

UNIT TRIPPING REPORT

UNIT No:2

STATION: NTPL, TUTICORIN.

OUTAGE NO: 95

REPORT NO: 95

- 1.Date of tripping : 06-11-2024
- 2.Time of tripping : 17:23:48 Hrs
- 3.Status before tripping
 - a) Unit load : 487 MW
 - b) Mills in service : B, C, D, E, F & G
 - 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 : Turbine tripped on Condenser back pressure high.
- 5.Other relays/protection acted : Boiler tripped on MFT-reheater protection.
- 6.Supporting documents attached : S.O.E & Trends
- 7.Any operation done prior to tripping : Nil
- 8.Analysis of tripping :

Unit was running at 487 MW in CMC. At 17:23:00 hrs, CWP-2B tripped due to discharge pressure low. Run back acted and top two Mills were tripped on auto, Turbine follow mode came and Load reduced to 455 MW. At 17:23:48 hrs Turbine tripped on Condenser back pressure high and Boiler tripped on Reheater protection at 17:23:57. Hot well left side specific conductivity raised to 20

microS/cm at 17:32 hrs, suspected condenser tube leakage. Informed to Lab to verify the same, mean time CEP discharge Cationic conductivity went up to 0.3 microS/cm at 17:42 hrs. Immediately feed water to Boiler feeding stopped, all LPHs isolated, water feeding into deaerator closed, one CEP stopped, and other pump kept in recirculation till vacuum killing.

9. Root cause :

Unit was running at 487MW and CW-2B discharge pressure tapping pipeline stub welding joint dislodged and the Pump got tripped on discharge pressure low protection. The HOPD of CW-2B not closed immediately since the HOPD was in manual mode. HOPD is closed after 2min of pump stoppage manually. But CW-2A flow short circuited to fore bay through CWP-2B discharge valve, Condenser back pressure went high in 48 sec and resulted in Unit tripping. The reason for Condenser tube leakage may be due to pressure/flow fluctuations in CW system at full load .

10. Remedial measures taken/to be taken:

CW-2B discharge pressure trip bypassed until tapping point restoration during major overhaul.

HOPD of all CW Pumps auto operation to be made ready.

11. Time/Date of boiler light up and sync:

Light Up: : 07:50 Hrs on 09/11/2024

Sync'd: : 13:42 Hrs on 09/11/2024

12. Delay for Synchronization :

Condenser tube leakage resulted in condensate contamination in the Hot well. After condenser tube plugging, the hot well, CEPs, Deaerator, Condensate system, Loop drains and Feed water system were flushed till the chemical value reaches normal level then Unit was lighted up.

13. Recommendation / Action plan :

- i) CW Pump HOPD auto operation is to be ensured.
- ii) CW discharge pressure tapping to be made ready.

14. Any specific learning / feedback : Nil

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