


EVENT ANALYSIS REPORT

UNIT NO : 01	TPS : Khaperkheda TPS		Unit Capacity : 210 MW	
1. *HO Code :	Station Code : T003	Time - 19:19 Hrs.	Date - 18/11/2017	No. of days from last sync. : 26 days.
2. Operating conditions at the time of Event :				
Load		Coal Cycles in service		Oil Support
35 MW		A		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. 18/11/2017 at 19:19 hrs. set was on load 35 MW load. One by one Coal mills were Withdrawn and Set withdrawn (Turbine Hand tripped) due to poor coal receipt.				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 Root Cause Analysis: Due to "Critical Coal Stock" set withdrawn (Hand Tripped).				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: 08/09/2017
Event: T.A. Set withdrawn due to "Critical Coal Stock".				
7. Remedial Actions: Shutdown works carried out.				
9A. Implementation Status of Long Term/Short Term measures stated at Sr. No 7 & 8 :-				
10. Boiler lighted up		Time - 14:50 Hrs	Date - 15/12/2017	
11. T-A Set Synchronized		Time - 22:49 Hrs	Date - 15/12/2017	
12. Remark :				
<div style="text-align: right;">  Chief Engineer </div>				
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. 18/11/2017 TO 25/12/2017

1) Furnace :-

- a. Erection of sky climber.
- b. Water washing of furnace 1st & 2nd 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/cm² pr. & found ok.

2) Air - preheater :- (A)

- 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. Hot end side radial seal setting done.
- e. Bracing and shrouding angles strengthening done by welding.
- f. Expansion joints covering plates 04 nos. replaced by new.
- g. Support and guide bearing LOP servicing carried out.

Air - preheater :- (B)


- a. AHSB body patching done.
- b. APH 1B – Internal inspection carried out.
- c. All eroded damaged bypass seals of hot end replaced by new.
- d. Strengthening of bracings & shrouding angles carried out.
- e. Expansion joints covering plates 03 nos. replaced.
- f. Support and guide bearing LOP servicing carried out.
- g. Cold end side soot blower repairing done.
- h. 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 worn out plate replaced.
2. Common duct A worn out hopper plate replaced.
3. Common duct B both corner top plate found worn out & same replaced.
4. Bracings in ESP inlet ducts A, B, C, D & common duct area are found worn out & same

5. ESP inlet duct B slant portion plate found damaged and same replaced.
6. ESP inlet duct B LHS side wall plate found worn out and same replaced.
7. Diverter plates in horizontal duct B & C and common duct are found worn out and same replaced.
- 4) Transition duct plates between eco outlet and APH inlet replaced.**
- 5) Burner tilt mechanism :-**
 - a. All 04 burner corners done internally with the help of sky climber. Clinkers removed.
 - b. Reach rods of 04 nos. of coal compartment assemblies welding and fitting done properly.
 - c. Servicing of all coal & oil compartment assemblies is carried out.
 - d. Servicing of burner tilt mechanism carried out
 - e. Burner tilt mechanism trial taken & found ok.
 - f. LHS & RHS both side wind box cleaning done.
 - g. All secondary air dampers of all 04 corners decoupled & servicing done.
 - h. All dampers couple trial taken in presence of I&C and operation staff and found ok.
- 6) High pressure valves :-**
 - a. Servicing of RH spray station valves, EBD & CBD valves is carried out.
 - b. Replacement of isolating valve of SH spray station control valve S70 is carried out.
 - c. Boiler drain valve B96 bonnet leakage attended.
 - d. R19 re-heater control valve LHS replaced by new one.
- 7) Both FD fan servicing :**
 - a. 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.
- 8) ID fan 1A & 1B**
 - a. Cone flushing, bearing oil and water flushing done, damper trial taken. Casing leakages attended.
 - b. Impeller seal setting done.
- 9) Coal mill 1F COH & Grinding elements replacement work.**
 - a. 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 (BM-I)