



15 TON/HOUR POLYMER MODIFIED BITUMEN PLANT QUOTATION

Quotation No: GE-063-22

Date: 24.02.2022

TECHNICAL SPECIFICATIONS

Capacity	: 15 Ton/Hour
Operation	: Automatic / Manuel operation

1- POLYMER MODIFIED MILL – 1 UNIT

It grinds polymer (SBS, APP etc.) and bitumen and makes them homogeneous.

Pumping Capacity	: 20 t/h
Product Capacity	: 6 t/s (%5 granular)
Temperature	: 220°C (max.)
Pressure	: 6 bar
Motor Power	: 160 kW 2700 rpm
Heating	: Hot Oil
Cooling	: Water Cooling with Radiator
Pre-discharge Pump of Mill	: 15 kw 50 t/h Type 863 Hot Oil Heated

2- MIXING TANK – 2 UNITS

2.1 BODY

Capacity	: It is manufactured in dimensions to provide 10 m ³ volume.
Type of Tank	: Prismatic
Sheet Thickness	: 6 mm (S235JR)
Weighing	: 4 x 10 Ton Capacity Load-Cell in Each Tank

Equipments

Manhole cover ø 600 mm
1 Bitumen filling pipe (3 " DN80, PN16, DIN2633)
2 Discharge pipes (4 "DN100, PN16, DIN2633)
1 SBS filling pipe (10 "DN250)

2.2 HEATINGS

Heat Transfer	: Serpentine NPU 140 DIN-1026
Sealing	: Resistant to 6 Bar Pressure.

2.3 INSULATION

Insulation of Tank	: 100 mm Rock Wool
Outer Surface of Tank	: Painted Trapezoidal Sheet

2.4 MIXING SYSTEM

There is 4 pieces 7,5 kW 142 rpm motors at 2 directly coupled tank.

Sealing is provided in the bearings.

There is a rotating shaft and 3 mixing wings on it and the wings are fixed to the rotating shaft.

Temperature indicators are digital and analog and there are two output locations.

Ladder and platform are available.

3- BITUMEN PUMP – 1 UNIT

Motor Power : Coupling driven 15 kW 1000 rpm

Heating : 3" Type 863 hot oil heated

Pump Capacity : 50 t/h

4- POLYMER MODIFIED-GRANULE (SBS) FEEDING UNIT - 1 UNIT

Feeding and Dosing Chamber : It is made of 4 mm sheet with 500 kg capacity (20 SBS package capacity of 25 kg).

Feeding Screw : 30 m³ / h capacity, body from 168 mm diameter pipe, 5 mm wall thickness, 5 kW 60 rpm reducer.

5- INSTALLATION EQUIPMENT – 1 UNIT

- Pipes are steel drawn and jacketed types and welded joints are made in accordance with TSE standards. Bypass pipes are mounted in suitable 1" places.
- 4 pieces compensators
- 5 pieces pneumatic actuated ball valves (Heated)
- 4 pieces mixing tank inlet valves
- 6 Pieces Hot oil line bypass valves
- 1 Filter
- Materials are in relevant TSE and international standards and CE marked.

6- ELECTRIC AND CONTROL SYSTEM - 1 UNIT

Control Panel

- The system is PLC controlled.
- The system has a switchgear and control panel.
- A type panel conforming to IC standards is used.
- PMB prepared in the system can be supplied to the stock tank.
- PMB transfer can be made between mixing tanks.
- All valves used in the system during all operations can be controlled from the PLC screen on the control panel by means of pneumatic actuators.
- Mixing tanks; temperature is monitored digitally and manually, weight is monitored digitally by load cells and mill temperature is monitored digitally.

