


EVENT ANALYSIS REPORT

UNIT NO : 01		TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 14:51 Hrs	Date - 11/11/2016	No. of days from last sync. : 6 days	
2. Operating conditions at the time of Event :-					
Load		Coal Cycles in service		Oil Support	
95 MW		A, B & C		Nil	
3. Nature of Event: T.A. set withdrawn to attend boiler tube leakage at LTSH Zone.					
4. Name of First Up , Main Protections & Protection on which GCB tripped : Flame Failure (First Up), Loss of All Fuel, Turbine Tripped, Reverse Power Relay Operated,					
5A) Observations: On dt. 11/11/2016 at 14:00 hrs, set was on load at 185 MW with five coal cycles in service (F-U/P) and no oil support. The furnace draft went on positive side (+35 mmwc). Feed flow found increased with drum level maintaining low and sudden increase in DM make-up. After confirming boiler tube leakage, load reduced gradually by withdrawing coal cycles-E & D. At 14:51 hrs boiler tripped on "Flame Failure" and turbine tripped on boiler interlock. GCB opened on Gen. Reverse Power Protection.					
5 B) Remedial Action/work done: <u>Primary Failure</u> - LTSH Lower Bank Coil No. 87 Tube No. 1 from bottom, found fish mouth opening punctured. <u>Secondary failure</u> - (1) LTSH Lower Bank Coil No. 87, Tube No. 2 & 3 found eroded. (2) LTSH Lower Bank Coil No. 88, Tube No. 2 found punctured and Tube No. 1 & 3 found eroded. (3) LTSH Lower Bank Coil No. 89 Tube No. 1 found punctured near 90 degree bend. (4) LTSH Lower Bank Coil No. 86 Tube No. 1 found punctured and Tube No. 2 & 3 found eroded. Replacement of punctured & eroded tubes carried out. (Total 20 Nos. HP welds joints).					
6. Root Cause Analysis: Thermal stress rupture due to pulsating load variation and cyclic loading & unloading is the root cause of failure of Tube No. 1 of LTSH Lowers Bank Coil No. 87 near SHH-9 header, which resulted into longitudinal crack.					
7. Preventive action suggested (Short Term) : DP test & ultrasonic test of all the stub connection joints of LTSH coils with header SHH-9 will be carried out during forthcoming AOH of Unit No. 1.					
8. Preventive action suggested (Long Term) :-					
9. Similar event occurred last time:-		Unit No # 1, 210 MW	Time : 01:12 hrs	Date : 05/05/2013	
Event: - T.A Set withdrawn to attend "Boiler Tube Leakage "at 'LTSH Zone'.					
Remedial Actions: BM: 1> Replacement of LTSH terminal tube no. 1 & 2 of coil no. 92. 2> Replacement of LTSH terminal tube no. 1 of coil no. 91. 3> Flushing of SHH9 header carried out at 50 Kg/cm ² after Hydraulic test.					
9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7 & 8 :- The above corrective action will be implemented in June/July-2017 by BM-I section.					
10. Boiler lighted up		Time - 20:30 hrs.		Date- 12/11/2016	
11. T-A Set Synchronized		Time - 01:23 hrs.		Date- 13/11/2016	
12. Remark :- GTR HV side connection checking & attending work carried out.					
 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)					