


EVENT ANALYSIS REPORT				
UNIT NO : 01	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 19:32Hrs	Date - 17/12/2017	No. of days from last sync. : 2 days
2. Operating conditions at the time of Event :-				
Load		Coal Cycles in service	Oil Support	
35 MW		A	AB*2	
3. Nature of Event: T.A. set forced withdrawn to attend boiler tube leakage at Economizer Zone.				
4. Name of First Up, Main Protections & Protection on which GCB tripped : Hand Trip (First Up), Turbine Trip, Turbine Trip To Boiler Trip, Gen. Protection Operated.				
5A) Observations: On dt. 17/12/2017 at 19:00 hrs. set was on load at 135 MW with five coal cycles in service (F S/by). Heavy leakage sound was noticed at 33.6 mt. elevation at economizer corner no.3. After confirming boiler tube leakage, load reduced gradually by withdrawing coal cycle one by one and set hand tripped at 19:32 hrs. GCB opened on Reverse Power Protection.				
5 B) Remedial Action/work done: <u>Primary Failure</u> - Economizer upper bank coil no.138 tube no.3 found thin lip & eye opening punctured. <u>Secondary failure</u> - Economizer upper bank coil no.137 tube no. 2 & 3 are found punctured. <u>Work carried</u> - Economizer upper bank coil no.137 & 138 plugged by providing hemispherical spool at economizer intermediate and economizer inlet header. (Total Nos. of HP welds joints = 4 Nos.)				
6. Root Cause Analysis: Localized flue gas erosion of tube no.3 of Economizer upper bank coil no. 138 is the root cause of failure.				
7. Preventive action suggested (Short Term): Gradual loading & unloading during load variation is to be monitored strictly and necessary instructions have been displayed in control room to carry out loading and unloading within stipulated time period. Circular (No.618 dated 03.12.16) in this regard issued to all the concerned.				
8. Preventive action suggested (Long Term) :- (1) Normalization of Economizer coil no. 137 & 138 will be carried out during forth coming AOH of unit no. 1. (2) Erosion Profile mapping of economizer coil will be carried out during forth coming AOH of unit no. 1. (3) Cold air velocity test will be carried out during forthcoming AOH of unit no. 1.				
9. Similar event occurred last time:-	Unit No # 1, 210MW	Time: 22:26 Hrs.	Date: 03/09/2015	
Event: - T.A. Set withdrawn due to boiler tube leakage at economizer side.				
Remedial Actions: Economiser upper bank Coil No.105, 106 & 108 plugged by providing hemispherical spool at economiser intermediate and at Economizer inlet header. (Total Number of Joints = 6 Nos)				
9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7&8 :-				
10. Boiler lighted up	Time -07:15 hrs.	Date- 19/12/2017		
11. T-A Set Synchronized	Time -12:19 hrs.	Date- 19/12/2017		
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)				