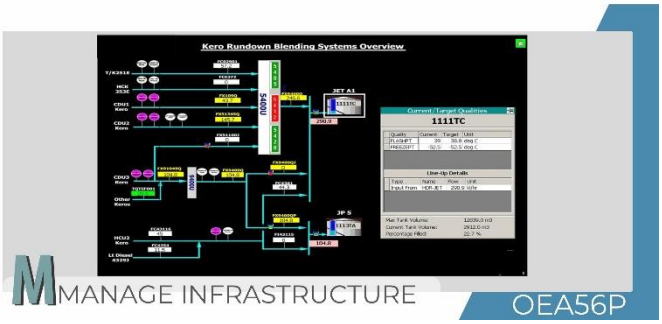
Product Blending



Topic ID	**OEA56T**
Title	**Product Blending**
Category	**M-Manage Infrastructure**
eLearning Level	**Basic**

Introduction

A refinery produces many blended products to fit requirements. These include asphalt, distillate fuel oil, finished motor gasoline, finished aviation gasoline, kerosene, kerosene-type jet fuel, liquefied refinery gases, lubricants, naphtha-type jet fuel, petrochemical feedstock, miscellaneous products, and other oils.

This topic will discuss product yield, types of blending, gasoline blending, diesel blending, kerosene blending, fuel oil blending, lube oil blending, stationary batch tank lube in-line blending, moving batch tank lube in-line blending, naphtha blending, etc.

Gasoline Blending

Gasoline blending is a refinery operation. Many processes blend different gasoline and other products such as 83 octane, premium 92 octane, and regular 87 octane. Gasoline may be blended to meet between 10 and 15 specifications depending on the demands. Gasoline blending is done by tank-to-tank in-line blending. Here, various products are involved, such as naphtha from fluid catalytic cracking, reformation, isomerate, and butane gas.

Diesel Blending

Diesel blending is done by tank-to-tank in-line blending. Diesel fuel is intended for gas-turbine as well as diesel engines in trains and trucks. Diesel contains different amounts of selected distillates. Besides this, saturated and aromatic hydrocarbons are also present. Diesel oils and bunker oils are blends of various refinery products. They are often diluted with CDU distillates for viscosity adjustments.

The refinery attempts to reduce the cost of the blend. But, of course, it helps to have low-cost diesel components and expensive distillates like diesel distillate kerosene.

Diesel blending produces a variety of different blends, such as B5, B2, and B20.

Kerosene Blending

Kerosene is a mixture of aliphatic hydrocarbons with 10-16 carbons for each molecule. Kerosene's half-life reaction is 0.27-0.22 days with a boiling range between 330 and 550F. Kerosene is blended using rundown-to-tank in-line blending. Kerosene is a blendstock used for jet fuel. Kerosene is blended with diesel fuel in significant amounts to optimize its performance. Kerosene is also used to reduce the viscosity of residual oil.

Lube Oils Blending

Stationary batch tank lube in-line blending uses up to 300 to 400 formulations. As the batch tank is kept stationary, a lot of piping and control valves are required. Compared to stationary batch tank blending, moving batch tank blending requires fewer piping and valves.

Summary

Product blending is done to ensure that all specifications and demands are met. Blending processes are categorized based on methods and products.

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