

Fluid Catalytic Cracking Course

A Eurotek training course

Free 6 months License for FCCTek Process Model for each Attendee.



ERS Fluid Catalytic Cracking

An introduction:

The ERS FCC Training Course is an ideal course for those process engineers who wish to gain a detailed understanding of all the core features of the Fluid Catalytic Cracking Process. Covering issues from Chemistry and Catalysis through Process Operation and onto Design, it is a comprehensive course providing the engineer with a thorough grounding in the technology. Technologists from backgrounds as diverse as technical support, operations, planning, and process control, have all found the course helpful.

Learning objectives:

Upon completion, graduates will be knowledgeable in the fundamentals of Fluid Catalytic Cracking and understand the individual unit operations in terms of design, operation and troubleshooting.

After completing this course you will:

- Have a thorough understanding of the core features of the Fluid Catalytic Cracking Process from feed properties through to product yields and qualities.
- Understand heat balance between the Reactor and Regenerator,

- Understand the pressure balance of the Fluid solids section.
- Be able to run an FCC computer simulation to accurately model a unit and optimise any given starting operation.
- Be able to solve operating problems via Trouble shooting and Root Cause Analysis.



Who should attend?

Professionals working in the operation, design and troubleshooting of all refining activities especially those with a focus on the Fluid Catalytic Cracking Unit.

The course will be highly valuable to all engineers involved in the operation and design of FCC facilities. Additionally, the course will be useful to any technical personnel wishing to gain a perspective of how the FCCU fits into the operation of a complete refining plant.

Those who are experienced in other fields and seek a review of the fundamentals of FCC will also find this course most beneficial.

Job Titles/Functions Appropriate for the Course Include:

- Process, Project, and Plant Engineers
- Commercial Development and Planning Engineers
- Computer/System Analysts and Refinery Modelling Engineers
- Operations Economic Evaluators
- Catalyst Manufacturers and Refinery Chemists
- Product, Equipment, Chemicals, Supplies or Services Sales Personnel

Description:

The petroleum industry uses FCC as the primary basis for conversion. This course covers the core elements of FCC technology. A solid foundation is laid by covering the detail of Heat and Carbon Balance. Key variables that affect product yields and selectivity are described and their impact on the optimisation of the unit operation is discussed.

Techniques used for control of the FCC fluid solids unit are also presented. Finally, 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 FCC problems and attempts to cover solutions useful to design and operating engineers. Recent concerns associated with diesel maximisation and processing heavy feeds are covered.

This course will provide an overview of the diverse nature of the FCC processes, depending on the feedstocks used, products made and the environmental issues. It will address process integration issues, which are vital for economic viability.



Course Presenter

George Blair is a Director of Eurotek Refining Services Ltd and a Senior Refinery Process Consultant with experience in key refining process operations, design, sales, training and coaching. He has worked for various divisions of BP, UOP and Exxon/Mobil over a 30-year career. Within BP he was Technology Co-ordinator in Europe and Senior FCC Consultant overseeing FCC Technology. .

His BP achievements include Increased Capital Investment efficiency through front end project work (20-50% reduction in CAPEX relative to contractor/licenser proposals), development of BP Amoco's proprietary FCC yield prediction model, and integration with other refinery optimisation tools, coaching of young engineers to maximise both individual potential and corporate value, two Chairman's awards for Technical Excellence in 8 years, building of a refinery focused technology support network providing high quality FCC technology support to BP refineries worldwide.

Within Exxon/Mobil he was a consultant Engineer for European refineries in the area of FCC and Section Head of the Refinery Technical Service Group (Fawley Refinery). George has a B. Sc Hons. in Chemical Engineering and Management Studies from Loughborough University and a Diploma in Industrial Studies Loughborough University.



Course programme

Day 1

Introduction to FCC

Development of Catalytic Cracking
FCCU role in a Refinery
FCCU Reactions
FCCU Designs

Catalysis

Nature of Cracking Catalyst
Catalyst Evolution
Zeolites
Composition and Selectivity

Coke, Conversion and Heat Balance

FCCU Conversion
FCCU Coke Yield
Heat and Carbon Balance
Full and Partial Combustion

Process Control

Basic process control requirements
Influences on process control strategies
Background to multi variable control

Day 2

Process Variables and Yields

Operating Variables
Feedstock Effects
Interactions
Yields and Selectivities

Maximum Diesel Production

Chemistry and Catalysis
Feed Quality Effects
Operating Variable Effects
Optimum Strategy

Catalyst Circulation

Fluidisation Fundamentals
Flow Regimes in an FCCU
Pressure Balance
Common Problems

Process Monitoring and Optimisation

Why, what and how to Monitor
Importance of Constraints
Optimisation

Day 3

Product Qualities

Blending FCC Products into fuels
Impact of FCC process changes on Product Qualities.

FCC Hardware Technology

Feed Injection
Reactors
Reactor Strippers
Regenerator
Cyclones

Residue Operation

Effect on Yields
Effect on Catalyst
Effect on Operation
Residue Technology

Troubleshooting Case Studies/Q&A



Registration form:

Fluid Catalytic Cracking Course:

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

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

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

Early Bird Bookings Received before 22nd March: Course fee £1950.00+ 20% VAT
For Bookings Received after this date: £2200.00 + 20% VAT will be applied

PLEASE NOTE: Payment to be made at time of reservation. To qualify for Early Bird discount, payment must be received no later than 30th April 2019. If an invoice is required to make payment by bank transfer please email your request or Purchase order to reservations@eurotek-refining.co.uk and an invoice will be emailed by return.

Make payments to Eurotek Refining Services Ltd.

Account: Eurotek Refining Services Ltd Bank: Lloyds Plc
SWIFT: LOYDGB21419 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. Course content may be subject to change at Eurotek Refining Services Ltd.'s discretion

Course timetable:

15^h May

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

16^h May

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

17^h 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.



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