

Plant #
597



Basic Oil Plant- 53000 TPY

Capacity: 53,000 Ton per year

Products: Basic Oils, Paraffin Wax

Major Equipment

H/P Mix Preheater – C-105 1/2

Steam Heater – C-106

H/W Mix Surge Tank – F-301

Semi-Dry L/P MIBK Partial Condenser – C-301

Dry L/P MIBK Condenser – C-303

1st Stage Flash Drum – E-302

2nd Stage S/W H/W Mix Heater – C-304

Wax Product Pre-Cooler – E-312

2nd Stage H/P Flash Column – E-303

3rd Stage H/P Mix Column – E-308

Hard Wax Strainer – S-302A/B

Steam Super Heater – F-304

MIBK Cooler (Exist) – C-103 1/2

S/W Mix Preheater (Exist) – C-107 1/2

Soft Wax Stripper – E-321

Soft Wax Product Cooler – C-326

Semi-Dry MIBK Flash – 720-F-303

Feed Flash – 720-F-306

MIBK Reboiler – 720-C-310

MIBK Stripper (Exist) – 720-E-104

Hard Wax Product Cooler – C-306

Wet MIBK Preheater (Exist) – 720-C-130

Brief Plant Description

Used 53,000 tons per year (TPY) basic oil plant designed by TEMEKA of Greece. Built in 1963. 17,000 TPY extra capacity of paraffin wax and other blended materials. The basic oils produced are classified under API Group 1, which includes oils with less than 90% saturated bonds and/or more than 0.03% sulfur content, with a Viscosity Index (VI) ranging between 80 and 120. The facility is organized into six processing sections: Furfural, MIBK, Oil Hydrotreating, Wax Hydrotreating, Wax Solidification, and Oil Blending. The Furfural Unit begins with heavy vacuum gas oil (HVGO), which is processed in a vacuum distillation unit that operates at temperatures between 320–550 °C. This produces fractions optimized for oil production. These fractions are then directed to an extraction unit where furfural is used as a solvent to separate aromatic compounds (extracts) from paraffins (raffinate), which comprise both oil and wax components. The MIBK Unit serves as a dewaxing and de-oiling system, utilizing the raffinate stream from the Furfural Unit as feedstock. This stream is processed with methyl isobutyl ketone (MIBK) to separate it into oil and wax through a filtration process. In the Oil Hydrotreating Unit, the extracted oils undergo hydrotreatment to reduce sulfur content, while the Wax Hydrotreating Unit performs a similar function specifically for waxes. The Wax Solidification Unit takes liquid wax and pours it into chilled, slab-shaped molds to solidify the wax into its final form. Lastly, the Oil Blending Unit combines both in-house produced oils and imported oils to create finished oil products that meet specific customer requirements.

**For more
information contact**

Edward Zhang, Plant Sales
edz@phxequip.com
+1 732.520.2187 (Direct Dial)
+1 845.242.3378 (Mobile)

**To discuss plants
you are selling**

Jesse Spector
plants@phxequip.com
+1 732.709.7157 (Direct Dial)
+1 908.902.8854 (Mobile)