MIDE

MIDE BITUMEN EMULSION PLANT

Batch type continue operation

Capacity： 8-10 T/H Type : ME-8

The **MIDE** bitumen emulsion plant is designed to meet with the high demands for modern emulsion technology. The batch system of this plant offers the possibility to produce all known bitumen emulsion types varying from the simplest tack-coat to the high-tech slurry emulsions.
The different flows for bitumen and water are controlled individually and can be changed during production without any influence on each other.

All equipment used on **MIDE** bitumen emulsion plants is designed to with stand the different chemicals used in the production of bitumen emulsions and all equipment is arranged to leave good access for maintenance. For a detailed description of the equipment please see the following technical description.

Following items is included in the plant.

- Mounted on a frame emulsion production unit with all internal piping and electrical wiring.
- All according to the technical description

TECHNICAL SPECIFICATIONS

1.1) Mill unit

MIDE designed grinding mill in stainless steel (SS329), with a guaranteed production capacity of **8-10** tons/hour.

Air gab between rotor and stator can be adjusted from the back of the mill shaft without opening the mill or dismantling of the mill. The adjustable air gab guaranties the best results producing different types of emulsion and it ensures a proper distribution and particle size of bitumen droplets in the emulsion.

The mill has double leap seal system and packing seal system with water cooling for the shaft. Stuffing box for leap seals is cooled down by water to extend lifetime of leap seals. Ball bearings for shaft and rotor are running in oil bath.

The design of the mill in where the water and bitumen phases enter the mill from the front side

An electrical motor 30 kW drives the mill with coupling directly, and the mill house is heated with hot oil .

The mill is mounted on a steel frame in galvanised steel.

- JX-MIDE ME-80 colloid mill, rated at up to 10tph
- DN50 flanged inlet and DN40 flanged outlet
- SS329 on wetted parts.
- Hotoil heating with jacket .

- high speed, double roller thrust bearing; inner high speed, roller bearing; internal high heat viton seals
- 1 – 4mm adjustable gap.
- 30kw motor, high efficiency, 3000rpm, motor with coupling and guard.
- 30 motor direct starter

1.2) Bitumen system

Complete and fully equipped bitumen line for in-line dosage of bitumen, including inlet filter with extra strainer, positive displacement gear pump with internal pressure relief valve and volumetric flowmeter

Galvanised pipe arrangements with 3-way valves, temperature gauge, temperature transmitter and pressure gauge.

All equipment with hot oil jacket.

Speed of the bitumen pump is controlled from a frequency converter.

- (GP51 of pump DN50 bitumen gear pump with 4kw motor and 2.5" strainer
- 4kw Motor inverter
- 2" welded steel bitumen lines
- Hot oil heat tracing with pipe insulation
- One DN40 3 way ductile iron jacketed plug valve
- Check valve
- Pressure and temperature gauge

1.3) Soap system

Complete and fully equipped water line for soap system , including inlet filter with extra strainer, soap supply pump, magnetic-inductive water flow meter and valve for control of water flow.

stainless steel pipe arrangements with 3-way inlet valves and auxiliaries.

- Chemical resistant solution centrifugal pump
- High efficiency motor with starter
- Stainless steel 3way control valve with DN32 pump
- Stainless steel check valve
- Chemical resistant piping and fittings
- magnetic-inductive water flow meter
- One pressure & one temperature gaug

1.4) Process control system (PCS)

The production of emulsion on the emulsion plant is controlled from the plants process control system. The MLS is used as a backup system for the CCS. In case that failure should occur to the CCS the production of emulsion can be continued on the MLS until the trouble-shooting has finish.MLS

1.4.1) Control panel / Manual system (MLS)

Control panel with main incoming breaker for the plant, fuses, contactors, relays etc. necessary for the equipment.

Front of control panel is equipped as follows:

Digital indicating controllers complete with internal high and low alarm settings and auto/manual switch for manual adjustment of output for control of all flows.

Amp meter indication for

- Bitumen inlet motor / Mill motor

Production hour meter

Switch panel for manual control containing stop/start buttons (illuminated for status indication) for all motors

Technical Data 8~10 T/H Plant

Mill	**Capacity**	**8-10 T/H**
	Discharge pressure	4 bar
	Motor power	30 kW
Bitumen Pump	**Capacity**	**1000~8000 L/H**
	Discharge pressure	4 bar
	Motor power	4 KW
Soap Pump	**Capacity**	**1000~8000 L/H**
	Discharge pressure	4 bar
	Motor power	1.5KW
Water Flowmeter	**Range**	**1000-8000 L/H**
	Type	Volumetric
	Accuracy of measurement	+/- 0.25 %
Electrical requirements	**Voltage**	**3 x 380 V 50 Hz**
	Total power consumption	45 Kw
	Fuse requirements	60 Amps

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