€TRAINING

Refinery Process Yields Optimisation

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Introduction:

This training program will present a detailed overview of refining process yields, from the crude oil feed to the finished products.

Major refining processes are presented and discussed, including feedstock, feedstock preparation, operating conditions, catalysts, yields, product properties, and economics. It is oriented toward the practical aspects of refinery operations as well as the terminology and economics of refining

Conference Objectives:

At the end of this conference the participants will be able to:

- Understand the complex nature of Refining and its operations
- Understand the drivers of the Petroleum Refining industry to maximize process fluid yields
- Appreciate the purpose and subtleties of all processes associated with the processing of petroleum into finished products
- Apply the learning to aid refinery scheduling and optimization
- Appreciate the implications of different feedstocks on product quality and product range

Targeted Audience:

- Process Engineers, Technologists, Operating, and Supervisory personnel engaged in the refining activities who have a minimum of experience and who are required to understand and discuss issues related to their processes.
- Refinery scheduling staff, blending staff, and crude oil buyers
- Engineering and operations personnel, this training program will also be suitable for business, sales, technical, and scientific personnel with limited or no broad refinery operating experience, along with Technical sales personnel.
- Those involved in selling equipment or supplies to the refining industry and those involved with economic evaluations of refinery operations will benefit from this conference

Course Outlines:

Unit 1: Crude Oil Yields Refinery Technology:

- Crude Oil Origins & Characteristics
- Crude oil Assay and properties
- Crude oil products
- Product specifications
- Gasoline
- Kerosene/ Jet Fuel
- Fuel Oil/ Diesel Fuels
- Petrochemical Feedstocks
- Refineries Complexity
- Overall refinery flow: Interrelationship of processes

Unit 2: Petroleum Refinery Processes:

- Crude Processing
- Desalting
- Atmospheric distillation
- Vacuum distillation
- Heavy Oils Processing - Cocking and Thermal Processes
- Delayed Coking
- Fluid Coking
- Flexicoking
- Visbreaking

Unit 3: Process for Motor Fuel Production:

- Fluid catalytic cracking
- Hydrocracking
- Cat Cracking
- Isomerization
- Alkylation
- Hydrotreating
- Catalytic Reforming

Unit 4: Supporting Operations:

- Blending for Product Specifications
- Hydrogen production
- Refinery Gas Plants
- Acid Gas Treating
- Sulfur Recovery Plants

Unit 5: Refinery Economics:

- Residue Reduction
- Asphalt and Residual Fuel
- Cost Estimation
- Economic Evaluation