CRUDE OIL TESTING, EVALUATION, SAMPLING & EQUIPMENT

CLE139
Chemical Laboratory Engineering, Technology & Management

TRAINIT ACADEMY

COURSE TITLE

CRUDE OIL TESTING, EVALUATION, SAMPLING & EQUIPMENT

COURSE DATE/ VENUE

25 February – 01 March, 2019

London, UK

COURSE REFERENCE

CLE139

COURSE DURATION

05 days

DISCIPLINE

Chemical Laboratory Engineering, Technology & Management

COURSE INTRODUCTION

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.

COURSE OBJECTIVE

Upon successful completion of this course, the delegates will be able to:

- ✓ Discuss the history of crude oil as it relates to supply and training patterns
- ✓ Define and discuss key terminology
- ✓ Discuss sample protocols
- ✓ Review and discuss case studies

COURSE AUDIENCE

- 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.

COURSE CONTENT

DAY 1

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

COURSE CERTIFICATE

TRAINIT ACADEMY will award an internationally recognized certificate(s) for each delegate on completion of training.

COURSE FEES

$6,150 per Delegate. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

COURSE METHODOLOGY

The training course will be highly participatory and the course leader will present, guide and facilitate learning, using a range of methods including formal presentation, discussions, sector-specific case studies and exercises. Above all, the course leader will make extensive use of real-life case examples in which he has been personally involved. 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.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Case studies & Practical Exercises
- 10% Role Play
- 10% Videos, Software or Simulators (as applicable) & General Discussions