

UNIT TRIPPING REPORT

UNIT No: 1

STATION: NTPL, TUTICORIN.

OUTAGE NO: 94

REPORT NO: 94

1. Date of tripping : 22-10-2024
2. Time of tripping : 15:23 Hrs
3. Status before tripping
 - a) Unit load : 220 MW
 - b) Mills in service : C, D, E & F
 - c) Oil guns in service : NIL
 - d) Boiler feed pumps in service : TDBFP A & B
 - e) CEPs in service : B & 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 : Boiler tripped on MFT due to flame failure.
5. Other relays/protection acted : Turbine & Generator tripped on MFT.
6. Supporting documents attached: S.O.E & Trends
7. Any operation done prior to tripping : Nil
8. Analysis of tripping :

Unit was running at 220 MW in CMC. At 15:22:39 hrs Mill-E tripped due to mill motor bearing temperature high protection(false pickup). Flame intensity low alarm came. at 15:23:10 hrs flame scanner reading low flame intensity and unit tripped on MFT(flame failure protection).
9. Root cause :

Unit was running at low load (below technical minimum) with 4 talabira coal mills at a coal flow of 198tph . Mill E got tripped and coal flow reduced to 154 tph, due to sudden variation in coal flow at low load furnace pressure fluctuated (Furnace pressure went to -63mmwc) and destabilised the flame ,resulted in unit trip on flame failure.

10. Remedial measures taken/to be taken:

Mill motor bearing temperature element is attended by C&I. To avoid spurious tripping, Mill motor bearing temp spike protection logic configured for all mills in unit 1&2.

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

Light Up: : 15:46 Hrs on 22/10/2024


Sync'd: : 17:52 Hrs on 22/10/2024


12. Delay for Synchronization : unit synchronised at 17:14 hrs, but turbine tripped again on low forward power, so rolled back after reaching 510 rpm and synchronised the unit at 17:52 hrs.


13. Recommendation / Action plan :


i) Mill motor bearing temp spike protection logic configured for all mills in unit 1&2.-so false pickup mill tripping will be avoided.

14. Any specific learning / feedback : Nil


DCE/EEMG


DCE / OS


DCE / C&I


ACM / OS


CM/OS

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