FENIX®
An ISO 9001:2008 Company

LUBE OIL (USED) RE-REFINING TECHNOLOGY

Pre-Treatment / Dewatering
Distillation / Diesel Removal
Solvent Extraction
Hydrotreating
Fractionation

turning waste into a resource

www.fenix.in

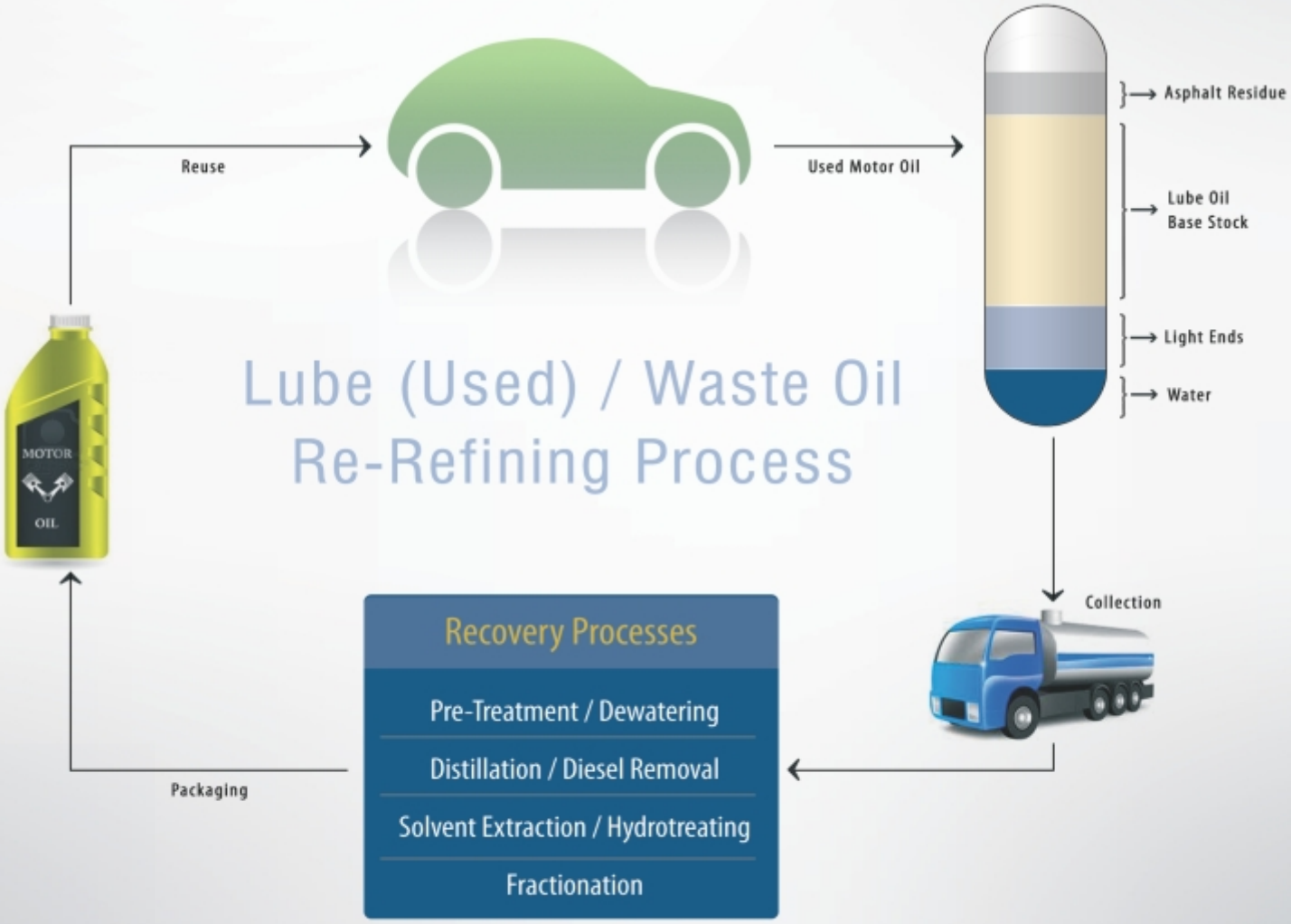
LUBE OIL (USED) RE-REFINING

Used oil re-refining is the process of restoring used oil to new oil by removing chemical impurities, heavy metals, moisture and dirt. FENIX offers Innovative & Environmentally Friendly Solution for used oil re-refining, specially suited for small & medium size plants.

