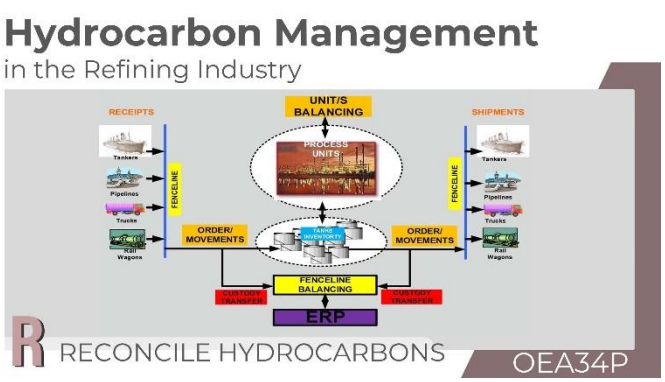

Topic ID	**OEA34T**
Title	**Hydrocarbon Management in the Refining Industry**
Category	**R-Reconcile Hydrocarbon**
eLearning Level	**Basic**

Introduction

In this course, we will walk through the definition and overview of hydrocarbon management, examine the elements and processes involved, study business cases, learn its related commercial systems and strategies, use commercial software to perform calculations, and learn how to perform audits in the plant.

This topic will discuss refinery fenceline balancing, meter reconciliation, distribution of refinery loss, inter-tank transfer, mass quantity uncertainty matrix, HM landscape dataflow, etc.

Overview of Hydrocarbon Management

Hydrocarbon management in the refining industry deals with identifying and quantifying losses, including both accountable and unaccountable loss, and the measurement to control losses based on strategic and economic consideration.

It is also known as mass reconciliation, mass balance, and yield accounting. Mass reconciliation is a process conducted at month-end by refinery yield accountants and financial analysts to calculate the refinery's final percentage of loss and gain based on a determining parameter in the equation.

It is important since it involves billion-dollar assets and million-dollar transactions. Therefore, it requires detailed and accurate accounting, unit plant optimization, and loss and gains estimate calculation.

Main Elements of Hydrocarbon Management

The elements of hydrocarbon management in the refining industry are receipts, own use, losses, and shipments. The receipts and shipments cover any input and output of hydrocarbon from and to tankers, pipelines, trucks, and rail wagons that pass through custody transfer to processing units. The own use covers fuel gas, fuel oil, FCC coke, and waste gasses used in the hydrocarbon management process. Finally, the losses cover accountable losses such as chemical loss, fugitive loss, and flare loss, as well as unaccountable losses.

This course will explain several calculations, such as determination of oil loss and its percentage, refinery loss and gain, a refinery's monthly normal distribution, production to the consumption ratio, economics, and uncertainty calculation. In addition to that, the course will cover data flow in the refinery process, strategies to optimize operations for optimum results, and commercial software commonly used in the industry.

Summary

This topic touches on the economics of hydrocarbon management. It shows how to approach hydrocarbon management strategically (fenceline balance and bottom-line balance), calculate stock measurement uncertainty, unit reconciliation, oil loss, etc.

Options for eLearning This Topic

Mode of eLearning	Available?
Free Course	No
Refresher Course	Yes
Pick N Choose (Custom Curriculum)	Yes
Advanced Level Course	Yes
Structured MCOR Curriculum	Yes