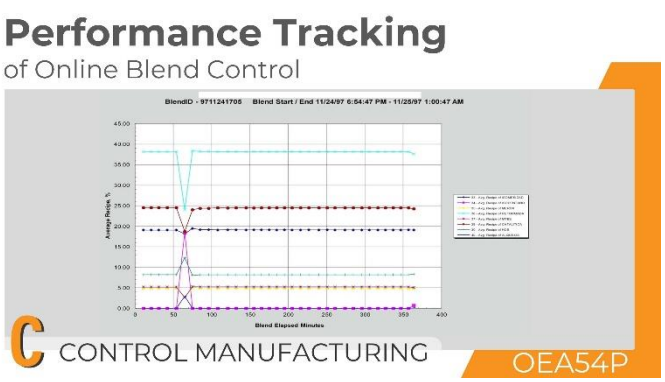

Topic ID	**OEA54T**
Title	**Performance Tracking of Online Blend Control**
Category	**C-Control Manufacturing**
eLearning Level	**Basic**

Introduction

Tracking the performance of an online blend control and optimizer system is crucial to detect problems. A simple, flexible, robust system can be deployed using MS Excel, SQL, or VBA that would be independent of a vendor-supplied online blend control system to track post-blend performance.

This topic will discuss the objectives of tracking, MS Excel/SQL-based system architecture, a sample of Excel plots of blend parameters, system features, the purpose of performance tracking, blend data retrieval screen, data entered into Excel.

It shows the configuration of plots, stock recipe setpoints history, average recipe %, target ratio, PV and SP, etc.

Performance Tracking of Online Blend Control

An integrated blend data analysis results in improved blend planning and operations in oil refineries. An online blend control performance tracking system can function as a decision support system. It helps in operation monitoring and improving blend operations by providing operational and management reports. The performance tracking system collects the data on planning and execution of the blending operations of refinery products and provides multiple benefits after analysis of integrated blend data.

Apart from discovering potential problems, performance tracking benefits include an incremental increase in profits, reduced quality giveaway, and reduced blend variability. Reviewing post-blend history can prevent giveaways and violations of the next blend. It also enables tracking of stock qualities (analyzers) and predicted blend qualities.

The performance tracking system is composed of five components in general.

There is a data extractor interface in between the process database and blend information system database. The Excel VBA module succeeds the blend information system database and precedes the plots and reports. The data can be gathered by blend performance monitors from multiple external sources such as lab systems, blend controllers or planning tools, process data historians, etc. A performance monitoring system converts data into valuable information to support decision management.

The performance tracking system performs analyzer validation during blend control and monitors the actual versus predicted product properties. The recipe is also optimally adjusted to meet specifications by reviewing and assessing the generated plots of blend elapsed minutes versus average, flow set points, target ratio SP & PV, etc. The final reports may include blend analysis reports, actual vs target reports, actual vs lab reports, detailed recipe reports, etc.

Summary

This topic walks through the performance tracking of the online blend control and optimizer system and its architecture, features, and benefits. A performance tracking system should be independent of vendor-supplied online blend control systems to perform a realistic and unbiased optimization.

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