HOW IT WORKS?

Turn to waste oil recylers

Turn the earth into a better place to live

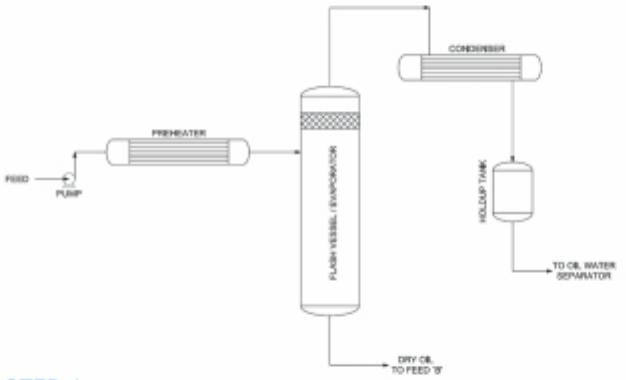


Lube (Used) / Waste Oil Re-Refining Process

Re-refining Processes

Pretreatment and Dewatering

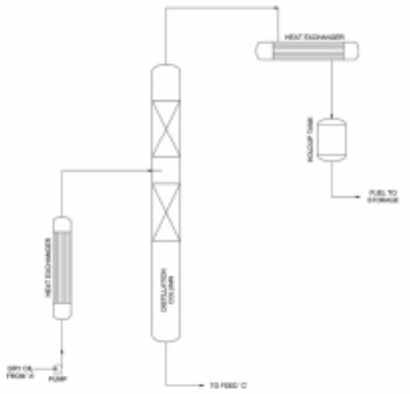
Filteration and dewatering of waste oil by decantation, light hydrocarbons removal by distillation.



STEP-1

Diesel Removal

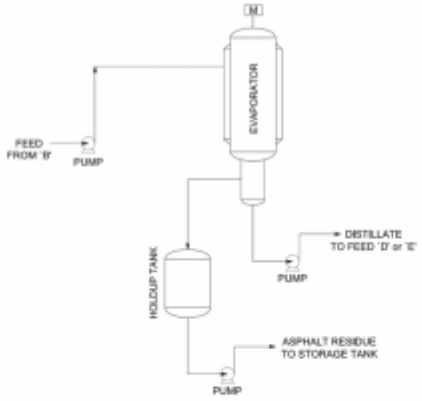
Removal of Diesel fraction by distillation



STEP-2

Asphalt Removal

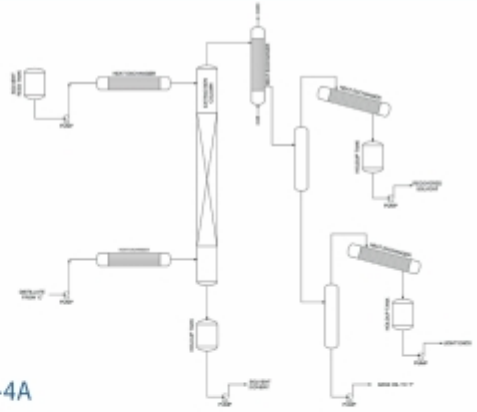
Removal of asphaltic fraction by thin film evaporator. High temperature and high vacuum are needed.



STEP-3

Solvent Extraction / Finishing

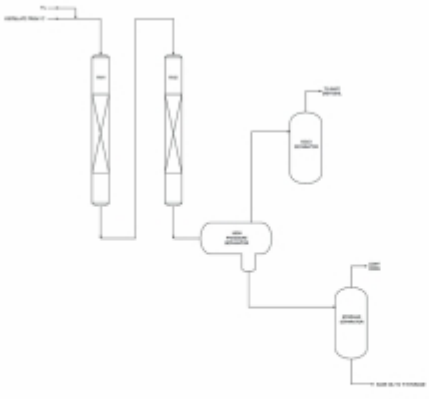
After removing water, light hydrocarbons and asphaltic fraction, chemical treatment of the waste oil by solvent extraction or hydrogenation



STEP-4A

Hydrotreating

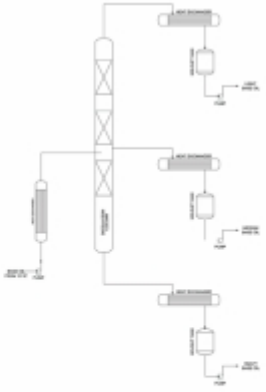
After removing water, light hydrocarbons and asphaltic fraction chemical treatment of the waste oil by hydrogenation.



