

UNIT TRIPPING REPORT

UNIT No: 2

STATION: NTPL, TUTICORIN.

OUTAGE NO: 89

REPORT NO: 89

- | | |
|---|---|
| 1. Date of tripping | : 10-08-2024 |
| 2. Time of tripping | : 18:20Hrs |
| 3. Status before tripping | |
| a) Unit load | : 300MW |
| b) Mills in service | : C, D, E, G & 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 | : 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 | : Wall blower operation in progress |
| 8. Analysis of tripping | : |

Unit was running at 300 MW in CMC. At 18:15 hrs last row wall blower operation was in progress. At 18:18:30 hrs furnace pressure gone negative to -25mmwc and windbox dp fluctuation occurred due to Mill-C unloading due to feeder coupling failure. Flame intensity low alarm came, immediately wall blower was suspended to protect flame failure. at 18:20 hrs flame scanner reading low flame intensity and unit tripped on MFT from flame failure protection.

9. Root cause :

Feeder-C Motor keyway has worn out which resulted in coupling failure and coal feeding to boiler from feeder-C had been abruptly cut but the federate was showing 45 Tons so the coal flow in other mills did not raised which resulted in lean mixture and O2 in flue gas at RAPH inlet raised up to 7% and resulted in flame failure.

10. Remedial measures taken/to be taken:

Motor has been replaced by Electrical Maintenance Department. Logic and alarm to be improved for this case

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

Light Up: : 19:16 Hrs on 10/08/2024

Sync'd: : 20:48 Hrs on 10/08/2024


12. Delay for Synchronization : NIL

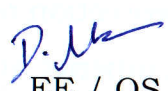
13. Recommendation / Action plan :


- i) SADC of unit-2 Corner-2 will be attended, during capital overhaul, which will improve flame stability.
- ii) Suitable Alarm for Feeder coupling failure / Mill Unload shall be identified and provided for early detection.


14. Any specific learning / feedback :

Frequent occurrence of flame failure happens in unit-2, mostly due to disturbance in coal flow or in lean mixture. Further study is required in unit-2, for improving flame stability


EE/EEMG

 13/10/24
EE / OS

 31/08/24.
DCE / C&I


ACM / OS


CM/OS

Copy submitted to CEO / NTPL

Copy submitted to GM/O&M

Copy submitted to CM/BMD

Event Summary

(filtered)

