courses.

PAYMENT

By UK bank cheque, bankers draft, bank to bank transfer to:
European Technology Development Ltd.
***Note**: ETD account details for bank-to-bank transfer will be provided on request. Please quote reference '**LMF 2014**' with the payment and state below how you paid or intend to pay.……*

By Credit Card: Major cards such as Visa / Master Card / JCB / Switch/ American Express are accepted with the exception of Diners Club. For security reasons please *fax* or post this.

Name of Account Holder		Amount: £
Card Type and No.		Expiry date:
Authorisation signature		Security code:

Accommodation: Information on local hotels (£40 to £70 per night) or hotels in central London can be supplied on request. There are frequent trains from London Victoria or London Waterloo stations to Leatherhead and the journey time is about 40 minutes.

Delegate Details: (*Required for your delegate badge*)
Your title **and** name:
Company: Position (optional):
Address:
Phone: Fax: E-mail:

REGISTRATION ADDRESS: *Please copy and post/ fax/ e-mail to address below:*
Mrs Kay Mahoney, Registration Section, European Technology Development, Fountain House, Cleeve Road, Leatherhead, Surrey, KT22 7LX, UK
kmahoney@etd-consulting.com Tel: + 44 1372 363 111 Fax: + 44 1372 363 222

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