

Improving Refinery Energy Efficiency Course

A Eurotek training course



ERS Improving Refinery Energy Efficiency Course

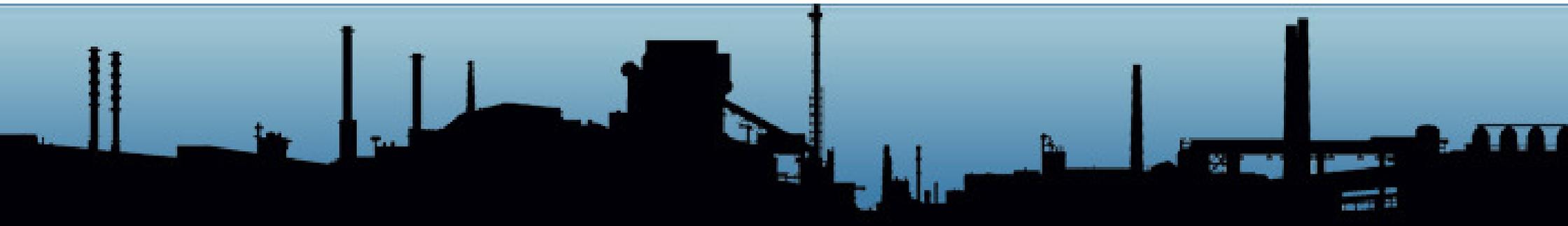
An introduction:

As the cost of crude oil and subsequently refinery fuel increases, the need to ensure that refinery processes are energy efficient becomes more important. This course reviews all aspects of refinery energy performance from the site systems and processes, down to the equipment level. It also includes sections on energy management and a review of the essential technologies and tools.

Learning objectives:

Upon the completion of the course, participants will have gained solid understanding of the following:

- Refinery energy balance and where is energy consumed in a refinery
- How to assess the actual energy efficiency of an operating refinery
- Specific energy characteristics of refinery's various process units and improvement potential
- Energy efficient operation of refinery utility systems (steam and power)
- Energy efficiency of refinery equipment
- Energy saving techniques and development of energy saving projects
- Energy management procedures



Who should attend?

Professionals working in the petroleum processing industry will benefit from this course, especially those with a responsibility for energy management and efficiency. The material presented is relevant to all engineers working on processing units in the industry, including operations, design and maintenance personnel.

Job Titles/Functions Appropriate for the Course Include:

- Process, plant and project engineers
- Thermal and stationary equipment engineers
- Personnel responsible for inspection, maintenance and reliability
- Shutdown planners

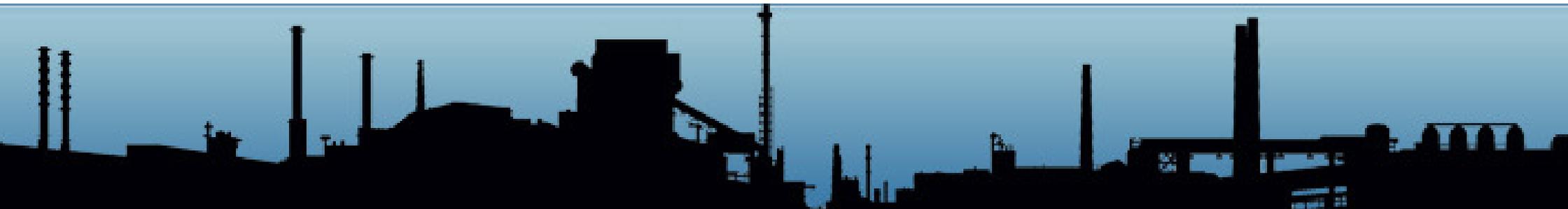
Description:

Increased fuel cost and stringent environmental regulations impose additional pressure on otherwise tight refinery margins. Energy has long been recognised as the largest single operating cost in a refinery, but nowadays the energy efficiency is one of the differentiators that determine the future of an operating company.

Energy, however, can be successfully managed. Through comprehensive energy management programmes refiners ensure that all their facilities – those that consume energy as well as those that produce it - are operated in an optimum manner, while their investments projects related to energy efficiency are strategically selected.

This course presents the up-to-date methodologies and techniques that are used to assess the energy efficiency of an oil refinery, and introduces systematic procedures for reducing the consumption and the energy bill. The course can be considered as a tool box for refinery energy co-ordinators and process engineers and managers who want to become conversant with all aspects of refinery energy efficiency.

Much of the course time is dedicated to (1) developing thorough understanding of refinery energy topics, particularly how much, where, why and with what efficiency the energy is consumed, and (2) introducing the practical application of energy saving techniques. The format of the course is a combination of presentations and open discussions, during which particular refinery cases or problems can be brought forward and discussed. Simulation examples are used throughout the course to enhance the understanding, and participants will receive several basic energy software tools that they may find useful in their daily work.



Course Presenter

Dr Zoran Milosevic is a Principal Consultant and an oil refinery specialist at KBC Process Technology, where he is responsible for development of KBC technology and services in the refinery energy conservation area. Zoran has 35 years of experience in refinery operation, process design and consulting.

