



IFP Training



CATALYSTS IN PETRO-REFINING PROCESSES

About Instructor

Executive Vice President in IFP Training

Author of 66 IFP Patents in Catalysis and Refining processes

President of Refining Committee of AFTP since 2012

Research and Development Manager of commercial catalysts in IFPEN



CHRISTINE TRAVERS



Build your skills in:

Operation and performance control of the main refining catalysts

Preparation and characterization of industrial catalysts

Sponsor:



CATALYSTS IN PETRO-REFINING PROCESSES

(Catalytic Reforming, FCC/RFCC, Isomerization, Hydro Processing, SRU Processes)



3 Days

PURPOSE

To deepen understanding of catalysts: their preparation use, unit start-up, performance control, troubleshooting during operation, unit shutdown and regeneration.

AUDIENCE

Engineers and managers in the operations, project engineers, process engineers or technical assistance and commissioning personnel in engineering or licensing and catalyst suppliers.

LEARNING OBJECTIVES

- To grasp the role and the basic mechanism of a catalyst.
- To learn the methods for performance monitoring.
- To understand the issues related to industrial use (start up, shutdown, etc)
- To analyze the effect of the parameters on catalytic selectivity and stability.

PREREQUISITE

It is recommended that participants be familiar with the contents of the "Refining Processes and Petroleum Products" course (refer to the corresponding training session) in order to benefit fully from this course.



CHARACTERISTICS AND PROPERTIES OF INDUSTRIAL CATALYSTS 0.75 day

Main types of catalytic processes and related catalyst markets in the refining and heavy petrochemical industries. Main features of catalysis

Thermodynamics in a chemical reaction. Kinetics in heterogeneous catalysis. Quality requirements for an industrial catalyst, characterization of its properties.

Processes for catalyst synthesis and industrial production of catalysts.

OPERATION AND PERFORMANCE CONTROL OF INDUSTRIAL CATALYSTS 2.25 days

The following items are presented for each process: process and chemical reaction characteristics, selection and developments of catalytic formula, catalyst implementation, process flow diagram; process performances and catalyst monitoring. The specific features for the corresponding type of catalyst are emphasized.

Catalytic reforming catalysts

Precautions for start-up, monitoring and maintaining catalyst activity, incidents. Regeneration steps. Catalytic formulas for the regenerative process. Solution for benzene removal.

Isomerization catalysts

Different types of catalysts and process arrangement. Impact on the resulting octane number. Influence of poisons on the catalytic activity and operational constraints linked to the type of catalyst.

Catalytic cracking catalysts

Zeolite structure and design for yield optimization. Analysis of catalyst ageing. Improvements of LCO and propylene yields. Improvements in catalyst regeneration. Metal passivation and solutions for Vanadium effects. Additives for emission reduction,

Hydrotreatment and hydrocracking catalysts

Active phase structure, sulfiding at start-up. Evolution of catalytic formulas and processes for the treatment of unsaturated and heavy cuts. Selective hydrogenation and hydrotreatment of FCC gasoline minimizing octane loss.

Catalysts for Claus converter and tail gas treatment

Claus catalysts. Impact of sulfur deposit and temperature on the conversion. COS and CS₂ hydrolysis. Deactivation and regeneration. Adaptation to tail gas treatment processes.

LANGUAGE	LOCATION	DATE	FEES	REGISTRATION CONTACT
	Tehran	12-14 December (آذر 22-24)	39,500,000 Rial	training@cbcoilandgas.com

محل برگزاری دوره هتل بزرگ تهران (تقاطع ولی عصر - مطهری) می باشد.
مهلت ثبت نام تا ۱۵ آذر ۹۵ می باشد.

حداکثر ظرفیت تعداد شرکت کنندگان 27 نفر می باشد

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