AbarSolutions
Petroleum Consultancy

Advanced Petroleum Refinery Technology

From 28/10/2024 To 01/11/2024

Radisson Blu Hotel Madrid Prado
Madrid, Spain

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حولي – قطعة 11 – شارع 172 – قسيمة 013521 – مجمع آمار – الدور 1 – محل 1 – الرقم الآلي للوحدة 18121758
Hawalli - Block 11 – Street 172 - Parcel 013521 – Amar Complex - Floor 1 - Flat 1 - PACI Unit No. 18121758

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Abar Solutions Petroleum Consultancy Invite Your Employee To Participate With Us In Special Training Course As Under Details:

Course Name	Advanced Petroleum Refinery Technology				
Code	**Period**	**Start**	**End**	**Location**	**Fees**
OPE 57	5 Days	28/10/2024	01/11/2024	Radisson Blu Hotel Madrid Prado Madrid, Spain	1250 KD
** The Fees Includes: Lecturer, Training Material, Training Room With One Coffee Break & Lunch Open Buffet Daily, Certificate Of Attendance In Last Day Training Course **					

Course Description:

This course will present an overview of the modern, integrated petroleum refinery, its feedstocks, product slate and the processes employed to convert crude oil and intermediate streams into finished products, Hydrocarbon chemistry, crude oil properties and fuel product quality will be discussed, including changes to products resulting from worldwide legislation, with a focus on MTBE. Each refining process will be presented, covering operating description and conditions, feedstock and catalyst selection, product yields and the relationship between process parameters, unit performance and product output and properties.

Course Objectives:

This program is designed to give the trainees an understanding in:

- The overall process operation of an integrated petroleum refinery.
- The extensive vocabulary unique to this industry.
- Will also gain knowledge of:
  - Crude oil properties and their effect on refining.
  - Major product specifications.
  - The effects of ever-changing fuels specifications on future product composition and refinery configuration.
- The effect of the worldwide response to CO2 emissions.
- New vehicle engine / fuel options on future product quality / demand.
- The process operation of each refinery unit.
- How the units interact, and how they are likely to change.

The course is designed to highlight the fundamentals of the role of the process engineer in the field of Refining Technology.

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Course Content & Outlines:

I.N.T.R.O.

The Refinery Flow-sheet:

- Refinery operations overview &Terminology.
- Storage and handling.
- Process Integration.

Feedstocks:

- Chemistry, Properties and types of crude oils.
- Effects of properties on R/O.

Products:

- Product slate.
- Motor fuels.
- Heating oil.
- Petrochemicals.

Specifications:

- Effects of specifications on refinery operations.

Crude Oil Processing:

- Desalting.
- Atmospheric distillation.
- Vacuum distillation.

Processes for Motor Fuel Yield:

- Fluid catalytic cracking.
- Hydrocracking.
- Visbreaking & Coking.

Heavy Oil Processing:

- Trends in technology for high-boiling feedstocks with high sulfur, nitrogen and metal content.
- Hydro processing.
- Solvent extraction.
- Thermal cracking.

Processes for Improving Motor Fuel Performances:

- Reforming.
- Isomerization.
- Alkylation.
- Polymerization.
- Hydrotreating.
- Hydrogenation.

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Blending for Product Specification:

- Octane.
- Cetane.
- Oxygen.
- Sulfur
- Olefin.
- Aromatics contents.

Air Pollution Control:

- Particulate and oxides of nitrogen removal.
- Sulfur removal and recovery.

Future Refinery Operations:

- Product distribution changes.
- Feedstock quality.
- Economics.
- Processing schemes.
- Effects of environmental regulations and oxygenates on products.
- Processes and economics & Fluid Flow.
- Heat Transfer.
- Mass Transfer.
- Specifying process equipment.
- Control Valves.
- Safety Relief Valve Design.
- Heat Exchangers .
- Pumps and motors.
- Metering Devices (i. Venturi, ii. Rectangular Weir, iii. Pitot Tube).
- Compressors and steam turbines.
- Vacuum systems.
- Distillation / Absorption.
- Separators and accumulators.
- Utility systems.
- Cooling Water Systems.

Course Evaluation and Summary.

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Course Agenda:

Advanced Petroleum Refinery Technology 28/10/2024 – 01/11/2024				
Day	9.00AM To 11.30 PM	30 Minute	12.0 PM To 03.0 PM	End & Lunch
MONDAY	I.N.T.R.O. The Refinery Flow-sheet: • Refinery operations overview &Terminology. • Storage and handling. • Process Integration. Feedstocks: • Chemistry, Properties and types of crude oils. • Effects of properties on R/O.	Light Break	Products: • Product slate. • Motor fuels. • Heating oil. • Petrochemicals. Specifications: • Effects of specifications on refinery operations.	Lunch Buffet Break
TUESDAY	Crude Oil Processing: • Desalting. • Atmospheric distillation. • Vacuum distillation. Processes for Motor Fuel Yield: • Fluid catalytic cracking. • Hydrocracking. • Visbreaking. • Coking.		Heavy Oil Processing: • Trends in technology for high-boiling feedstocks with high sulfur, nitrogen and metal content. • Hydro processing. • Solvent extraction. • Thermal cracking.	
WEDNESDAY	Processes for Improving Motor Fuel Performances: • Reforming. • Isomerization. • Alkylation. • Polymerization. • Hydrotreating. • Hydrogenation.		Blending for Product Specification: • Octane. • Cetane. • Oxygen. • Sulfur • Olefin. • Aromatics contents. Air Pollution Control: • Particulate and oxides of nitrogen removal. • Sulfur removal and recovery.	

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THURSDAY	Future Refinery Operations: • Product distribution changes. • Feedstock quality. • Economics. • Processing schemes. • Effects of environmental regulations and oxygenates on products.		Future Refinery Operations: • Processes and economics & Fluid Flow. • Heat Transfer. • Mass Transfer. • Specifying process equipment. • Control Valves.	
FRIEDAY	Future Refinery Operations: • Safety Relief Valve Design. • Heat Exchangers . • Pumps and motors. • Metering Devices (i. Venturi, ii. Rectangular Weir, iii. Pitot Tube). • Compressors and steam turbines.		Future Refinery Operations: • Vacuum systems. • Distillation / Absorption. • Separators and accumulators. • Utility systems. • Cooling Water Systems. • Course Evaluation and Summary.	

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