

Hydrotreating Processes

A Eurotek training course



ERS Hydrotreating Processing

An introduction:

The ERS Hydrotreating course is a comprehensive core skills course for professionals dealing with all aspects of Hydrotreating units. The course will be highly valuable to all engineers involved in the operation, design and troubleshooting of Hydrotreating facilities.

Additionally, the course will be useful to any technical personnel wishing to gain a perspective of how Hydrotreating fits into the operation of a complete refining plant. Those who are experienced in other fields and seek a review of the fundamentals of Hydrotreating 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 Hydrotreating units.

This will include the impact of feed quality, catalyst, operating conditions and unit design on product qualities

In addition they will have gained some valuable insight into how to optimise, debottleneck and troubleshoot their Hydrotreating units.



Who should attend?

ERTC Hydrotreating is a comprehensive core skills course for professionals dealing with all aspects of the Hydrotreating units.

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

Description:

The petroleum industry uses Hydrotreating as a primary process for quality improvement to meet final fuel specifications as well as feed preparation for many intermediate processing units. This course covers the core elements of Hydrotreating 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 Hydrotreating problems and attempts to cover solutions useful to design and operating engineers.

Concerns associated with processing for clean fuels are covered.

This course will provide an overview of the diverse nature of the Hydrotreating 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 training courses.



Course Presenter

Mr. John Bauld has 40 years experience in Refinery Operation, Technical Support, Training and Management. He is a Chemical Engineer from Strathclyde University, Scotland. In the former Mobil refinery near London, England he progressed through Plant Engineer for numerous processes and projects to Shift Supervisor and Plant Supervisor/ Area Manager roles.

After moving to Exxon Engineering, based in London, he guided on-going operations in European refineries. He has been instrumental in reducing capital and operating costs and in improving plant reliability through innovation and training, particularly in Hydroprocessing, Reforming, Gas Treating and Sulphur Recovery. He has extensive experience establishing design requirements, economic evaluation and licensor/ contractor selection, start up, troubleshooting, training and mentoring activities with Mobil, Exxon & Licensees and KBC Process Consultants including extensive.

He is a Chartered Engineer and a Fellow of the Institution of Chemical Engineers (UK) and currently consults and trains for international clients. He has wide personal interests including playing Classical Guitar and Church Bell Ringing.



Course programme

Day 1

- Introduction to Hydrotreating
- HDT role in a refinery
- Feed and product qualities, product uses (Naphtha, Kerosene, Gas Oil and FCC Pretreat)
- HDT reactions
- Design Basics and Safety
- Unit design features
- Process and operating variables
- Special safety concerns
- Catalysis
- Nature of HDT Catalysts
- Composition and activity
- Catalyst selection and reactor loading diagrams
- Q&A Session for Day 1 Topics

Day 2

- Operation, Monitoring and Troubleshooting
- Data and models
- Constraints
- Catalyst deactivation
- Reactor Distribution Internals
- Effects of poor distribution
- Developments in internals design
- Pressure drop management
- Reactor loading and unloading, catalyst handling
- Q&A Session for Day 2 Topics
- Revision of the Basics: FCC Naphtha Treating for Clean Fuels
- Case Studies – Session 1
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Day 3

- Catalyst Management
- Regeneration
- Start-up procedures
- Equipment Design and Process Debottlenecking
- Reactors, exchangers, separators, strippers, compressors
- Design options
- Typical bottlenecks
- How far can we push?
- Case Studies – Session 2
- Refinery Hydrogen Balance
- Using Hydrogen wisely
- HPU options
 - Q&A Session



Registration form:**Hydrotreating Course:**

Sir Christopher Wren's House Hotel, Windsor, UK

Please make a reservation at ERS Course for the following delegate:

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

For Bookings Received before 21st October: Course fee £1850.00 + 20% VAT

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

Eurotek Refining Services Ltd has obtained a special Conference rate at the Sir Christopher Wren's House Hotel. Bookings at this hotel must be made via Eurotek Refining Services.

- Single room per night (incl. breakfast) £116.67 + 20% VAT
- Double room per night (incl. breakfast) £133.33 + 20% VAT

Arrival Date _____ Departure Date _____ Number of nights required _____

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:**21st November**

08.00 Onwards Course Registration
09:00-17:00 Course Programme

22nd November

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

23rd November

09:00-16:00 Course Programme

Five 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 or
+44 1737 830077
- 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.
- 5: Complete and Fax this form to: +44
1737 830239



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