7- COMPRESSOR AND PNEUMATIC INSTALLATION - 1 UNIT

Pressure : 8 bar
Capacity : 0.12 m³ / min
Air Tank Capacity : 50 Lt
Motor Power : 2 kW
Engine Speed : 3000 rpm

GENEL ŞARTLAR

1. MANUFACTURERS' OBLIGATIONS

- 1.1. Manufacturer is obliged to manufacture the mentioned **OKEMOS MODIFIED BITUMEN PLANT** within the production time stated in this quotation.
- 1.2. **OKEMOS MODIFIED BITUMEN PLANT** units are as listed in scope of supply section.
- 1.3. Packing the necessary parts of the plant, loading them on the transport vehicles provided by the customer.
- 1.4. Emulsion plant installation plan, foundation projects, operation projects will be supplied to client by manufacturer within 15 days following contract signature and advance payment.
- 1.5. To send suitable supervisors for assemblage, electricians, welders, pipe layers, automation personnel and training operators for commissioning to commence on time.
- 1.6. Technical assembly is manufacturers' responsibility.
- 1.7. After completion of assembly manufacturer shall train any person assigned by client for 3 days.
- 1.8. Guarantee documents for all materials and components used for production will be submitted to client. Guarantee documents for components with international trademarks used for the automation system will be provided.

2. CLIENTS' OBLIGATIONS

Below mentioned services are not covered by the contract and will be at clients' risk and own payment unless otherwise agreed in writing.

- 2.1. The topographical survey and geo-technical research required determining the suitability of the construction site substrate for the foreseen work, as well as all the calculation, planning and execution of any excavation, earthmoving, civil and foundation work required will be supplied by the client in order to comply with the Manufacturer's arrangement drawings. The ground should be prepared to withstand 2 kg/cm².
- 2.2. The appropriate electrical energy voltage, ampere and power (380 V, 3 Phase, 50 Hz or generator) including all necessary cables and connections is clients' responsibility.
- 2.3. All required permits and/or lawful requisites for plants' erection is clients' obligation.
- 2.4. All on-site work safety precautions must be taken.
- 2.5. All Client is liable for transportation insurance of plant,
- 2.6. Client is obliged to provide lifting equipment such as a mobile crane and forklift at required tonnages and list of tools and equipment given by manufacturer.
- 2.7. Plant and site lighting is clients' responsibility.
- 2.8. Supply and installation of main power line, grounding and lightning rod belongs to the customer..
- 2.9. Tools and equipments in accordance with the list submitted by the manufacturer will be supplied following the assembly,
- 2.10. Client must provide lockable sheds to store equipment and materials and suitable change rooms as soon as erection commences.
- 2.11. Obtaining comprehensive fire insurance with adequate status throughout the installation process.
- 2.12. Client must provide the necessary water, construction site electric panel and compressed air.
- 2.13. Client is obliged to provide the required amount of materials such as bitumen, water etc. to operate the plant.
- 2.14. The client will ensure its safety and security during the storage and assembly of the facility at the installation site.
- 2.15. Client is liable for any damages caused to plant during transportation, erection and operation such as fire and theft etc.
- 2.16. All other issues are not mentioned in this quotation

➤ **GUARANTEE:**

The guarantee period is twelve (12) months commencing from the date of commissioning against defects due to faulty material and workmanship.

EXCLUSIONS TO GUARANTEE

- Naturally generally wearable parts - electrical components such as electric motors, rubber parts and wearable parts.
- Damage arising from misuse of machinery.
- Primer and top coat paint, due to no special conditions or terms agreed upon.
- Damage and defects caused by interference to system, tampering with the inner and outer structure, trying to repair and replacing parts, interference of unauthorized services/suppliers/persons/facilities without **OKEMOS'**es permission
- Electronic and automation systems of international companies producing high standards such as SIEMENS, TELEMECHANICQUE, DANFOS are used in the facilities we produce. The guarantees of these systems are limited to the guarantee periods given by these companies, and the customer will be given the guarantee documents obtained from these companies.

IN GENERAL:

The plants installation, inspection and maintenance & repair must coincide with our "Operations & Maintenance" manual.

The facility is considered to be in operation when it is capable of producing modified bitumen.

OKEMOS reserves the right to make changes in technical information, features and images used without notice. The images used in the offers are representative and vary according to the machine capacity and models.



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