TRAINING PROGRAM

BASIC UNDERSTANDING OF THE CORRELATION BETWEEN LABORATORY RESULTS AND REFINERY OPERATION

Introduction:

The course covers major components of laboratory techniques and refinery process systems. Its aim is to provide participants with a clear picture of refinery condition assessments by developing an understanding of interpretation methods of laboratory results regarding chemical reactions in all refining processes. The course also discusses the measurement uncertainty method which can be helpful in evaluating analysis results and in understanding lab results' deviation limits.

Who Should Attend?

The course is designed for new chemists, technicians and engineers who work in refinery laboratories and operation, process, maintenance and planning sections. The course is also useful for experienced chemists, technicians and engineers who wish to refresh their knowledge.

Methodology:

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

Certificate:

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration

Course Objectives:

By the end of this course delegates will be able to:

- Provide basic understanding of laboratory analyses and techniques applied.
- Provide good knowledge of the chemical reaction in refinery processes.
- Provide a good grasp of the techniques used for interpreting the laboratory results.
- Provide an understanding of the evaluation method to diagnose the condition of the refinery.

Course Outline:

- Introduction
- Petroleum accumulation, drilling and gathering center
- Refinery facilities: towers, reactors, heat exchangers, valves, heaters, pumps, tanks
- Composition of petroleum
- Composition of refined products
- Laboratory technique and analysis
- Laboratory measurement uncertainty
- Process description
- Reaction in reactors
- Flow description

- Desalting unit
- Crude distillation unit
- H-Oil unit (hydrogen treatment)
- Vacuum distillation unit
- Isocracking unit
- Kerosene unifiner
- Light Diesel unifiner
- Diesel unifiner
- Haphtha unifiner
- Catalytic reformer unit
- Mercaptan oxidation unit
- Amine unit
- Sour water treating
- Hydrogen unit
- Gas processing unit
- Acid-gas treating unit
- Sulfur recovery unit
- Demineralizer unit
- Boiler plant
- Cooling water system
- API separator
- Lube oil blending plant
- Demonstration and evaluation of lab results all units
- Lab results interpretation
- Refinery pollution