

UNIT TRIPPING REPORT

UNIT No: 2

STATION: NTPL, TUTICORIN.

OUTAGE NO: 90

REPORT NO: 90

1. Date of tripping : 11-08-2024
2. Time of tripping : 6:13Hrs
3. Status before tripping
 - a) Unit load : 280MW
 - b) Mills in service : B, D, E, F&G
 - 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 : TG tripped on Bearing Metal temp high.
5. Other relays/protection acted : Boiler was in service.
6. Supporting documents attached : S.O.E & Trends
7. Any operation done prior to tripping : Nil
8. Analysis of tripping :

Unit was running at 280MW in CMC. At 6:13 hrs turbine front bearing temp left 2 elements gone high on false pickup to 168°C in TP-2 protection and resulted in a turbine trip on bearing metal temp high. 2 mills got tripped (F, G) on run back due to turbine trip, coal flow reduced to 114 t/hr, boiler was in service with 3 mills, oil guns taken for flame stability. Turbine trip on front bearing metal temp element-1 (front top left) bypassed due to frequent hunting.

9. Root cause :

False pickup of turbine front bearing temperature left elements is the root cause.

10. Remedial measures taken/to be taken:

turbine trip on front top left bearing temp high bypassed and unit taken back in to service. its temp is being monitored regularly, for any hunting. Alarm given separately for front bearing temperature high.

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

Light Up: : Boiler in service

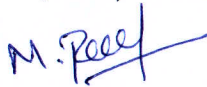
Sync'd: : 7:51Hrs on 11/08/2024

12. Delay for Synchronization : NIL


13. Recommendation / Action plan :

- i. Redundancy and availability of Turbine Bearing Temperature elements shall be regularly reviewed and monitored. .
- ii. Temperature element to be attended during capital overhaul
- iii. STG valve full close to be ensured after every rolling.

14. Any specific learning / feedback : Oil passing noticed in STG valve and temperature rise (85°C) observed in front bearing drain oil.



EE/EEMG


 13/08
EE / OS

 31/08/24

DCE / C&I



ACM / OS


CM/OS

Copy submitted to CEO / NTPL

Copy submitted to GM/O&M

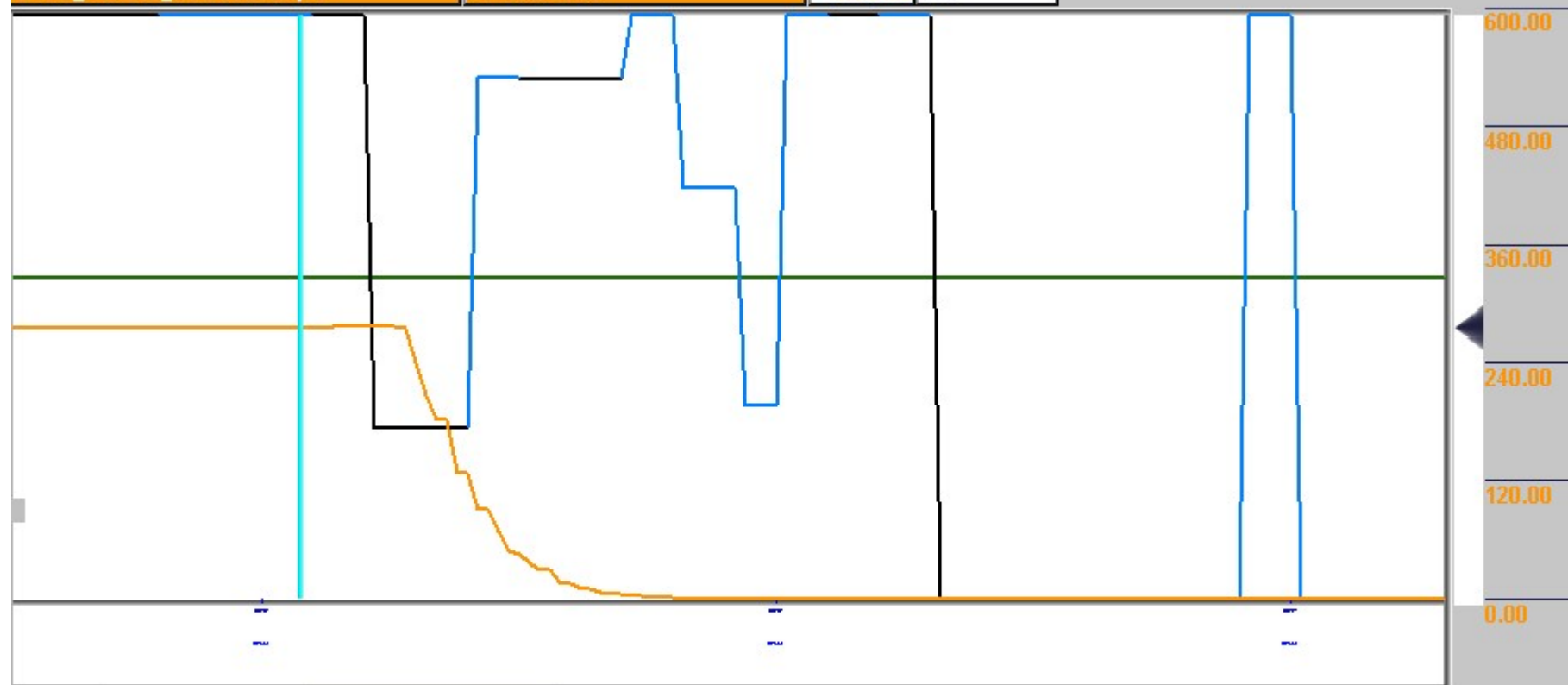
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Dynamic 8 Point Trend

