CRUDE COMPLEX UNIT- 311/312

RELIANCE PETROLEUM LIMITED JAMNAGAR

CRUDE / VACUUM DISTILLATION UNIT

DESCRIPTION

The Crude Complex of Reliance Petroleum Ltd. consists of two identical Crude Trains i.e. Unit-311/321 & Unit-312/322. Each train is designed to process 225,000 BPSD. The Crude Unit is designed to process either 100% Arab Light or 100% Arab Heavy Crude Oil. However, the unit would be normally processing the blend of 60% Arab Light & 40% Arab Heavy Crude Oil.

The Crude train-1 consists of Crude & Vacuum Distillation Unit (U-311, CDU/VDU) & Saturated Gas Concentration Unit (U-321).

The Crude train-2 consists of Crude & Vacuum Distillation Unit (U-312, CDU/VDU) & Saturated Gas Concentration Unit (U-322).

The Crude & Vacuum Units are heat integrated with Sat Gas Concentration Units. However, the U-311 is heat integrated with U-321 & the U-312 is heat integrated with U-322 only, respectively (i.e. Circulating Diesel Stream ex CDU is used as heating medium for Stabiliser column reboilers in Sat Gas Concentration Unit).

OBJECTIVES

The Crude Unit is the mother unit in any Petroleum Refinery. The feedstock for the Crude Unit is Raw Crude Oil, which is either indigenous or imported. The crude oil is received through the ships at jetty, off-loaded in Crude Tanks at the Marine Tank farm (MTF). The crude oil from the MTF Crude tanks is pumped to the Crude Oil tanks in the Refinery Tank farm (RTF). The crude oil from the RTF crude tanks is then fed to the Crude Units by a combination of the booster & main crude oil charge pump in the RTF area.

The objective of the Crude & Vacuum Unit is to separate Crude Oil into various fractions as given below:

- Unstabilised Naphtha, which is a feed for Saturated Gas Concentration Unit.
- Light & Heavy Kerosene which is a feedstock for LAB Plant, SKO/ATF Product or Diesel blending component.
- Diesel which is feedstock for Diesel unionfiner or a component for diesel blending system.
- HAGO, LVGO & HVGO together form the feedstock for Vacuum Gas Oil unionfiner.
 VGO Unionfiner in turn prepares the feedstock for FCCU.

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