

RECENT DEVELOPMENTS IN OIL REFINING TECHNOLOGIES

OBJECTIVES

To bring the latest information on the todays and **future trends** in the refining industry.

On completion of the course, the participants:

- have got a **broader vision on the constraints** imposed to the refiners in the next future coming from technical safety and environmental concerns
- have improved their knowledge on the recent developments regarding the main refining processes
- understand better how the latest breakthrough can meet the new challenges.

COURSE CONTENT

REFINERY PRODUCTS AND SCHEME EVOLUTION OUTLOOK FOR 2020 0.5 day

Recent trends and new constraints reshaping the environment of the refining activity.
Quality requirements and desulfurization.
New and future regulations concerning emissions: SO_x, CO₂, NO_x, COV's.
Evolution of the refining scheme.

ATMOSPHERIC AND VACUUM DISTILLATION: NEW CONCEPTS 0.25 day

Progressive distillation, concept and example.
Heat recovery optimization and energy consumption.
Modern internals for crude oil distillation column.
Efficient and low energy consuming vacuum equipment.

CATALYTIC REFORMING AND ISOMERIZATION 0.75 day

Fixed bed reforming debottlenecking options.
Continuous catalytic reforming: concept, comparison with "semi reg" units.
Benzene production and reduction in the gasoline pool.
Advanced isomerization technology for recycling paraffins.
New breakthrough in catalytic fields.

FCC: MORE PROPYLENE OR MORE RESIDUE 0.75 day

Feed injection and mix temperature control.
Riser termination devices and catalyst separation. Post riser quench.
Stripping technology.
Regeneration and catalysts coolers.
Propylene yield enhancement.

GASOLINE SULFUR REDUCTION STRATEGIES 0.5 day

Sulfur distribution in FCC gasoline and selective HDS.
Alternate sources of gasoline:

- light olefins oligomerization.
- new trends in alkylation.

ULTRA - LOW SULFUR DIESEL PRODUCTION AND VGO DEEP HYDROTREATMENT 0.5 day

New generation catalysts and related performances.
Diesel hydrotreater units: investigation of existing and new means to reach ULSD.
FCC feed pretreatment.

HYDROCRACKING TECHNOLOGIES FOR VACUUM DISTILLATES 0.75 day

High pressure hydrocracking, mild hydrocracking.
Recent technologies: catalysts, energy recovery, fractionation.

HYDROCRACKING ROUTES FOR RESIDUE 0.25 day

Various available technologies: fixed bed, ebullient bed, moving bed.

HYDROGEN BALANCE 0.25 day

Routes for production of hydrogen (steam methane reforming, partial oxidation).

THERMAL CONVERSION OF RESIDUES 0.25 day

Renewal of old process: delayed coker.
Integration in the framework of crude upgrading.

DEVELOPMENT OF ANCILLARY UNITS 0.25 day

Sulfur plants and tail gas treatments.

▲ Who should attend?

Graduate engineers, process or technical personnel seeking information on the recent developments in oil refining technologies.

▲ Duration

5 days

▲ Dates & Location

April 21-25, 2008
Rueil-Malmaison

▲ Tuition Fees

€ excl. tax 2,240

▲ Lecturers from

- ENSPM FI - IFP Training
- INDUSTRY
- Axens

Ref. **RPC / RECENT**