

ABSTRACT

POLISHED TURBINE FUEL

Turbine fuel provided for large-scale land based turbines used by utilities for producing electricity and desalinated water, and for large mobile engines and turbines in marine and remote applications where only liquid fuels are available. Use results in less corrosion, ash formation and emissions (NO_x, SO_x, CO₂ and noxious metals) than firing contaminated heavy crude, refinery residual oils or high sulfur fuel oils. Manufacture is by decontaminating crude oils, non-conventional crudes, and other highly contaminated feeds. Each fuel is produced as a single product of unit operations, not ex-plant blend of various refinery products, yet using an apparatus configuration less complex than conventional crude oil refining. These fuels can be fired by advanced high efficiency turbines of combined cycle power plants having hot flow paths and heat recovery steam generation systems susceptible to corrosion, which systems cannot otherwise risk contaminated heavy crudes or refinery residual oils feeds.

Figure 1