

## UNIT TRIPPING REPORT

UNIT No: 1

STATION: NTPL, TUTICORIN.

OUTAGE: NO.77

REPORT NO: 77

- |  |  |
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| 1.Date of tripping                     | :06-06-2023                            |
| 2.Time of tripping                     | :02:50Hrs                              |
| 3.Status before tripping               |  |
| a) Unit load                           | :280MW                                 |
| b) Mills in service                    | :B,C,D, 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            | :Generator trip on "Low Forward Power" |
| 5.Other relays/protection acted        | :Boiler tripped on drum level low.     |
| 6.Supporting documents attached        | : S.O.E & Trends                       |
| 7.Any operation done prior to tripping | :Nil                                   |

8.Analysis of tripping :

Unit was running at 280 MW in CMC. Suddenly Turbine HP & IP control valves got closed and generator tripped on low forward power, turbine tripped. MDBFP came in auto, but because of hp bypass auto close due to higher pressure set resulted in higher drum pressure and a boiler trip on drum level low.

9. Root cause :

In EHTC, Primary DPU was active and secondary DPU was in standby. Primary DPU fatal error resulted in changeover to standby Secondary DPU. During the changeover, the load set becomes zero resulting in closure of turbine control valves and trip on low forward power.

HPBP Fast Open came on turbine trip. But subsequently by pass valves BPV1&2 were getting closed in auto, because of a higher pressure set point (due to control valve closure before TG trip). This condition resulted in drum level fluctuation and a boiler trip on drum level low.

10. Remedial measures taken/to be taken: Primary DPU fault was reset, the change over from primary to secondary DPU, secondary to primary DPU was checked and found ok. Then clearance was given by C&I for taking back the unit.

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

Light Up: : 04:00 Hrs on 06/06/2023

Sync'd: : 05:51 Hrs on 06/06/2022


12. Delay for light up : nil

13. Recommendation / Action plan :


- i) DPU problem was communicated to the OEM for addressing this issue. The team OEM visit is planned to address this issue.
- ii) DCS Critical loop DPU Controllers Redundancy, Availability and Healthiness to be monitored periodically.


14. Any specific learning / feedback : nil


  
EE / OS

  
ACM/OS

  
DGM/ELEC

  
DGM / C&I

  
DGM / MTP

  
DGM/OS

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