Training Title
GASOLINE BLENDING IN REFINERIES

Training Duration
5 days

Training Venue and Dates

RT259	Gasoline Blending in Refineries	5	01 – 05 March, 2020	$4,500	Dubai, UAE

In any of the 5 star hotels. The exact venue will be informed once finalized.

Training Fees

- **US$4,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.**

Training Certificate
Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION
This five-day course is designed for blending engineers, senior operators, product coordinators, refinery planners, refinery lab personnel, and fuels marketers and traders, and provides a comprehensive overview and discussion of gasoline blending techniques, technology and cost/benefits. It addresses contemporary issues such as the latest specifications, ultra low sulfur fuels, impact of MTBE phase-out, Ethanol blending, and environmental impact of various gasoline specifications.

Case studies are used to illustrate the relative importance of each aspect of the gasoline blending operation, together with specific exercises. A complete set of course materials and lunches are included

TRAINING OBJECTIVES

- Gasoline Product Specifications, Current and Future
- Components and Additives
- Blending Equipment and Software
- Blending Control and Optimization Techniques
- Blending Non-linear Property Correlation Equations
- Quality Assurance, On-line Analyzers and On-line Certification
- Environmental Issues
- Calculating Costs/Benefits of Blend Automation
- Blend Performance Monitoring and Troubleshooting

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- References and Other Material

WHO SHOULD ATTEND?

Refinery and unit operating personnel, Engineers with process responsibility, Refinery technical staff

TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.
Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

DAILY OUTLINE

Day One

Overview of Blending Operation

-Overview of Refinery
-Refinery offsite operation
-Fuel blending operation in refinery
-Blending Problems and Challenges

Blending Field Equipment

-Blending Configurations
-tank farm and Automatic tank gauging system
-Pumps MOV"s and control valves
-Additives control and monitoring

Day Two

Qualities Analysis and measurements

-Quality relationships and measurements
-Lab analysis of stock and product quality
Online analysis of stock and product quality

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All about octane and measurements

-The Mysteries of octane
-Octane measurement by knock engine
-Integrated analysis technology and applications
-NIR and NMR versus CFR analyzers, selection and cost effectiveness

Day Three

Blending control;

-Leaner blend
-None- Linear blend
-Methods to handle blend Non-Linearity
-Control Matrix of quality

Blend Optimization

- Blend Control Strategy
- Blend Optimization
- How to estimate and update blending values
- Gasoline, Diesel and fuel oil specifications
- Refinery –wide planning

Day Four

Offline blending

- Ethanol blending
- Offline blend planning and optimization
- Lab exercise to solve an LP problems of small refinery

Laboratory Measurements

- ASTM Methods for Gasoline and Diesel

On-Line Analyzers

- Advantages vs. Single Lab Analysis
  Improving Measurements with ASTM 2885/3764 Test Methods
  State-of-the-Art NIR & NMR Analyzers for Blend Control
  Criteria for In-Line Blend Certification

Day Five

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CLEAN FUELS AND ENVIRONMENTAL ISSUES

- **Impacts of Upcoming USA and EU Regulations**
  - Phase Out of MTBE
  - Ethanol Blending
  - Sulfur Reduction
  - Bio-Diesels
- Sulfur Test Problems and Contamination

BENEFITS OF IN-LINE BLENDING

- **Benefits Calculation Methodology**
  - Inventory Reduction
  - Quality Giveaway Minimization
  - Use of Least Expensive Components
  - Tankage Minimization

OPEN FORUM Q&A SESSION

- Summary of Each Participant Blending Operation
- Exchanging Problems / Handling of Common Blending Problems

NOTE:
Pre & Post Tests will be conducted
Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.

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