

## 32,000 BPD Hydro-Desulfurization (HDS) Unit for Sale

**Capacity:** 32,000 BPD

**Raw Materials:** Light Gas Oil (LGO),  
Kerosene

**End Product:** Ultra Low Sulfur Diesel

### Process Information

The HDS Unit takes light gas oil from the refinery is desulfurized, denitrogenated, and hydrogenated over catalysts to produce a desulfurized gas oil. The desulfurized gas oil is dried under vacuum and blended with kerosene to give an ultra low sulfur diesel product.

### Major Equipment

- Mixed Gas Oil Feed Surge Drum
- Mixed Gas Oil Feed Pumps
- Mixed Gas Oil Feed / Stripper Bottoms Heat Exchanger
- Light Gas Oil Feed Surge Drum
- Light Gas Oil Feed Pumps
- Light Gas Oil Feed / Stripper Bottoms Heat Exchanger
- Reactor Feed / Effluent Heat Exchanger
- Reactor Charge Heater
- 2 Reactors
- Reactor Effluent / Recycle Gas Heat Exchanger
- High Temperature Separator
- Low Temperature Separator
- Gas Stream Exit High Temp Separator
- Recycle Gas System
- Product Stripper
- Wash Water Surge Drum



### BRIEF PLANT DESCRIPTION

Phoenix Equipment has for sale a 32,000 BPD Hydrodesulfurization (HDS) Unit. This HDS unit is used to desulfurize Light Gas Oil (LGO) and Kerosene to produce a low sulfur product, Ultra Low Sulfur Diesel (ULSD). This catalytic process is designed for 32,000 BPD of Light Gas Oil (LGO). The catalytic process of hydrodesulfurization (hydrotreating) is used to remove sulfur compounds from refined petroleum products. One reason for removing sulfur is to reduce sulfur dioxide SO<sub>2</sub> emissions that result from fuel combustion of petroleum products. Another purpose for removing sulfur from the intermediate product naphtha streams within a refinery is that sulfur, even in extremely low concentrations, can severely damage the metal catalysts platinum and rhenium in the catalytic reforming units that are used to upgrade the octane rating in naphtha streams. Hydrogenation of sulfur results in the toxic compound of Hydrogen Sulfide. In refineries, toxic hydrogen sulfide is converted into byproduct elemental sulfur.

**For more information contact -**  
Edward Zhang, Plant Sales  
[plants@phxequip.com](mailto:plants@phxequip.com)  
+1 732.520.2187 (Direct Dial)  
+1 845.242.3378 (Mobile)

**To discuss plants you are selling -**  
Jesse Spector  
[plants@phxequip.com](mailto:plants@phxequip.com)  
+1 732.709.7157 (Direct Dial)  
+1 908.902.8854 (Mobile)