


EVENT ANALYSIS REPORT				
UNIT NO : 01	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 12:23 Hrs.	Date - 08/09/2017	No. of days from last sync. : 15 days.
2. Operating conditions at the time of Event :				
Load		Coal Cycles in service		Oil Support
50 MW		A, D, E & F		AB elevation
3. Nature of Event: Set tripped on Poor Coal Receipt.				
4. Name of First Up , Main Protections & Protection on which GCB tripped : Hand Tripped[First Up], Turbine Tripped, Turbine Trip Gear Operated, Generator Reverse Power Protection Operated.				
5A) Observations: On Dt. 08/09/2017 at 12:23 hrs. set was on load 50 MW with four C/c in service(C/c B was U/p and C was out due to NCF) & oil support at AB elevations. Set withdrawn (Turbine Hand tripped) due to poor coal receipt.				
5B) Remedial Action/Work done: Shutdown works carried out as per detailed sheet attached.				
6. Root Cause Analysis: Due to "Critical Coal Stock" set withdrawn (Hand Tripped).				
7. Preventive action suggested (Short Term) :-				
8. Preventive action suggested (Long Term) :-				
9. Similar event occurred last time:-		Unit No # 2 , 210 MW	Time: 10:18 Hrs.	Date: 05/09/2014
Event: T.A. Set withdrawn due to "Critical Coal Stock".				
7. Remedial Actions: EM: GTR HV Side connection checking done during Shutdown Period.				
9A. Implementation Status of Long Term/Short Term measures stated at Sr. No 7 & 8 :-				
10. Boiler lighted up		Time - 23:35 Hrs	Date - 22/10/2017	
11. T-A Set Synchronized		Time - 10:46 Hrs	Date - 23/10/2017	
12. Remark :				
 <b>Chief Engineer</b>				
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)				

**MAJOR WORKS CARRIED OUT DURING UNIT NO. 1 SHORT SHUT DOWN**  
**FROM DTD. 09.09.2017 TO 20.09.2017**

**1) Furnace :-**

- a. Erection of sky climber.
- b. Water washing of furnace 1<sup>st</sup> & 2<sup>nd</sup> pass.
- c. Internal inspection of first pass & second pass.
- d. Pent house, cat house & dog house ash removed and leakages attended by welding of crown plates and seal plates.
- e. Surprise radiography of LTSH and economizer coils connection joints are carried out.
- f. Boiler hydraulic test taken at 150 kg/cm<sup>2</sup> pr. & found ok.

**2) Air – preheater :-**

- a. Air-preheater A & B water washing carried out for 12 hrs.
- b. APH 1A – Internal inspection carried out.
- c. All eroded damaged bypass seals of hot end removed and replaced by new. Seals setting done.
- d. Bracing and shrouding angles strengthening done by welding.
- e. Expansion joints covering plates 04 nos. replaced by new.
- f. AHSB body patching done.
- g. APH 1B – Internal inspection carried out.
- h. All eroded damaged bypass seals of hot end replaced by new.
- i. Strengthening of bracings & shrouding angles carried out.
- j. Expansion joints covering plates 03 nos. replaced.
- k. Both air-pre-heaters trial taken & found ok.

**3) APH outlet to ESP inlet duct :-**

Inspection of duct is carried out and following leakages were found.

1. Common duct A LHS side top corner plate found worn out
2. Common duct A hopper plate found worn out.
3. Common duct B both corner top plate found worn out.
4. Bracings in duct A, B, C, D & common duct area are found worn out.
5. Duct B slant portion plate found damage.



7. Diverter plates in horizontal duct B & C and common duct are found worn out.

Above all worn out plates are replaced by new and bracing supports and shrouding angles welding is carried out.

**4) Burner tilt mechanism :-**

- All 04 burner corners claiming done internally with the help of sky climber. Clinkers removed.
- Reach rods of 04 nos. of coal compartment assemblies welding and fitting done properly.
- Servicing of all coal & oil compartment assemblies is carried out.
- Servicing of burner tilt mechanism carried out
- Burner tilt mechanism trial taken & found ok.
- LHS & RHS both side wind box cleaning done.
- All secondary air dampers of all 04 corners decoupled & servicing done.
- All dampers couple trial taken in presence of I&C and operation staff and found ok.

**5) High pressure valves :-**


- Servicing of RH spray station valves, EBD & CBD valves is carried out.
- Replacement of isolating valve of SH spray station Control valve S70 is carried out.
- Boiler drain valve B96 bonnet leakage attended.

**6) Both FD fan servicing :**

- FD fan servicing : As heavy oil leakage was observed through FD fan 1A inspection carried out. Bearing assembly oil seal found damaged. Same replaced, servicing of fan and alignment carried out. Also the servicing of FD fan 1B carried out and its alignment was checked and corrected.

**7) Coal mill 1F COH & Grinding elements replacement work.**

- Coal mill 1F COH : As GB upper bearing was observed damaged. COH of coal mill 1F carried out. Also its grinding elements were replaced.

  
**EXECUTIVE ENGINEER**  
BOILER MAINTENANCE-I  
4X210 MW KHAPERKHEDA TPS  
M.S. Power Gen. Co. Ltd.