

CONDENSATE EXTRACTION PUMP SEAL

SSCESB



(15.1)

MATERIALS

Hardware: 316 SS, Alloy C-276 & Alloy 20

Rotating face : SiC

Stationary face: Carbon, Antimony Carbon

Elastomers: FKM, FFKM

OPERATING CONDITIONS

Shaft: 120 - 200 mm

Pressure: 40 - 140 Bar Max.

Temperature *: -20 ~ 300 °C

(13)

Speed: Upto 6500 rpm

PN PART

1 --- SLEEVE

2 --- GLAND RING

3 --- ROTATING FACE

4 --- STATIONARY FACE

8 --- ROTATING FACE O-RING

9 --- STATIONARY FACE O-RING

13 --- DRIVE COLLAR 15 --- LOCK PIN 15.1--- LOCK PIN

16 --- SPRING 16.1--- SPRING

18 --- GLAND O-RING

19 --- SLEEVE O-RING
24 --- FIXED THROTTLE BUSH

24.1--- FLOATING THROTTLE BUSH

26 --- SETTING PLATE

27 --- SNAP RING 27.1--- SNAP RING

27.1--- SNAP RING
29 --- BACKUP PLATE

30 --- SET SCREW

31 --- CAP SCREW

32 --- HEX. BOLT

34 --- PLUG

36 --- ROTATING FACE BODY

49 --- STATIONARY FACE BODY

53 --- HOUSING

79 --- THROTTLE BUSH BODY

Condensate extraction pumps (CEP) extract the condensate water from the condenser and pump it through the condensate polishing system and the LP heaters to the de-aerator feed water tank. In medium to large size gas-fired combined-cycle power plants, the CEP are vertical canned type to ensure enough Net Positive Suction Head Available (NPSHA). In small power plants, the CEP could also be horizontal end-suction type.

The condensate pumps are lower pressure pumps (~600 psig) designed to take suction from the low pressure condenser hotwell and deliver it to the main feedpumps. Several other pumps called Heater Drain pumps operate in parallel to assist in supplyiTng the main feedpumps by pumping condensate from the feedwater heaters' drain tanks forward also.

For the sealing of feed pumps in power plants, mechanical seals have proven to be a reliable and cost effective sealing method compared to alternatives such as packing and throttle bushing seals with an injection of cold condensate. Mechanical seals achieve lifetimes of 40,000 hours or more in older power plants that historically use the All Volatile Water Treatment.

* Depending on material selected

All specifications, instrumentation and capabilities subject to change without notice

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