



## STANDARD OPERATING PROCEDURES

### NLC TAMILNADU POWER LIMITED

#### DEPARTMENTAL PROCEDURE MANUAL

(ISO 9001:2015, ISO 14001: 2015, ISO 50001:2018 & ISO 45001: 2018)

**TITLE: - Furnace Air Tightness Test**

**NTPL/OPRN/DPM-01/SOP-54**

**ISSUE DATE: 09-09-2021 REVISION DATE:25.10.2022**

**REVISION:R0**

**PURPOSE** : To optimize boiler efficiency and reduce draft power

**SCOPE:** : Boiler Furnace, Air and FG Duct upto ID Fan Inlet

**RESPONSIBILITY** : Head of Department (Operation) / Shift Engineer

**CRITERIA** : To test tightness of furnace wrt Environment not for strength

#### ACTIVITIES:

S.N.	ACTIVITIES	RESPONSIBILITY
1	Ensure all Line Clearances and work permits of BM 1, BM 2 and AHS cancelled and clearance available	Shift Engineer
2	Check list protocol signed (Annexure I)	OS, EM, BMD, AHD
3	Start APH Motors (A/B)	Unit Controller
4	Start one set of ID/FD fans increase pressure further	Unit Controller
5	Start both PA fans, slowly raise PA Header Pr to 800 mmWC. Start seal air fan also	Unit Controller
6	Keep furnace pressure to +120 mmWC	Unit Controller
7	For Identification of any leakage, local round to be taken with maintenance Person and Protocol to be signed in the check list (Annexure II)	OS, EM, BMD, AHD & EEMG
8	Slowly Reduce furnace pressure to Normal and Stop PA/FD/ID fans. FAAT has completed	Unit Controller



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### Annexure I

S.NO	Area/System	Status Req	Actual Status
1	Bottom Ash Hopper Manholes		
2	Seal trough		
3	Mill scrapper Manholes		
4	Boiler Manholes/Peep holes		
5	SADC		
6	All Feeders doors (Front/rear)		
7	SA/PA duct Manholes		
8	ESP Duct Manholes		

Inspected By

OS :

EMD :

BMD :

AHD :



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### Annexure II

S.NO	Area/System	Team Responsible	Remarks
1	Boiler 1 <sup>st</sup> Pass		
2	Boiler 2 <sup>nd</sup> Pass		
3	APH Flue Gas duct		
4	ESP I/L and O/L Ducts		
5	ESP Passes		
6	Secondary Air duct		
7	Hot & Cold Primary duct		
8	Mill HG/HAD/CAG/CAD		
9	APH guide and support bearing area		
10	Dead Zone chamber in S panel & Reheater Goose neck area		
11	Boiler Pent House		