STEP-4B

Fractionation

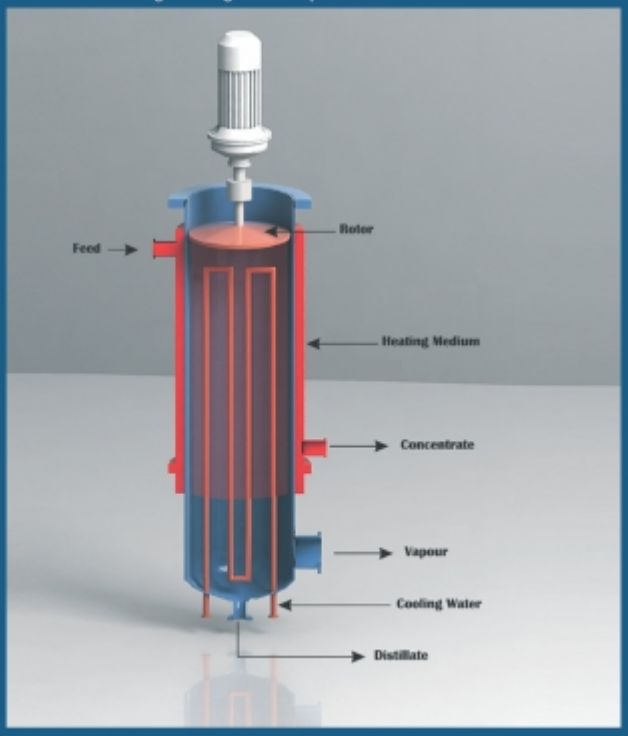
Recovering different cuts of base oil according to their boiling points.



STEP-5

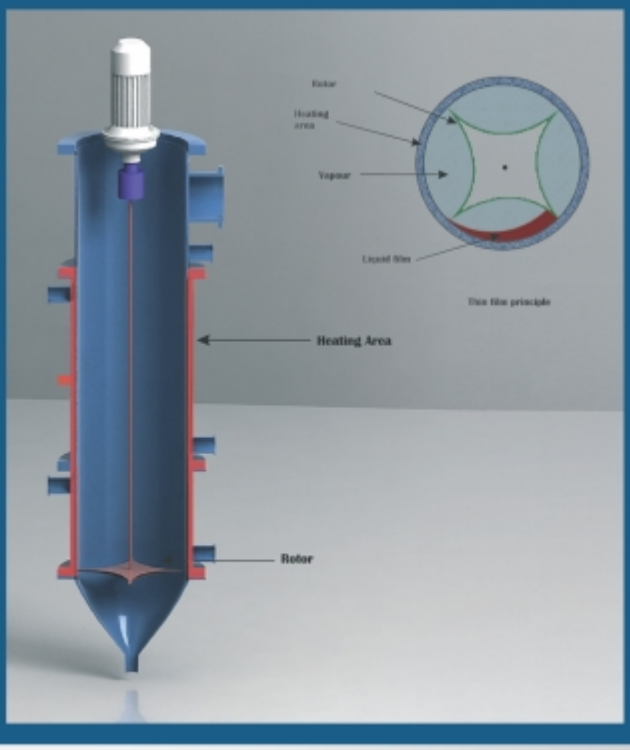
SHORT PATH DISTILLATION

Short path evaporators offer excellent results with evaporation, concentration, distillation or degassing of high-boiling, temperature-sensitive products. The internal condenser minimizes the pressure drop because of the short distance to the evaporation surface. Therefore, short path evaporators work with process pressures down to 0.001 mbar and corresponding low boiling temperatures. It is therefore suitable to evaporate even extremely heat sensitive products like vitamins and flavors, without causing damage to the product.



AGITATED THIN FILM EVAPORATOR

The wiped or agitated thin film evaporator are used to concentrate highly viscous and for stripping of solvents down to very low levels. Feed is introduced at the top of the evaporator and is spread by wiper blades on to the vertical cylindrical surface inside the unit. Evaporation of the solvent takes place as the thin film moves down the evaporator wall. The heating medium normally is high pressure steam or oil.



In technical collaboration with Erpek Engineering & Consulting, Istanbul, Turkey.

Notes:

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