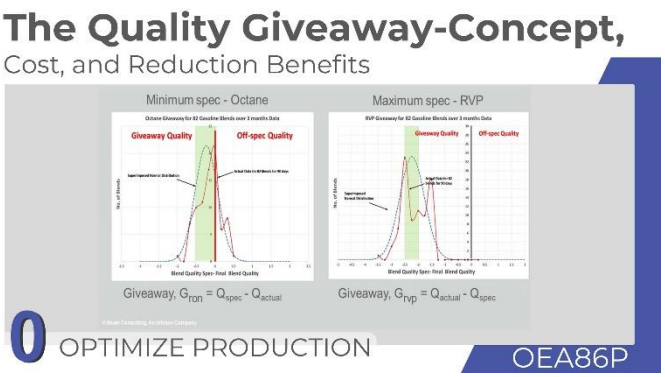

Topic ID	**OEA86T**
Title	**The Quality Giveaway-Concept, Cost, and Reduction Benefits**
Category	**O-Optimize Production**
eLearning Level	**Basic**

Introduction

The difference between the actual results of the chemical product and the stated results of the chemical product is a giveaway. This loss triggers marginal depletion of fuel, distillate, and heavy oil prices. These giveaways are converted into the income statement of a refinery by different types of opportunity costs. The blend quality is considered a giveaway if the product quality is greater than the blend spec. However, when the blend quality is less than the blend spec, it is considered violated.

This topic will discuss the concept of Quality Giveaway and Violation, cost estimation of RON and RVP giveaways, analysis of refinery giveaway data, Butane Blending for RVP, Losing tangible benefits by the quality giveaway, estimation of quality giveaway cost, the concept of Octane Giveaway, normal distribution of RON and RVP Giveaway, estimation of yearly loss of benefits from giveaway, etc.

Benefits Lost Due to Giveaway

As per the industry average, 0.1 RON giveaway will cost the refinery a loss of over 1 million US dollars for a 300KB/day capacity refinery. There is a reduction in margin. Online analyzers calculate the evolution of the blending process either in real-time or directly in the final tank by taking and evaluating the samples of the substance. The first of the two options is more effective as it allows for greater accuracy in the final specifications. In addition, it reduces the quality giveaway of the commodity.

Data required for RON and RVP giveaway cost estimation are the price of Gasoline RON rates, production ratio of all the grades, and percentage of Gasoline from crude. A basic way of analyzing and calculating the blending benefits is to obtain the data for a specific period. Then estimating the quality giveaway. The outcome may be presented graphically. Data obtained for a year may be used to estimate the annual loss. Then a normal distribution plot may be generated.

To Reduce RVP giveaway, nC4 should be blended, not iC4. iC4 exhibits a much higher vapor pressure than nC4. iC4 possesses a greater value as an alkylation feedstock. Octane giveaway may be reduced by placing reformer targets. In addition, there may be a blending of low octane components to minimize the octane giveaway. Typical considerations for Gasoline blending are octane flow and volatility flow (including T50, Reid Vapor Pressure, and Vapor / Liquid Ratio considerations).

Summary

Quality giveaway may be described as a refinery product of higher value than desired. A giveaway is not preferred for a refinery because there is a financial loss as highly valued chemical products are given at a low price. There is an impact on product dispatch scheduling. The product quality can be minimized with an advanced control system. In addition, Blend quality violation is also not acceptable because such a product cannot be dispatched. It will violate established norms. The product must undergo re-blending to bring it to spec. Re-blending is not a desirable process. Product dispatch schedule is greatly affected. Depending on the refinery characteristics, blending may be performed using the online analyzer. Giveaway losses are estimated in different ways in different refineries.

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