



6000 litre/hour “Maxei - France” Oil Treatment Plant

MAS6000 TYPE OIL TRETMENT EQUIPMENT

1. Treatment Process

The MAS6000 type oil treatment plant has been designed to treat dielectric oil having a 50 ppm moisture content and a dissolved gas content of approx. 10% by volume before being treated. With an appropriate pass number through the system, the clean treated oil goes out at a maximum temperature of 80 °C with a moisture content below **3 ppm*** and a dissolved gas content of approx. **0.1% by volume***.

This restores the oil dielectric strength to a value in excess of 75 kv.

The above figures are reached with oil having a 10⁻²mbar distillation curve at a temperature of 80 °C.

* Theoretical value depending on the measuring device accuracy and ranging from about 2 to 5 ppm.

2. Principle of Operation

The dielectric fluid enters the plant through an inlet strainer, and then passes through an inlet oil pump and into an oil heater, where it is heated by immersion heaters.

After a fine filtration on cartridge, the dielectric fluid is sprayed into a vacuum chamber on a basket of "Raschig" rings".

Contaminants being eliminated, the clean treated fluid flows through the outlet oil pump.

3. Technical Data

-	Flow rate	6,000 l/hr.
-	Heating power	78 kW
-	Total power	96 kW
-	Filtration on cartridge	1 µm nominal
-	Vacuum motor-pump	single stage
-	Flow to atmosphere	240 m ³ /hr
-	Ultimate vacuum against closed suction	0.08 mbar
-	Vacuum	0.5 to 5 mbar
-	Electrical supply	400 V - 3 phases - 50 Hz
-	Auxiliaries supply	220 V with transformer
-	Electrical equipment	Tropicalised

4. Specifications

4.1 Inlet oil motor-pump

Maxi. flow rate	9,500 l/hr
Lifting height at 4 m ³ /hr	40 m CE
Motor power	4 kW
Speed of rotation	1,500 r.p.m.

4.2 **Heater**

Made of a parallelepiped heating member.

Fitted with 10 flanged immersion heaters with resistance : unit power 7.8 kW - 2 heater speeds : 24 kW and 54 kW : total heating power : 78 kW.

Outlet linked to the filter through a safety valve, a regulation probe, a safety thermostat, a by-pass and a manometer graduated from -1 to 5 bars.

4.3 **Filtering system**

Filter head made of cast iron. Cartridge casing made of steel and screwed on the filter.

A consumable cartridge is used to filter the dielectric fluid. Filtration threshold is 1µm nominal.

Filter fitted with a electric clogging indicator.

Filter outlet linked to the dehydration tank through a manifold fitted with a flow regulation valve and a flow indicator with alarm.

4.4 **Dehydration Tank**

Cylindrical construction. Made of mild steel.

Fitted with 1 spraying blockhead and 1 set Raschig rings.

4.5 **Outlet Oil Vacuum Motor-pump**

Maxi. flow rate	7,000 l/hr
Lifting height at 4 m ³ /hr	35 m CE
Motor power	3 kW
Speed of rotation	1,500 r.p.m.

4.6 **Vacuum Motor-pump**

Flow rate	240 m ³ /hr
Ultimate vacuum	0.08 mbar
Motor power	5.5 kW
Speed of rotation	1,500 r.p.m.
Oil capacity	8.5 liters