☒ Start Time: Saturday 10/Aug/2024 18:19
 ☒ End Time: Saturday 10/Aug/2024 18:21
 






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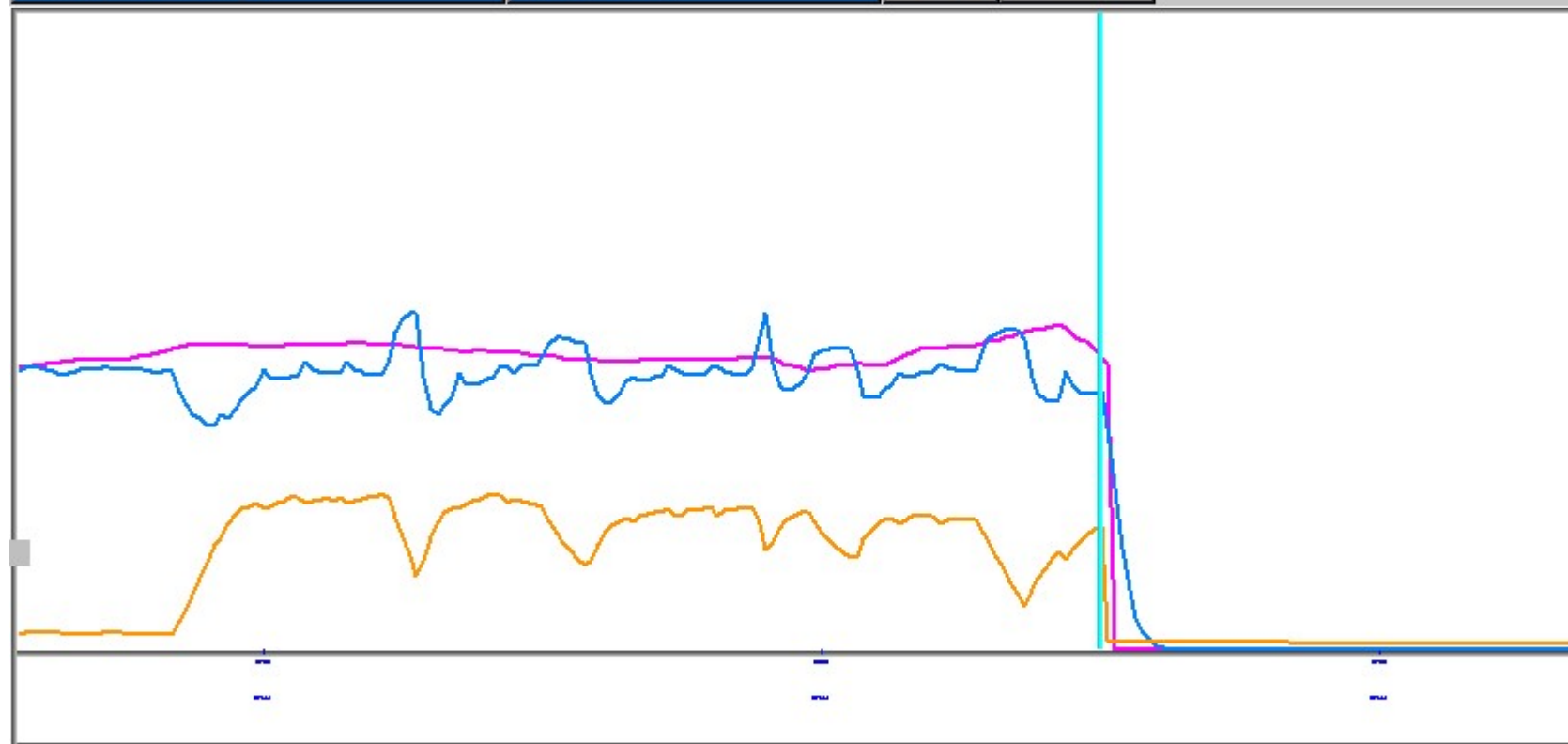
Time	S	TagName	Description	Event Text
10/Aug/24 18:20:10.831		2FL_FAIL_TRIP3_ALM		Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:10.917		2FL_FAIL_TRIP1_ALM		Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:11.119		2FL_FAIL_TRIP2_ALM		Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:15.830		2HBK01EZ300_XE33	FLAMEFAILTRIP	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:15.916		2HBK01EZ100_XE33	FLAMEFAILTRIP	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:15.916		2HBK01EG100_XE12	UNIT FLAME FAILUR...	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:16	5	2HBK01EA110_YV00_1	UNIT FLAME FAILUR...	Alarm Digital Value =TRUE 2UNIT_p
10/Aug/24 18:20:16.118		2HBK01EZ200_XE33	FLAMEFAILTRIP	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:16.118		2HBK01EG200_XE12	UNIT FLAME FAILUR...	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:16.416		2HBK01EZ100_XE33	FLAMEFAILTRIP	Digital_State Old=TRUE New=FALSE 2MF
10/Aug/24 18:20:16.466		2HBK01EA110_YV00	UNIT FLAME FAILUR...	Digital_State Old=FALSE New=TRUE 2UN
10/Aug/24 18:20:16.618		2HBK01EZ200_XE33	FLAMEFAILTRIP	Digital_State Old=TRUE New=FALSE 2MF
10/Aug/24 18:20:16.830		2HBK01EZ300_XE46	MFT CH 3	Digital_State Old=FALSE New=TRUE 2MF
10/Aug/24 18:20:16.916		2HBK01EZ100_XE46	MFT CH 1	Digital_State Old=MFT RESET New=MFT A
10/Aug/24 18:20:16.957		2HBK01EA110_YV00_1	UNIT FLAME FAILUR...	Digital_State Old=FALSE New=TRUE 2UN
10/Aug/24 18:20:16.966		2HBK01EA100_XU59	NO BOILER TRIP CMD	Digital_State Old=TRUE New=FALSE 2UN
10/Aug/24 18:20:17	2	21MAY02EZ100	MFT RELAY OPTD	Alarm Digital Value =OPTD 2TP1_p
10/Aug/24 18:20:17	5	2HBK01EA300_XF98	MASTER FUEL TRIP	Alarm Digital Value =TRUE 2UNIT_p
10/Aug/24 18:20:17	5	2HBK01EA118_YV00	MASTER FUEL TRIP	Alarm Digital Value =TRUE 2UNIT_p
10/Aug/24 18:20:17	5	21MAY1EZ110JYT01	TUR TRIP CH1.3 CMD	Alarm Digital Value =TRIPPED 2TP1_p
10/Aug/24 18:20:17	5	21MAY1EZ110HYT01	TURB TRIP CH1.2 CMD	Alarm Digital Value =ON 2TP1_p
10/Aug/24 18:20:17	5	21MAY1EZ110GCT01	TURB TRIP CH1.1 CMD	Alarm Digital Value =ON 2TP1_p

Dynamic 8 Point Trend

2HCB10EB001.Out.Sample

SB PRESS TX SEL

22.3815 KSC



54.45

43.56

32.67

21.78

10.89

0.00

10Aug2024 18:20:00

SB STM PRCV(SD21)	19.6768
ACTUAL LOAD	276.6540
.Out.Sample	Pending...
.Out.Sample	Pending...

SB PRESS TX SEL	22.3815
.Out.Sample	Pending...
.Out.Sample	Pending...
.Out.Sample	Pending...