

	SPECIFICATION FOR HP FILL & PURGE FILTER ASSEMBLY (Indigenous)		SPECIFICATION NO. : TSBM:001	
			SECTION : Boiler Mountings (FB)	
			REV. NO. : 01	DATE: 20.12.08
			SHEET 01 OF 01	
Project : Standard Material Code: 1) 963620320000 - Complete filter assy.(Filter assy. Including O-ring/gasket for bolted cover joint & filter tube gasket) - 1 set 2) 963620320100 - Filter element assy - 1 No. 3) 963620320200 - Differential pressure indicating switch - 1 No. 4) 963620320300 - Gasket / 'O' ring (Gasket or 'O' ring as applicable for filter assy cover) - 2 nos 5) 963620320400 - 'O' ring / Filter tube gasket - 4 Nos.				
This specification describes the requirement of a high-pressure fluid filter to remove solids from feed water supplied at low temperature to the pressurised motor enclosure of a wet motor boiler-circulating pump, which is installed in the circulation system of a steam generator.				
A) FILTER ASSEMBLY Filter housing should be of carbon steel, with 1" side inlet and bottom outlet ports, fitted with SCH160; SA106 Gr.B/equivalent, pipe nipples. Nipples to be with welded on theradolets, drilled & tapped for 1/4" NPT fittings and are to terminate with plain ends for socket welding to inlet and outlet isolation valves (by purchaser). The bolted cover is to be supplied with ethylene propylene 'O' ring seal. Filter housing to be constructed of the following ASTM materials for a service rating of at least 214.4 kg/cm ² (g) at 177°C and hydraulically tested at 321.6 kg/cm ² (g). Shell: SA106 Gr.B/Equivalent Head: SA515 Gr.70/Equivalent Bolts: SA193 B7 Nuts: SA194 2H				
B) FILTER ELEMENT Filter shall be porous, 316 stainless steel filter cartridge made of sintered element, reusable filter tubes with Buna-N gaskets and tube guide,. Tube collapse rating to be not less than 7.03 kg/cm ² with no filter media particles released by collapse. Filter tube to be suitable for 5 micron suspended particle retention of Fe ₃ O ₄ (magnetic black iron oxide) or Fe ₂ O ₃ hydrated (red) iron oxide with a normal concentration less than 250 ppb in 38 litre/min. deaerated water with Ph from 8.5 to 9.5 and occasional executions to 2000 ppb in 19 litre/min of water. Suspended solids will not exceed 140-micron particle size. Range of fluid pressure and temperature: 7.03 kg/cm ² (g) at 10°C to 214.4 kg/cm ² (g) at 65°C Clean filter tube pressure drop not to exceed 0.35 kg/cm ² (g) with 38 litre/ min. flow.				
C) DIFFERENTIAL PRESSURE INDICATING SWITCHES 0-7.03 kg/cm ² (g) range with NEMA-IV switch contact enclosure and 150mm dial gauge, 0-7.03 kg/cm ² (g) scale. Each differential pressure switch to be supplied with 2 NO + 2NC SPDT Contacts of rating 5A, 240V, AC /0.25A, 220V, DC field adjustable, normally open, reed switch elements, factory set to close on increasing differential pressure, sequentially at 1.76 kg/cm ² and 6.68 kg/cm ² . Piston sensor body to be 316 SS for 351.5kg/cm ² -line pressure. (Gauge case to be liquid filled to prevent pointer pulsation). Instrument to be supplied with 1/4" NPT pressure connections and necessary 3/8" OD x 0.49", SA213- SS tubing and SS compression fittings for field assembly of the instrument to 1/4" NPT pressure connections on the filter inlet and outlet nipples. Instrument to be supplied with filter housing mounting bracket.				
D) ETHYLENE PROPYLENE 'O' RING SEAL (or Equivalent) Spare ethylene propylene 'O' ring seals/gasket for bolted cover of Filter Assembly.				
E) BUNA -N FILTER TUBE GASKET (or Equivalent) Spare Buna-N filter tube gaskets for Filter Assembly.				
NOTES: 1. Vendor to submit cross-sectional drawing indicating various dimensions, material specifications, Catalog of sintered SS porous cartridge filter, details of mounting arrangement and Catalogs along with initial offer. 2. Vendor to submit 3 copies of O & M manuals after placement of purchase order. 3. O & M manuals in soft copy: Three (3) copies of O & M manuals in soft copies to be submitted in CD-ROM (compact disc) after placement of Purchase order.				
Revn: 01: Specification No. & Material codes added Dt. 20.12.08				
PREPARED K. SRIDHAR		CHECKED K.PERIASAMY		APPROVED K. PERIASAMY
				VENDOR SEAL SIGN.with Dt. NAME:

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