

UNIT TRIPPING REPORT

UNIT No: 2

STATION: NTPL TUTICORIN.

OUTAGE: NO. 31

REPORT NO:31

- | | |
|--|--------------------------------|
| 1.Date of tripping | : 01-10-2018 |
| 2.Time of tripping | : 00:10:44 Hrs |
| 3.Status before tripping | |
| a) Unit load | : 507 MW |
| b) Mills in service | : A, B, C, D, E & F |
| c) Oil guns in service | : NIL |
| d) Boiler feed pumps in service | : TDBFP A & B |
| e) CEPs in service | : A & C |
| f) ID fans in service | : A & B |
| g) FD fans in service | : A & B |
| h) PA fans in service | : A & B |
| i) CWP in service | : A & B |
| 4.First Up protection acted | : MFT (Hand Tripped) |
| 5.Similar occurrences in the | |
| Financial Year | : Second HPBP ferrule failure. |
| 6.Other relays/protection acted | : Turbine trip/Gen trip |
| 7.Supporting documents attached | : SOE & Trend |
| 8.Any operation done prior to tripping | : NIL |
| 9.Analysis of tripping | : |

Sudden drop in Unit Load and Main Steam pressure were noticed. MDBFP-2C was taken into service since the drum level was dropping very fast. TDBFP was not pumping, since load and pressure were deteriorating. HPBP-1 was found to be 100% open and couldn't be closed from board. Mills A & E were stopped to reduce steaming, and thereby to save Boiler from drum level tripping. Since drum level could not be raised or maintained, Boiler was hand tripped. Turbine got tripped on all three channels due to MFT cause.

10.Root cause :

The ferrule joint in the high pressure oil supply line (p-line) connected to the servo valve of BPE-2 (Spray valve) of HP bypass system in Unit #2 got failed suddenly. The connected pipe came out of the ferrule joint and there was no HP bypass operation during that time. This has resulted in loss of all oil in the system, including oil supply unit, within no time. Loss of oil pressure in servo motors lead to drift open of both the HPBP steam valves, since load was 100%. Increased steam flow through Bypass system lead to drastic drop in drum level, necessitating manual tripping of the boiler.

11.Remedial measures taken/to be taken:

This is the second instance of ferrule joint failure in oil supply line (p-line), after overhauling. Unit #2 HPBP system was totally flushed during the 2018 overhaul, to avoid frequent malfunctioning of servo valves. The whole oil system has to be checked for proper assemblage and action may be taken to study and eliminate any inferior spares, pipe stresses or erection defects.

12.Time/Date of boiler light up and sync : 01-10-2018

Light Up: 03:57 HRS

Sync'd : 06:01 HRS

13.Delay for light up : No delay

14.Recommendation / Action plan :

Sl.No.	Recommendations/Action plan	Responsibility	Time line
1	HPBP oil system pipe line joints have to be checked for proper fittings, pipe stress or erection defects. Action has to be taken to study for any inferior spares used or defective methods adopted during erection.	TM	Next shut down

15. Any specific learning / feedback :

Any failure of HPBP oil system is prone for unit tripping as well as a potential fire hazard. Hence preventive maintenance is of prime importance in this regard.



CM / OS



CM/EEMG



DGM / C&I



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