EVENT ANALYSIS REPORT

UNIT NO : 04	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time – 12:58 Hrs	Date - 22/10/2015	No. of days from last sync. : 02 days

2. Operating conditions at the time of Event :-

Load	Coal Cycles in service	Oil Support
68 MW	D	NIL

3. Nature of Event : T.A. Set withdrawn due to high vibrations of bearings and shaft.

4. Name of First Up , Main Protections & Protection on which GCB tripped :
Turbine Hand tripped **(First Up)**

5 A) Observations : T.A. set withdrawn due to high vibration to TG bearing no. 4 and high vibration to T.G. shaft. First, load reduced to minimum by withdrawing coal mills one by one. Set hand tripped when load was 68 MW with C/C D in service.

5 B) Remedial Action/work done: -

1. Washers having 16 mm thickness and spacers of 6 mm provided on LPT gland box bolts (8 Nos) and centering done. One of the eight bolts replaced with new one. All weights 11*95 gms removed from LPT rear shaft of turbine.
2. Relative shaft vibration pick ups and absolute vibration pick ups connectors checked and connections of all pick ups tightened.

6. Root Cause Analysis : At the time of withdrawing the set vibration readings were as follows:

a. Absolute Shaft Vibrations: X_1 = 155 microns, X2 = 153 microns, Y4 = 109 microns pick up
b. Absolute Bearing No. 4 vibrations = 33/43 microns pick up
c. Absolute Bearing No. 6 vibrations = 25/- microns pick up

7. Preventive action suggested (Short Term) :-

8. Preventive action suggested (Long Term) :-

9. Similar event occurred last time:-	Unit No # 4 , 210MW	Time : 17:26 Hrs	Date: 15/10/2015

Event : T.A. set withdrawn due to high turbine vibrations..
Remedial Actions : - No work done.

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

10. Boiler lighted up	Time – 10:22 Hrs	Date- 28/10/2015
11. T-A Set Synchronized	Time – 17:05 Hrs	Date- 28/10/2015

12. Remark : Vibration analysis conducted by the TIC staff Nagpur at 36 MW load on dt. 28/10/2015 after synchronization.

a. Bearing No. 4 : Axial displacement – 226 microns, Velocity - 33.32 mm/sec pick up.
b. Bearing No. 6 : Axial displacement – 60 microns, Velocity – 9.8 mm/sec pick up.

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)