

ABSTRACT

A method is proposed to economically reduce the level of deleterious contaminants in fuels containing residual fractions, such as residual fuel oil, residual/distillate blends and/or crude oil to be fed to marine or land based diesel engines and/or gas turbines as follows:

Step 1 Desalting (water washing) followed by centrifuging in the purifying mode

Step 2 Flash evaporation of remanant essentially emulsified water by means of a novel EVAPORATOR-CONDENSER.

Step 3 Centrifugal separation in the clarifying mode

Step 4 Fine filtration

The procedure is also applicable to functional fluids prone to contamination with water and eventually with solids.

The novel evaporator condenser comprises a substantially cone shaped flash chamber, having in its upper portion at least one nozzle or pressure drop valve connected to a pump and means of connecting said evaporator-condenser to a pressure regulator, also having in its interior a plurality of baffles adequately distributed and at least one ring shaped collector pan bisected by the conical chamber wall, for collection of water and condensed volatile hydrocarbons, said conical chamber wall defining in said ring shaped collector pan two compartments connected together by apertures and a main collector pan at the bottom of said evaporator-condenser.

This Sheet Has Been Replaced

