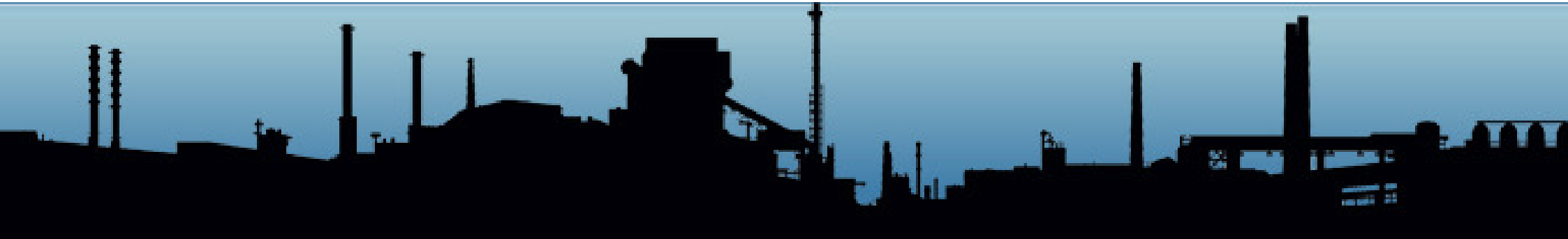
Eurotek
Refining Services Ltd

Our Business is Knowledge Transfer

Catalytic Reforming

A Eurotek training course



ERS Catalytic Reforming

An introduction:

ERS Reforming is a comprehensive core skills course for professionals dealing with all aspects of the Reforming Units.

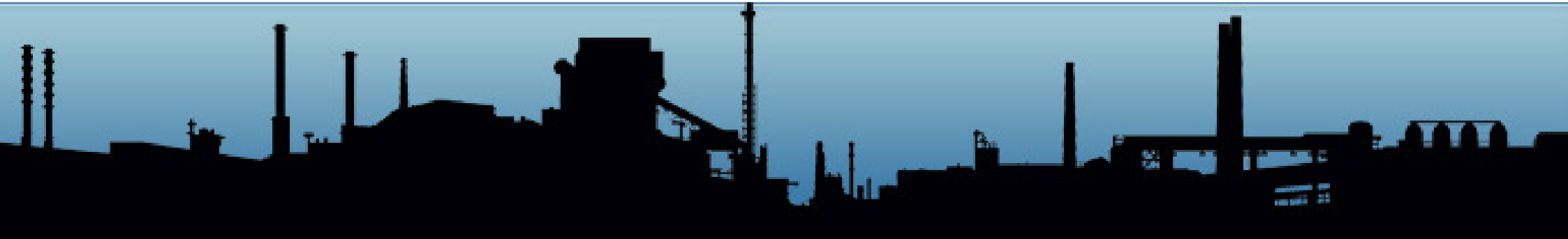
The course will be highly valuable to all engineers involved in the operation and design of Reforming facilities.

Additionally, the course will be useful to any technical personnel wishing to gain a perspective of how the Reformer fits into the operation of a complete refining plant. Those who are experienced in other fields and seek a review of the fundamentals of Reforming will also find this course most beneficial.

Learning objectives:

Upon completion of this course, participants will have gained a solid understanding of the key elements associated with the design, operation and troubleshooting of Reforming Units.

- The impact of feed quality, catalyst, operating conditions and unit design on product qualities.
- In addition they will have gained some valuable insight into catalyst activity and run lengths.
- The importance of Reformer operations in the economic optimisation of the refinery mogas pool.
- How to optimise, debottleneck and troubleshoot their Reforming Units.



Who should attend?

ERS Reforming is a comprehensive core skills course for professionals dealing with all aspects of the Reforming Units.

The course will be highly valuable to all engineers involved in the operation and design of Reforming facilities.

