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PETROCHEMICALS OLEFINS AND AROMATICS

▲ Who should attend?

Personnels working in the petroleum and petrochemical sectors looking for an introduction to the petrochemical aspects of olefins and aromatics.

▲ Duration

3 days

▲ Dates & Location

May 5-7, 2008
Lyon-Solaize

▲ Tuition Fees

€ excl. tax 1,380

▲ Lecturers from

• ENSPM FI - IFP Training

Ref. **RPC / PETRO-E**

OBJECTIVES

To bring broad technical information on steam cracker process and on other major processes used to provide olefins and aromatics.

On completion of the course, participants:

- are familiar with the sources, outlets and main industrial uses of olefinic and aromatic compounds
- have a grasp of the functions and main characteristics of the petrochemical processes and units currently used in the industry to produce, separate and purify the compounds concerned.

COURSE CONTENT

SOURCES, OUTLETS AND MAIN INDUSTRIAL USES OF OLEFINIC AND AROMATIC INTERMEDIATES — 0.5 day

The main production processes: steam cracking, catalytic reforming, fluid catalytic cracking, ...

Outlets and main uses of:

- olefinic and diolefinic hydrocarbons: ethylene, propylene, butenes, butadiene
- aromatics hydrocarbons: benzene, toluene, ethylbenzene, xylenes.

STEAM CRACKING AND TREATMENT OF THE CUTS PRODUCED — 1.75 days

Pyrolysis

Analysis of the hydrocarbon feedstock for steam cracking process.

Implementation: furnace, quench, primary separation.

Yields, operating variables affecting treatment severity, influence of the nature of the feed.

Compression and purification of the cracked gases

Implementation of compression.

H_2S and CO_2 removal by alkaline washing.

Drying of gases by adsorption.

Cooling: propylene and ethylene chilling cycles, cold box.

Separation and treatment of steam cracker effluents

Steam cracker effluent separation train, main characteristics of the cuts produced, specific impurities and particular constraints; acetylene removal from the C_2 cut, selective hydrogenation of MAC and propadiene in the C_3 cut.

Treatment of the C_4 cut, 1,3- butadiene isobutene and 1- butene recovery.

Steam cracked gasoline treatment for the production of motor fuels and benzene.

PRODUCTION OF AROMATICS — 0.75 day

Catalytic reforming and BTX production
Analysis of the process, the catalyst, yields, operating variables.
Characteristics of BTX effluents. Influence of the nature and cut points of feeds.

Aromatics and non-aromatics separation processes
Liquid-liquid extraction, extractive distillation.

Associated processes
Hydrodealkylation, disproportionation, isomerization.

Aromatic separation processes
Distillation, adsorption on solid: application to xylene separation.

Styrene production
Benzene alkylation, ethylbenzene dehydrogenation. Manufacturing conditions.