

Auxiliary Oil Pump

Figure 1 shows the centrifugal type auxiliary oil pump which is used to supply oil to the system during the starting and stopping periods when the oil pressure delivered by the main oil pump is too low for the turbine requirements. The pump casing is built in two main sections. The upper part consisting of the turbine housing "11" contains the turbine rotor, nozzle, rotor packing and the steam inlet and exhaust connections. The lower part consisting of the pump body "3" contains the oil impeller, upper bearing and lower bearing.

The unit as shown is designed to be mounted so that the impeller is always below the minimum level of the oil in the reservoir, thus giving a positive suction head. In this manner, the necessity of priming the pump is eliminated. The impeller "4" is of the bottom suction type.

The turbine rotor "20" which is mounted on the upper end of the pump shaft "6" is of the single wheel type with the blades or buckets milled internally. Steam leakage from the exhaust chamber along the shaft into the oil is prevented by the packing gland composed of items "13", "14" and "15" and the thrower "10". Any steam or water that does leak past the packing is thrown outward by the thrower and is removed by means of a drain which discharges to atmosphere.

The upper bearing "8", which is of the standard ball type, serves also as a thrust bearing and thus prevents any axial movement of the rotating element. It is lubricated by oil which is led from the pump impeller chamber through the tube as shown in the Figure. The lower bearing "5" is submerged in oil at all times.

The following list has been compiled to facilitate ordering spare or renewal parts by name and number, together with the serial number of the turbine:

Item No.	Name
1	Pump Inlet Housing
2	Gasket
3	Pump Body
4	Pump Impeller
5	Shaft Bearing (Lower)
6	Shaft
7	Shaft Bearing Nut (Upper)
8	Shaft Bearing (Upper)
9	Oil Baffle Ring
10	Water Thrower
11	Turbine Housing
12	Turbine Housing Cover
13	Shaft Gland Packing Seat
14	Shaft Gland Packing
15	Shaft Gland Packing Ring
16	Shaft Gland Flange
17	Turbine Rotor Nut
18	Turbine Rotor Nut Lock Washer
19	Tap Bolt
20	Turbine Rotor
21	Turbine Reversing Chamber Liner
22	Turbine Nozzle and Reversing Chamber
23	Turbine Nozzle Liner

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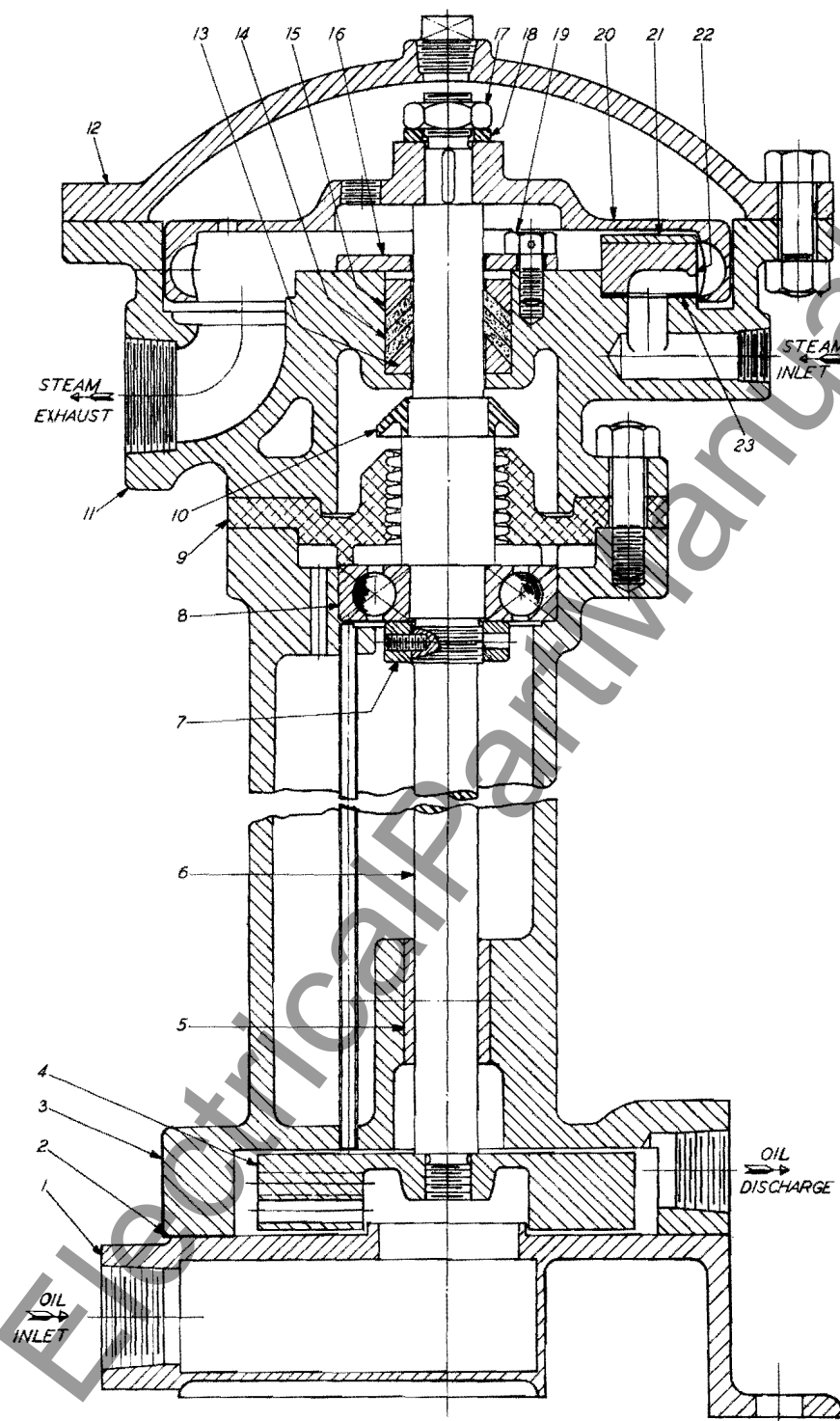


Fig. 1