He is a Chemical Engineer from Lehigh University, Pennsylvania (US) and a Fellow of the Institution of Chemical Engineers.

He also a Teaching Fellow of the Royal Academy of Engineering, and a Visiting Professor at the University of Surrey.

His main professional expertise is the optimisation of process plant operation with emphasis on profitability improvement and energy saving in oil refineries.

In his 22 years with KBC, he has conducted over 60 such margin improvement studies and energy conservation programs worldwide.

He has taught at various institutions and has presented numerous training courses on energy efficiency, Pinch Technology, energy efficient process design, and global energy



Course programme

Day 1

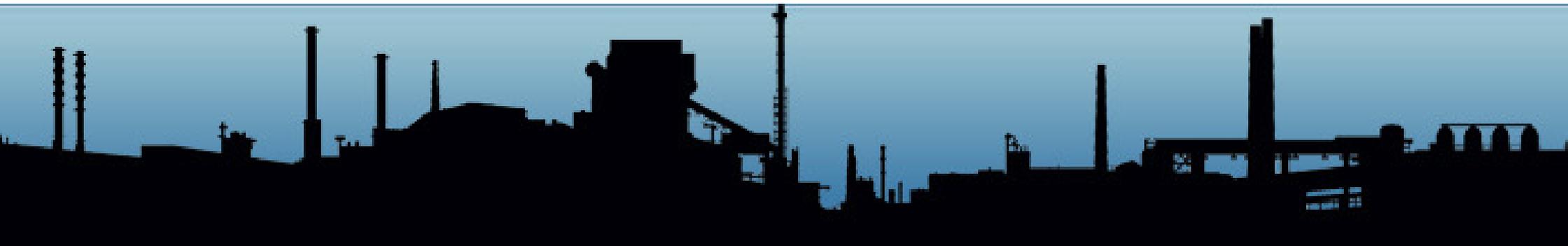
- Refinery Energy Balance
- Energy Efficiency Effect on Refinery Profitability
- Energy Benchmarking and Site Efficiency Assessment
 - Energy efficiency gap
 - Potential for improvement
- Fuel, power and steam pricing
- Improving the energy efficiency of refinery's key process units
 - Distillation
 - Hydrotreating
 - Catalytic reforming
 - Fluid catalytic cracking
 - Hydrocracking

Day 2

- Refinery Utility System
 - Steam generation
 - Power generation
 - Turbines, cycles, efficiencies
 - Cogeneration and its benefits
 - Optimisation of refinery Steam & Power system
 - Group work
- Process Heat Integration
 - How the integration works?
 - What is Pinch Technology?
 - Pinch Technology for refinery operators
 - Revamping preheat trains to improve energy efficiency
 - Group work

Day 3

- Equipment Efficiency
 - Fired heaters
 - Exchangers
 - Turbines
 - Compressors
 - Pumps
 - Group work
- Effective Energy Management
 - Energy focused organisation
 - Success factors
 - The Energy Team
 - Developing internal competence in energy
 - Tools and procedures
 - Identification and implementation of energy projects
 - Refinery's road map to energy-efficient future



Registration form:
Improving Refinery Energy Efficiency Course

CCT Venues, 135-137 Aldersgate House, London EC1A4JA, UK.

Please make a reservation for the following delegate:

Title _____ Given Name _____ Family Name _____
Position _____ Company _____
Address _____
Tel: _____ Fax : _____ Email: _____

For Bookings Received before 23rd April: Course fee £1950.00 + 20% VAT

For Bookings Received after this date: Late Booking Supplement of £250.00 + 20% VAT will be applied

PLEASE NOTE: Payment to be made at time of reservation. If an invoice is required to make payment by bank transfer or cheque please email your request or Purchase order to reservations@eurotek-refining.co.uk and an invoice will be emailed by return.

Make cheque payable to Eurotek Refining Services Ltd.

Transfers to: Account Eurotek Refining Services Ltd IBAN No. GB91LOYD30987301811462

Cancellations, Substitutions & Programme Changes If you are unable to attend the course, you may make a substitution at any time. All substitutions and name changes must be received in writing by mail, e-mail, or Fax. For cancellations received by mail, e-mail or Fax 21 days before course start, 75% of the fees will be refunded. For cancellations received after this date course papers will be sent, but no refund. An official cancellation number must be obtained from Eurotek Refining Services Ltd to qualify for a refund. Course content may be subject to change at Eurotek Refining Services Ltd.'s discretion

Course timetable:

23rd May

08.00 Onwards Course Registration

09:00-17:00 Course Programme

24th May

09:00-17:00 Course Programme

20:00 Course Dinner (free)

25th May

09:00-16:00 Course Programme

Four ways to book

1. Complete and return this form to:
Eurotek Refining Services Ltd 389
Woodham Lane, Addlestone Surrey KT15
3PP UK
2. Telephone with details on: +44 1932
702914
3. Complete and return this form to:
Reservations@eurotek-refining.co.uk
4. Visit our website at www.eurotek-refining.co.uk and click on Registration Form.



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