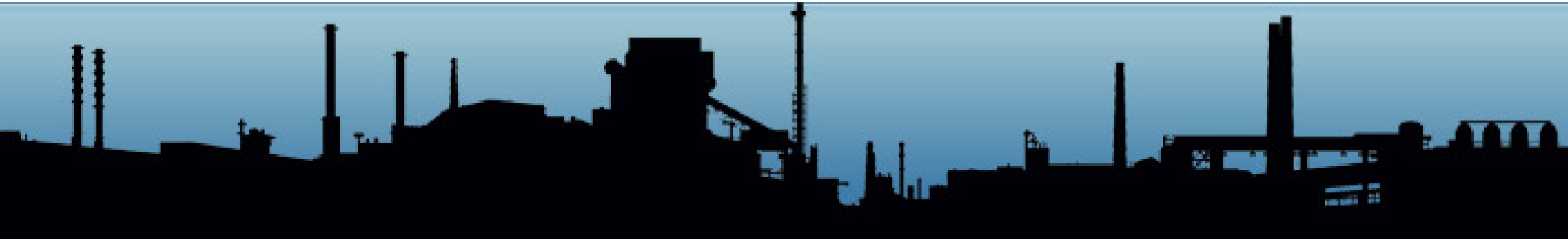
Additionally, the course will be useful to any technical personnel wishing to gain a perspective of how the Reformer fits into the operation of a complete refining plant. Those who are experienced in other fields and seek a review of the fundamentals of Reforming will also find this course most beneficial.

Description:

The petroleum industry uses Reforming as a primary process for quality improvement to meet final fuel specifications as well as hydrogen and LPG production for many intermediate processing units. This course covers the core elements of Reforming technology.

Key variables that affect product yields and properties are described and their impact on the optimisation of the unit operation discussed. A framework is presented for troubleshooting operating problems and, throughout this discussion, participants are encouraged to describe their specific challenges.

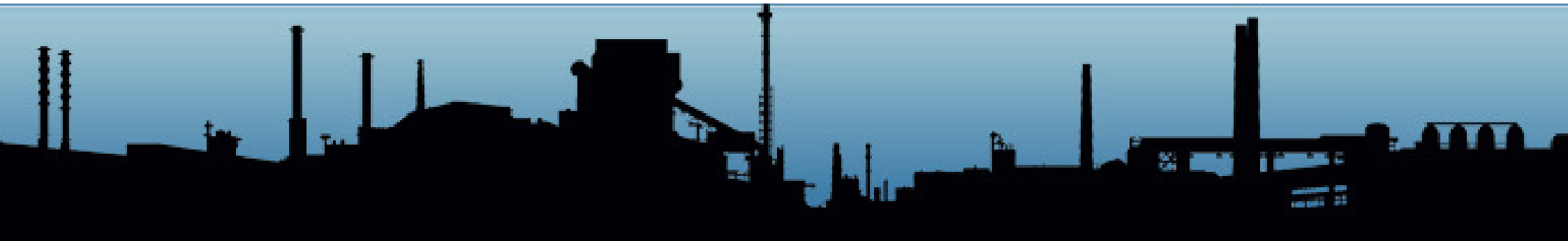
The scope of the course includes the core of most Reforming problems and attempts to cover solutions useful to design and operating engineers. Recent concerns associated with processing for clean fuels are covered. This course will provide an overview of the diverse nature of the Reforming processes, depending on the feedstocks used, products made and the environmental issues. It will address process integration issues, which are vital for economic viability. The course is designed to complement and supplement material presented in other ERS courses



Course Presenter

Lee Bamon is a Consultant for an International catalyst manufacturing company, with over 40 years experience in a wide range of chemical, refinery and petrochemical processes. He has worked for various companies including Dow Corning, Exxon and Stone & Webster, on the commissioning of units, including fluidised bed reactors, Cryogenic LNG plants and Ethylene Crackers. With Engelhard (now BASF) as Technical Manager, he supervised the commissioning and troubleshooting of all the licensed processes for the company, covering catalytic reforming, C5 and C6 isomerisation, oxidation and hydroprocessing operations, worldwide.

