EVENT ANALYSIS REPORT

UNIT NO : 01	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time – 12:44 Hrs	Date - 20/01/2018	No. of days from last sync. : 5 days

2. Operating conditions at the time of Event :-

Load	Coal Cycles in service	Oil Support
150 MW	A, C, E & F	NIL

3. Nature of Event: T.A. set forced withdrawn to attend boiler tube leakage at steam cooled walls zone.

4. Name of First Up, Main Protections& Protection on which GCB tripped :
Flame Failure **(First Up),** Turbine Trip, Turbine Trip To Boiler Trip, Gen. Protection Operated.

5A) Observations: On dt. 20/01/2018 at 11:50 hrs. set was on load at 150 MW with four coal cycles in service (B & D S/by). Heavy leakage sound was noticed at 22.9 mt. elevation at steam cooled walls zone. After confirming boiler tube leakage, load reduced gradually by withdrawing coal cycle one by one and set tripped on flame failure Protection.

5 B) Remedial Action/work done:
Primary Failure – Front steam cooled wall tube no. 5 found punctured from stub joint.
Secondary failure –Front steamed cooled wall inlet header tube no. 6 on RHS corner no.4 found seepage from stub joint.
Work carried –1) Replacement of front SCW inlet header stub no. 5 & 6 is carried out.
2) Mirror images of front SCW inlet header stub joints checked. Seepage observed from tube no. 08 on LHS, corner no. 1. Replacement of stub carried out.
3) Radiograph of all H.P. joints (butt joint =03 nos.) is carried out.
Total no. of joints =06 Nos. (03 Butt joints + 03 Stubs joints)

6. Root Cause Analysis: Stress rupture of tube no. 5 of front steam cooled walls inlet header SHH 5 due to pulsating load variation 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) :-

9. Similar event occurred last time:-	Unit No # 1, 210MW	Time: 14:51 Hrs.	Date:11/11/2016

Event: - T.A. set withdrawn to attend boiler tube leakage at LTSH Zone.
Remedial Actions: Primary Failure - **LTSH** Lower Bank Coil No. 87 Tube No. 1 from bottom, found fish mouth opening punctured.
Secondary failure – (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).

9A. Implementation Status of Long Term/Short Term measures stated at Sr No 7&8 :-

10. Boiler lighted up	Time –16:15 hrs.	Date- 21/01/2017
11. T-A Set Synchronized	Time –21:07 hrs.	Date- 21/01/2017

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)