Training Title:

CRUDE OIL SAMPLING, TESTING, EVALUATION & EQUIPMENT

Training Duration:

5 Days

Training Venue and Dates

REF LM040	Crude Oil Sampling, Testing, Evaluation & Equipment	5	20 - 24 Jan. 2025	$6,500	Milan, Italy

In any of the 4 or 5-star hotel. Exact venue will be informed soon.

Training Fees

- $6,500 per participant for Public Training including Course Materials/Handouts, Tea/Coffee, Refreshments & Lunch

Training Certificate

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

TRAINING DESCRIPTION

Crude oil is the single largest traded commodity in the world. Proper sampling, analysis, and reporting of data according to established standards is of paramount importance, especially with the volatility in price, and the market proliferation of synthetic, high TAN, and extra heavy crude oils. Whether crude oil is refined in the near-term or stored for an extended period, it is fundamentally important that recognized procedures and standards be used in sampling and analysis. This is true from the time crude oil is produced, through transportation and interim storage, until it is ultimately refined. Analytical data must be accurate and reliable as they are the basis for decisions on whether a given crude oil can be effectively processed and yield the desired product slate. These data are also used by engineering personnel in planning refinery upgrades.

OBJECTIVESS

- he objective of this guide is to provide a comprehensive overview of crude oil sampling, testing, evaluation, and the equipment involved in these processes. By the end of this guide, readers will:

- Understand the importance of accurate crude oil sampling and testing in various stages of the oil production and distribution process.
- Gain insights into the different methods and techniques used for sampling crude oil, including grab sampling, composite sampling, and automatic sampling.

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- Learn about the key parameters and properties of crude oil that are analyzed during testing, such as API gravity, viscosity, sulfur content, and water content.
- Familiarize themselves with the different laboratory and field testing methods employed to evaluate the quality and composition of crude oil.
- Explore the significance of quality control and quality assurance measures in ensuring reliable and consistent test results.
- Acquire knowledge about the specialized equipment and instruments used for crude oil sampling, testing, and evaluation, including samplers, analyzers, centrifuges, and separators.
- Understand the regulatory standards and industry guidelines governing crude oil sampling, testing, and evaluation practices to ensure compliance and reliability.

WHO SHOULD ATTEND?

- Laboratory technicians and chemists responsible for the analysis of crude oil samples for quantity and quality purposes
- Refinery personnel responsible for evaluating crude oil to determine their processing characteristics
- Operating (field) personnel responsible for collecting samples will also benefit from a better understanding of how test results are directly dependent on proper sample collection and handling
- Traders and buyers involved in sale, purchase, or exchanges of crude oil.

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 motivating everybody to find the right answers. The delegates will also be encouraged to raise their own questions and to share in the development of the right answers using their own analysis and experiences.

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

COURSE OUTLINE

Day 1

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- Crude Oil History; Supply and Trading Patterns
- Definitions and Terms
- Quality Variations and Their Causes
- The Complexities of Crude Oil Composition
- Sampling Protocols
- Sampling Containers and Sample Integrity

Day 2

- Composition and Classification
- Inspection Analyses (Cursory Assay)
- Comprehensive Analyses (Full Assay)
- Other Important Crude Oils and Fraction Properties
- Basics of Crude Oil Processing Evaluation

Day 3

- Bitumen and Extra Heavy Crude Oils
- Crude Oil Quality (Case Studies)
- ASTM Crude Oil Proficiency Testing Program
- Challenges Presented to the Analyst by Heavier, Higher Sulfur Feed stock and Opportunity Crude Oils
- Future Needs in Crude Oil Characterization and Analytical Test Method Requirements

Day 4

- Typical oilfield processing
- Production fluid treatment objectives
- Production fluid separation
- Emulsion
- Theory
- Stabilization
- Destabilization
- De-emulsifier

Day 5

- Dehydration
- Oil treatment basics

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- Desalting
- Stake's law of settling theory or gravity separation
- De-emulsifier requirements and selection
- Group discussion on the chemicals used.

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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