2LOAD_ACTUAL_MV3.Out.Sample

ACTUAL LOAD

280.3502 MW



11Aug2024 06:13:15.8

ACTUAL LOAD	280.3502
RADIAL BRG TMP (HPC FTL)	168.5414
.Out.Sample	Pending...
.Out.Sample	Pending...

RADIAL BRG TMP (HPC FTL)	168.5414
RADIAL BRG TMP (HPC FTL)	82.8527
.Out.Sample	Pending...
.Out.Sample	Pending...

Event Summary

(filtered)

Start Time: Sunday 11/Aug/2024 06:12		End Time: Sunday 11/Aug/2024 06:14			1183
Time	A/C	Type	S	TagName	Event Text
11/Aug/24 06:13:19	Alm	PA	3	22HP_FR_BRG_TMP	Alarm Digital Value =HIGH 2TP2_p
11/Aug/24 06:13:19	Alm	PA	5	TURBINE_TRIPPED_1	Alarm Digital Value =TRIPPED 2ATT_p
11/Aug/24 06:13:19	Alm	PA	5	TURBINE_TRIPPED	Alarm Digital Value =TRIPPED 2ATT_p
11/Aug/24 06:13:19	Alm	PA	3	2MSFLT25Pct	Alarm Digital Value =True 2B10CRE23_s
11/Aug/24 06:13:19	Alm	PA	3	2MSFLT20Pct	Alarm Digital Value =True 2B10CRE23_s
11/Aug/24 06:13:19	Clr	PA	3	2MSFGT25Pct	Alarm Clear Value =False 2B10CRE23_s
11/Aug/24 06:13:19	Alm	PA	5	2MKY02GX222_XG48	Alarm Digital Value =OPERATED 2B24CRE68_p
11/Aug/24 06:13:19	Alm	PA	5	2MKY02GX219_XG51	Alarm Digital Value =FAULT 2B24CRE68_p
11/Aug/24 06:13:19	Alm	PA	5	2MKY02GX214_XG51	Alarm Digital Value =FAULT 2B24CRE68_p
11/Aug/24 06:13:19	Alm	PA	3	21HP_FR_BRG_TMP	Alarm Digital Value =HIGH 2TP1_p
11/Aug/24 06:13:19.039		SQ		/HARDWARE_OUTPUT/DO/...	Digital_State Old=FALSE New=CH-2 MAN F 2EX
11/Aug/24 06:13:19.039		SQ		/HARDWARE_OUTPUT/DO/...	Digital_State Old=FALSE New=CH1 MAN F 2EX
11/Aug/24 06:13:19.133		SQ		2MSFGT30Pct	Digital_State Old=True New=False 2B10CRE23_s
11/Aug/24 06:13:19.480		SQ		21HP_FR_BRG_TMP	Digital_State Old=N.HIGH New=HIGH 2TP1_p
11/Aug/24 06:13:19.533		SQ		2BlrLoadGT30Pct	Digital_State Old=>30% New=N.>30% 2B02CRE
11/Aug/24 06:13:19.550		SQ		2HBK10CF100_XG00	Digital_State Old=TRUE New=FALSE 2UNIT_p
11/Aug/24 06:13:19.633		SQ		2MSFLT25Pct	Digital_State Old=False New=True 2B10CRE23_s
11/Aug/24 06:13:19.633		SQ		2MSFLT20Pct	Digital_State Old=False New=True 2B10CRE23_s
11/Aug/24 06:13:19.689		SQ		2MAY01EC201BZA16	Digital_State Old=FALSE New=ON 2ATT_p
11/Aug/24 06:13:19.742		SQ		2MAX51AA002AXJ21	Digital_State Old=ON New=FALSE 2ATT_p
11/Aug/24 06:13:19.779		SQ		TURBINE_TRIPPED_1	Digital_State Old=N.TRIPPED New=TRIPPED 2A
11/Aug/24 06:13:19.805		SQ		2MAY01EC201BZA16	Digital_State Old=ON New=FALSE 2ATT_p