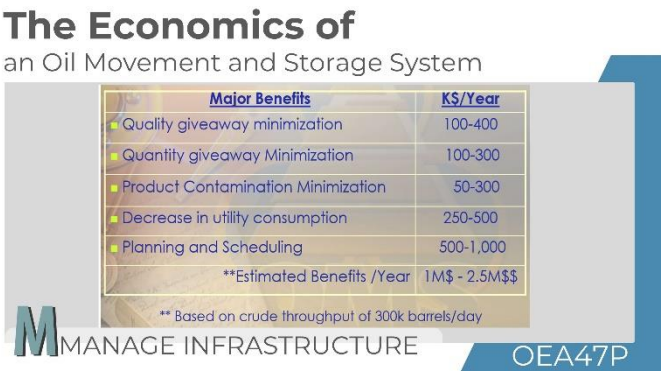

Topic ID OEA47T
Title The Economics of an Oil Movement and Storage System
Category M-Manage Infrastructure
eLearning Level Basic

Introduction

The prime challenges concerning oil movement during refinery operations are many. For example, performing an efficient periodic reconciliation of oil movements, managing an enormous data set and entering it manually, measuring each unit-wise loss, considering other losses due to errors, excluding property giveaway in product blending, comparing the anticipated data with the actual output, etc.

This topic will discuss oil movement management/control/monitoring, efficient management of refinery equipment, typical numbers of OM&S elements, in-plant material movement activities, distribution of daily OM&S activities, aspects of tank farm automation, operational problems and costs, control functions/modules, path selection methodology, sequence of operations, single-tank status, tank inventory, integrated OM&S control system, etc.

Oil Movement Management and Control

Oil movement management allows refiners to perform movement activities within the oil refineries, terminals, and tank farms. Oil movement management helps with safe and effective movement execution by considering temperature/pressure requirements, equipment availability, and material compatibility.

The oil movement control utilizes a model of a refinery to define all types of associated equipment. For example, receiving and shipping points, tanks, valves, pipes, and pumps. The control movement model helps to securely and efficiently organize and manage material movements. Oil movement involves equipment such as valves and pumps.

Oil movement control involves the following steps:

- Path selection and isolation for safe movement via the best path possible.
- Sequence generation ensures that the involved equipment is operated in the desired sequence.
- Allowing the operator to review path approval and sequence actions and either accept or reject the relevant actions.

Movement execution organizes and controls the flow of material. Due to the movement operations, the tank quality integration system monitors any variations in product property.

Oil Movement Monitoring

Oil movement monitoring allows refiners to precisely schedule and monitors material movements within terminals, tank farms, and refineries. For safely and efficiently executing refinery operations, the oil movement monitoring provides comprehensive and explicit information about inventory logs, tank status, alarms, and a summary of various activities.

Summary

If refineries want to improve their hydrocarbon management, they should consistently examine the impact of oil movement management and control on production efficiency. Here, challenges involved in the oil movement business, its management, control, and monitoring are discussed.

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