When he became Senior Sales Manager for the same company, his expertise extended to include FCC catalysis. For a number of years, his work as a Consultant has been in the FCC, catalytic Reforming areas, as well as an advisor for the Insurance Industry. Lee attended the University of Wales, where he gained a C & G in Chemical Operations and Engineering.



Course programme

Day 1

Introduction to Catalytic Reforming
Historical Development of Catalytic Reforming
Refining Processes
Unit Design Semi-Regen and Continuous Processes
Chemistry of Reforming Process
Support Functions
Reaction Chemistry
Metal/Acid Functions
Environmental Control
Reforming Catalysts
Catalyst Composition and Types
Commercial Catalysts, Mono and Multi Metal
Evaluation of Catalyst Change-outs – Economic Evaluation
Choice of Timing
Monitoring of Reforming Process
Feed/Catalyst Sampling and Analyses
Performance Evaluation
Operating Variable Effects
Water/Chloride Balance

Day 2

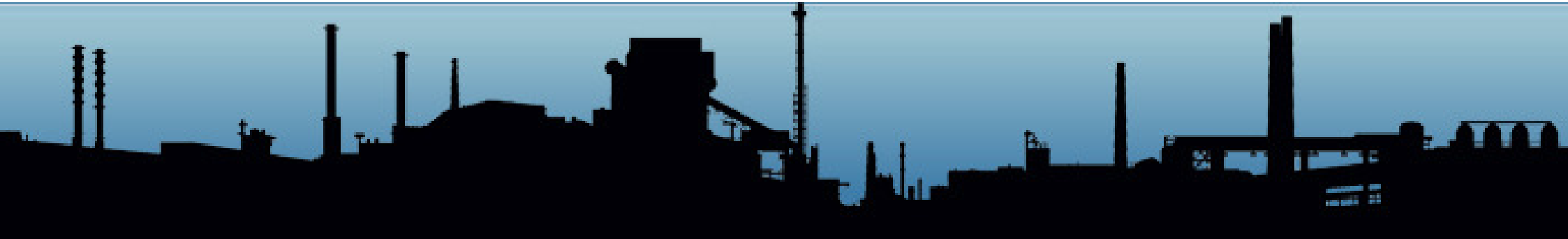
Unit Configuration and Design Semi-Regen
Reactor Designs
Review of Licensed Processes.
Continuous Reforming Units
CCR Processes
Economic Considerations for CCR
Catalyst Composition and Types
Reformer Operating Schemes
Unit Optimisation
Aromatics Production
Revamp Options
Continuous Reforming Systems
Reforming Catalyst Procedures
Unit Start-up Techniques
Catalyst Regeneration for Semi-Regen Units
Safety and Unit Protection during
Carbon Removal Process
Carbon Removal in CCR Units
Reformer Troubleshooting
Feed Contaminants
Catalyst Problems

Day 3

Reformer Process Simulation
Basis for a Reformer Model
Accuracy Considerations
Applications and Benefits

Naphtha Reforming
Naphtha Sources
Reforming Reactions
Catalyst Compositions and Selection
Process Variables
Troubleshooting

Sulphur Guard
Role of Sulphur in Reforming
Sulphur Guard Units and Catalyst Types
Liquid vs. Vapour Phase Operation
Economic Evaluation
-Q&A.



Registration form:
Reforming 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 16th April: Course fee £1950.00 + 20%
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:

16th May
08.00 0nwards Course Registration
09:00-17:00 Course Programme

17th May
09:00-17:00 Course Programme
20:00 Course Dinner (free)

18th 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: enquiries@eurotek-refining.co.uk

4: Visit our website at www.eurotek-refining.co.uk and click on Registration Form.

Visit our Website
www.eurotek-refining.co.uk for the latest information on Eurotek Refining Services Ltd Training Courses