

AKFEN MUHENDISLIK

High-Tech Oil Recycling



Product Catalog



About Us

Akfen Engineering carries out turnkey projects in domestic and abroad for the establishment of crude oil refineries, waste oil recycling facilities and mineral oil facilities. (Europe, Arab countries and Africa) countries, the production, installation, design, electrical installation, piping work, personnel training, automation, insulation, performance tests and commissioning of the projects in the desired capacity, provides a turnkey quality and price guarantee. At the same time, we manufacture filter press, gas filter, tubular heat exchanger, mixer-blender, hot oil boiler and stock tanks. We have ISO 9001: 2015, ISO 14001: 2015 and CE Certificates.

MINERAL OIL PLANTS



Mineral oils, one of the raw materials obtained by refining crude oil, are used according to their density and crude base oils such as SN80, SN150, SN 350, SN500 are obtained with a second refining process. These oils are used as lubricant product, basic raw material.

Mineral oils are obtained by mixing base oils of different concentrations with various additives selected according to the properties expected from the product. These oils are divided into 2 parts.

Industrial Oils;

Heat treatment oils, Metalworking Oils, Leather and Textile processing oils, Hydraulic oils, gearbox oils, slide oils, anti-rust and solvent preparation oils, fully synthetic industrial oils, etc.

Automotive Oils;

Engine oils, gear oils, bearing and bearing oils, transmission oils, machine oils, greases, tem synthetic oils, etc.

Mineral Oil Production Plants and System Working Principles;

After the desired mineral oil is targeted, the base oil suitable for production is taken and sent to the production mixer. Base oil is mixed until it reaches a certain temperature. The formulation prepared in screw and additive mixers is added to the base oil in the production mixer and mixed under heat. A sample product is taken for the laboratory after a certain period of time, after the necessary controls are completed, mineral oil is considered to be produced.

Equipments in Mineral Oil Production Facility;

1. Raw Material Tanks
2. Finished Goods Tanks
3. Production Mixers
4. Plant Process and Automation Operations
5. Stock Area
6. Automatic or semi-automatic filling machines
7. Circulation and delivery pumps
8. Laboratory and test equipment
9. Scales and scales

Mineral Oil Plants Production Process

- In the Mineral Oil Facility managed by the Loadcell system, base oils are first transferred from stock tanks to production tanks.
- The heat settings of the tank are made. Mixer and tank circulation pump mix the base oils until a homogeneous mixture is formed.
- If the baseblend sample taken by the laboratory is analyzed by chemical engineers and does not get the "suitable" result, the base oil mixture in the production tanks is corrected until the desired values are achieved in the unsuitable parameters.
- The base oil mixture, which is brought to the appropriate density, is passed to the additive stage for the production of mineral oil.
- Additives are added to the base oil mixture drawn into the pre-mix tank, depending on the amount to be produced, and it is switched back to the main production mixer. Additives and base oils are mixed in the production mixer until it forms a homogeneous mixture.
- The sample is taken from the homogeneous mixture and sent to the quality control laboratory and analyzes are made. The mixture is adjusted until the parameters in the analysis report are complied with. When the result comes to suitable values, the production process is completed.
- After the production process, the intermediate product taken to the intermediate stock tank: Before going to the stock tank, it is subjected to the relevant analysis of the quality control laboratory in order to ensure that there is no oxidation that may come from the previous runs.
- After the Quality Control laboratory grants the filling permission, the intermediate product: barrel, plastic packaging, etc. transferred to filling lines.

TECHNICAL SPECIFICATIONS

MODELS	AK-MY 5	AK-MY 20	AK-MY 50	AK-MY 100
Daily transaction capacity	5.000 LT	20.000 LT	50.000 LT	100.000 LT
Total processing time	8 hours	8 hours	8 hours	8 hours
Required factory space	200 m2	500 m2	600 m2	800 m2
System warming method	Hot oil boiler, Steam boiler or Electric resistance			
Products to be produced	Automotive oils (Diesel and gasoline oils) Industrial oils (Gear oil, Cutting oil, Machine oil)			
Raw materials	SN-80 , SN-150 , SN-300 , SN-500 Base oil And Recycling Base oil			
Fuel	Diesel, Fuel Oil, Gas and Electricity			
Operation system	Loadcell Automation System Or Semi-Automatic Manual System			
Lab	Standard Basic Laboratory Equipment Required for System Operation			
Required manpower	1 Chemical engineer 1 Staff	1 Chemical engineer 3 Staff	2 Chemical engineer 5 Staff	2 Chemical engineer 7 Staff
Delivery time	30 Work day	35 Work day	45 Work day	60 Work day
Setup time	5 Work day	10 Work day	15 Work day	20 Work day



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