EVENT ANALYSIS REPORT				
UNIT NO : 03	**TPS : Khaperkheda TPS**		**Unit Capacity : 210 MW**	
1. *HO Code :	**Station Code : T003**	**Time – 22:08 Hrs**	**Date - 08/03/2016**	**No. of Days from last sync. : 03 days**

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 Nature of Event: TA Set Withdrawn to attend "Boiler Tube Leakage" at 'Reheater Zone'.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 Trip, Trip Gear Operated.

5A) Observations: At about 21.00 hrs on dt. 08.03.16 set was on load at 160 MW with four coal cycles (A, B, C & D) in service. DM make-up found increased to 60 T/Hr and drum level maintaining low. Abnormal sound of BTL noticed and hence load reduced gradually in order to withdraw set for attending boiler tube leakage. At 22.08 hrs on date 08/03/16 set forced withdrawn when load was 80 MW.

5B) 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.

6. Root Cause Analysis : The serrations inclusive of longitudinal hair line cracks at the vicinity of punctured bottom offset bend of circuit 3 coil No. 55 of reheater rear pendent assembly leads to the conclusion that the creep might be the preliminary probable root cause of failure. The creep might be due to transformation of creep cavities and deposition of high oxide scale thickness.

Secondary failure :
(1) Re-heater rear pendant assembly coil No. 55, circuit No. 2 bottom offset bend (60 x 120) degree found punctured and circuit No. 1 bottom offset bend (60 x 120) degree found eroded.
(2) Re-heater rear pendant assembly coil No. 54, circuit No. 1 & 3 bottom offset bend (60 x 120) degree are found punctured and circuit No 2 bottom offset bend (60 x 120) degree found eroded.
(3) Re-heater rear pendant assembly coil No. 56, circuit No. 1 & 2 bottom offset bend (60 x 120) degree found punctured.
(4) Re-heater rear pendant assembly coil No. 57, circuit No. 1 bottom offset bend (60 x 120) degree found eroded.

7. Preventive action suggested (Short Term) : Inside oxide scale thickness measurement of reheater rear coils has been carried out. Replacement of reheater tubes (Coil No. 53 to 58) having IOT scale more than 600 microns will be carried out during forthcoming AOH.

8. Preventive action suggested (Long Term) :-

9. Similar event occurred last time:-	**U - 3, 210 MW**	**Time- 20:13 Hrs**	**Date: 23/10/2014**

Event: TA Set Withdrawn to attend "Boiler Tube Leakage" at 'Reheater Zone'.
Remedial Action/work done: Replacement of Reheater Rear Coil No. 25 Tube No. 6,7,8,9,10,11,12 Coil No 26 Tube No 7,8,9,10,11 and Coil No 27 Tube No. 11 carried out. **Total Joints = 26 Nos.**

9A. Implementation Status of Long Term/Short Term measures stated at Sr. No 7 & 8:- The suggested preventive actions will be implemented in April-2016.

10. Boiler lighted up	**Time – 17 : 05 Hrs**	**Date - 10/03/2016**
11. T-A Set Synchronized	**Time – 20 : 56 Hrs**	**Date - 10/03/2016**

12. Remark: -

Sadhia
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)