

### UNIT TRIPPING REPORT

UNIT No: 2

STATION: NTPL, TUTICORIN.

REPORT NO: 83

OUTAGE: NO.83

1. Date of tripping : 27-12-2023
2. Time of tripping : 14:44Hrs
3. Status before tripping
  - a) Unit load : 340MW
  - b) Mills in service : A, B,D, E,F &H
  - c) Oil guns in service : Nil
  - d) Boiler feed pumps in service : TDBFP A &B
  - e) CEPs in service : A&B
  - 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 acted due to "Furnace Pressure Low"
5. Other relays/protection acted : Turbine trip / Generator trip
6. Supporting documents attached : S.O.E & Trends
7. Any operation done prior to tripping : Nil
8. Similar occurrences in the Financial Year : Nil

9. Analysis of tripping :

PA Fan 2B got tripped at 14:44:08 hrs on False Closed feedback of PAF-2B O/L Gate, Run back acted 2 Mills (F&H) got tripped and Mills A,B,D & E Tripped on PA Header Pressure V.Low, resulted in MFT on "Furnace pressure V.Low" in all the three channels. This finally led to Unit tripping at 14:44:20 hrs.

10. Root cause :

False close feedback of PA O/L gate is the reason for this trip. After Unit tripping, the gate remote and local operation was checked and

Open/Close feedback changeover was found to be normal. Actuator Limit switch and DCS Cable healthiness were checked and found normal. The root cause of the false feedback during fan trip could not be ascertained. PA fan 2B started during Lightup and Outlet gate opened. Open /close Feedback observed to be normal and kept under observation.

11. Remedial measures taken/to be taken:

PA Fan 2B trip Logic Modified as PA header pressure <750mmwc AND PA O/L Gate Closed. UCB Hooter alarm provided for PA 2B Outlet gate Not Open ,Close feedback changeover .

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

Light Up : 27-12-2023 @ 15:31 hrs  
Synchronized : 27-12-2023 @ 18:00 hrs

13. Delay for light up : No Delay


14. Recommendation / Action plan :


S.No	Recommendations/Action plan	Responsibility	Time line
1	PA 2B O/L Gate feedback problem to be ascertained in the Next Opportunity	EM&C&I	Next opportunity
2	PAF 2B Trip Protection on "O/L gate Closed" modified by including PA Header Pressure <750mmwc in AND Logic .	C &I OS	Immediate
3	Study on PA Fan trip in other similar plants in the aspects of avoiding unit outage.	OS	3 months


15. Any specific learning / feedback :





Most of the PA Fan tripping leads to unit outage and experiments cannot be done in PA Fan system due to it can lead to catastrophic events in boiler. But we can study other similar plants PA Fan trip and its logics to avoid unit outage.

  
EE / OS

  
EE/ EEMG

  
DCE/C&I

  
ACM / OS

  
CM/OS

Copy submitted to CEO / NTPL

Copy submitted to GM/O&M