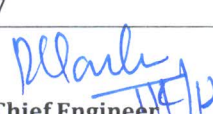


EVENT ANALYSIS REPORT				
UNIT NO : 03	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time -19:37 Hrs	Date - 23/03/2017	No. of days from last sync. : 1 day
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service	Oil Support	
80 MW		A, B, C & D	NIL	
3. Nature of Event : TA set withdrawn due to boiler tube leakage at Reheater Zone.				
4. Name of First Up , Main Protections & Protection on which GCB tripped : Hand Tripped (First Up), MFT Operated, Turbine Tripped, Trip Gear Operated.				
5A) Observations : On dt. 23/03/2017 at 19:00 hrs, set was on load at 130 MW with four coal cycles (E&F - Stand-by) in service and no oil support. Abnormal sound was noticed near LRSB-76. DM make-up found increased. Furnace draft fluctuations were observed. After confirming boiler tube leakage, set hand tripped at 19:37 hrs when the load was 80 MW with four coal cycles in service. GCB opened on reverse power protection.				
5B) Remedial Action/work done: <u>Primary Failure</u> – Tube no.7 of Reheater rear coil no.30, found punctured. <u>Secondary Failure</u> – Secondary failure observed at Reheater coil no.27, 28, 29, 30, 31, details of which are as under. (1) Reheater Coil no. 27, tube no. 14, 15, 16, 17, 18 punctured and tube no. 6, 7, 19, 20 eroded. (2) Reheater Coil no. 28, tube no. 14, 15, 16 punctured and tube no. 6, 17 eroded. (3) Reheater Coil no. 29, tube no. 14, 15 punctured and tube no. 6, 7, 9, 10, 16, 17 eroded. (4) Reheater Coil no. 30, tube no. 8, 9, 10, 11, 14, 15 punctured and tube no. 6, 16, 17, 18, 19 eroded. (5) Reheater Coil no. 31, tube no. 9, 10, 11 punctured and tube no. 6, 14, 15, 16 eroded. <u>Work carried out</u> - Replacement of rear reheater pendant assembly coil tubes, as mentioned above is carried out. <b>Total No. of HP welded Joints – 82 Nos.</b> As a preventive measure, Inside-Outside thickness (IOT) measurement of tubes carried out and the thickness of 0.40 mm was observed against allowable thickness of 0.65 mm.				
6. Root Cause Analysis : High temperature creep is the root cause of failure of tube no.7 of Reheater rear coil no.30, as laminar cracks observed on the failure area.				
7. Preventive action suggested (Short Term) : Ultrasonic test of Reheater coils will be taken during available opportunity.				
8. Preventive action suggested (Long Term) : Creep rupture test of Reheater coils will be taken during unit overhaul.				
9. Similar event occurred last time:-		Unit No #3 , 210 MW	Time : 22:08 Hrs	Date : 08/03/2016
Event : T.A. Set withdrawn for attending Boiler Tube Leakage at Rear Reheater Zone. Remedial Action / work done : Replacement of bottom offset bends of reheater rear coils - (Total 40 Joints) (1) Coil No. 53 -> Circuit No. 3, 4, 5 & 6. (2) Coil No. 54 -> Circuit No. 1, 2, 3 & 6. (3) Coil No. 55 -> Circuit No. 1, 2, 3, 4, 5 & 6. (4) Coil No. 56 -> Circuit No. 1 & 2. (5) Coil No. 57 -> Circuit No. 1.				
9A. Implementation Status of Long Term/Short Term measures stated at Sr. No 7&8:-				
10. Boiler lighted up		Time - 16:20 Hrs	Date - 26/03/2017	
11. T-A Set Synchronized		Time - 21:38 Hrs	Date - 26/03/2017	
12. Remark :				
 Chief Engineer				
13. Recommendations of Works Section:				
1. Procurement/Replacement Plan:				
2. Operational Error:				
3. Delay in Maintenance:				
4. Delay in bringing back the Unit:				
5. Training of Staff:				
6. Whether remedial action is completed satisfactory & point is closed:				
C E/Dy C E (Works)				