



# With you at every step



## Empowering Your Steam Engineering Products and Solutions with Excellence

Bringing you knowledgeable insights and information that will keep your Steam Engineering products up and running during and post lockdown period. Kindly refer to the Start-up Protocols for the product that is applicable to you.

### CUSTOMER SERVICE BULLETIN

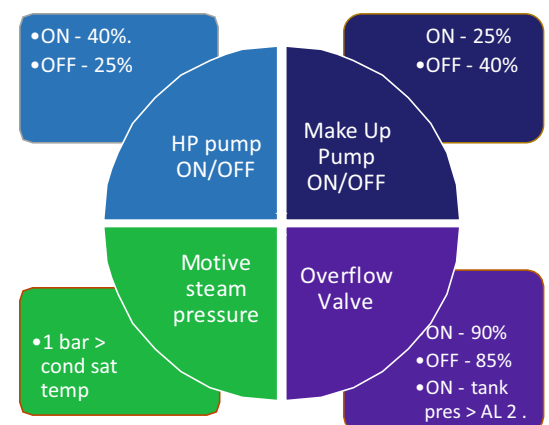
DOCUMENT No : SE/Startup Protocol/HPCRS Rev: 00

PRODUCT : HPCRS - HIGH PRESSURE CONDENSATE RECOVERY SYSTEM

DIVISION : HEATING - STEAM ENGINEERING

P r e c h e c k u p	CHECKLIST	Yes	No
	1. Open the by-pass line for the float traps after process and remove the condensate.		
	2. Clean the level sensor and strainer of pump trap.		
	3. Remove the flanges before pump strainers and flush the entire line for 15-20 minutes.		
	4. Clean the strainers of both the HP pumps and make-up pump.		
	5. Fill the water in the pump priming chamber and remove the air lock through air vent.		
	6. Flush the water in the condensate pots of LT and fill with RO equalent water.		
	7. Close the manifold and remove the air lock through the manifold air vent.		
	8. Pneumatic air line should be flushed for 5 to 10 minutes at full pressure before opening the air to instruments.		
	9. Adjust the air pressure to 3.0 - 4.0 Kg/Cm2.		
	10. Check the incoming voltage.		
	11. Do the megger for all the motor.		
	12. Open the motive steam line strainer and TD trap by-pass line of pump traps and flush for 5 minutes.		
	13. Check the functioning of the control valves with respect to 0-100%		
	14. Fill the lubrication oil in the make up pump and dosing pump.		

S t a r t u p	<ul style="list-style-type: none"> <li>• Open all the water side and side inlet and outlet isolation valves.</li> <li>• Initially open the air vent valve provided on the tank.</li> <li>• Open all the instruments isolation valves.</li> <li>• Close all the drain and by-pass valves.</li> <li>• Allow the condensate flow upto 60% to the pressurized tank through pump traps.</li> <li>• Check the pressure and temperature of the condensate in the tank.</li> <li>• Start the main HP condensate pump.</li> <li>• Start the dosing pump and add dosing chemicals in the bin.</li> <li>• Check the pump inlet pressure and outlet pressure. Pump outlet pressure should be higher than the boiler operating pressure.</li> <li>• Check for any back pressure created in the process area.</li> <li>• Check the pumping trap operation.</li> <li>• Check for any gasket leakages, arrest them if any were found.</li> </ul>
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SYMPTOMS	POSSIBLE CAUSES	DO's and DON'Ts
HP pump not starting	All the safties are unhealthy. OLR setting disturbed.	<b>DO'S</b> 1. Always run the system with suction valve full open. 2. Clean the strainers & level sensors thouroughly. 3. Check the sound of the pump regularly, any abnormality needs to be informed. 4. Isolate the power supply and apply LOTO during off condition. 5. Always check the pH, hardness and TDS at condensate pump outlet at regular intervals. 6. All the safeties to be checked at-least daily once. 7. Ensure all the check points are ticked to YES. 8. Electrical connections should be intact in respective terminals as per electrical drawing.  <b>DONT'S</b> 1. Never close any suction side isolation valve of pump unless the system is in stopped condition. 2. Never close any isolation valve of instrument unless required. 3. Never stop the dosing pump during HPCRS operation. 4. Don't change the controller set points unless required. 5. Never by-pass any safety interlocks.
Pressure not maintained in the tank	Steam blanketing pressure is less. Control valve not operating.	
Control Valve Not Functioning	No output from PID controller.	
	Less air pressure.	
	Water accumulation in positioner. Mechanical struck up.	
Condensate accumulation in proccess	Level sensor of pumping trap is malfunctioning.	
	No float movement in trap	
	Motive steam pressure not sufficient for pump trap.	
	Fuse or MCB trip inside th pump trap	
Level transmitter value not matching with gauge glass	3-way valve manifold valves not opened.	
	Fill the water in condensate pot.	
	Arresst SS tubing leakages.	
Overflow valve not operating	Solenoid coil not operating.	

Thermax Limited Steam Engineering Services recommends customer to get in touch with the local service engineer as per details given below :

### 1<sup>st</sup> Level

Region	Name of Service Engineer	Email id	Contact No
North (JK, PB, HR)	Puneet Panchal	Puneet.Panchal@Thermaxglobal.com	9717200940
North (NCR, RJ)	Devesh Maurya	Devesh.Maurya@thermaxglobal.com	8880464848
North (UP)	Sachin Srivastav	Sachin.Srivastav@thermaxglobal.com	9411953067
East	Pranay Mridha	Pranay.Mridha@Thermaxglobal.com	9830240010
West (MH, CG, GOA)	Anil Asangi	Anil.Asangi@thermaxglobal.com	8484856043
West (GJ, MP)	Vipul Gohil / Himanshu Vasava	Vipul.Gohil@Thermaxglobal.com / Himanshu.Vasava@thermaxglobal.com	9662064627 / 9033551798
South (AP, KAR, TS)	Sandeep Jampala	Sandeep.J@Thermaxglobal.com	8008145681
South (TN, KL)	Noor Mohammed	Noor.Mohammed@Thermaxglobal.com	8098734264
MENA, SEA, SAARC	B Santhanakrishnan	B.Santhanakrishnan@thermaxglobal.com	9607971978

### 2<sup>nd</sup> Level

Contact Person	Designation	Email Id	Contact No.
Sathiyababu V.	Head - Technical Service Group	Sathiyababu.v@Thermaxglobal.com	9486620370