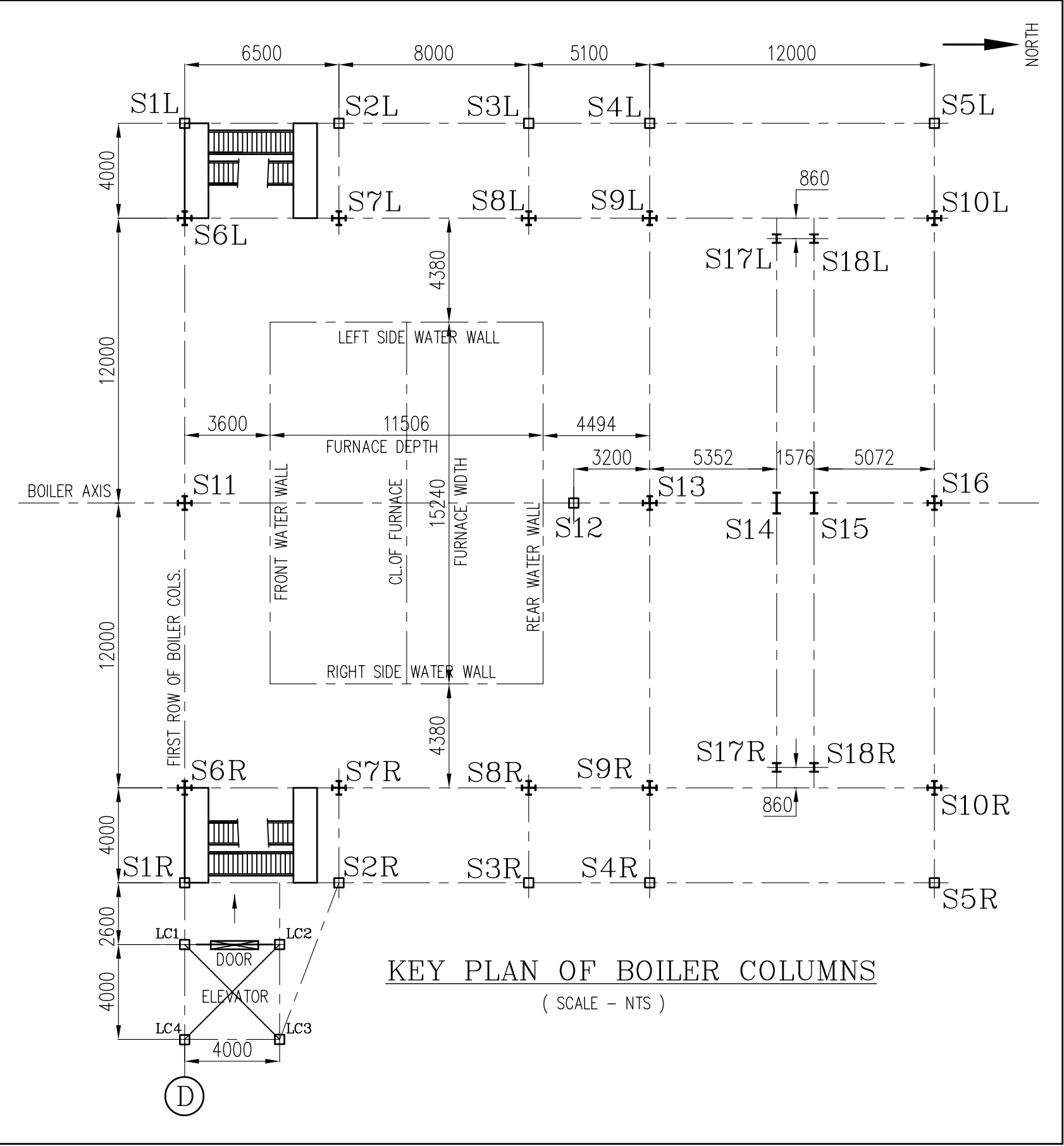
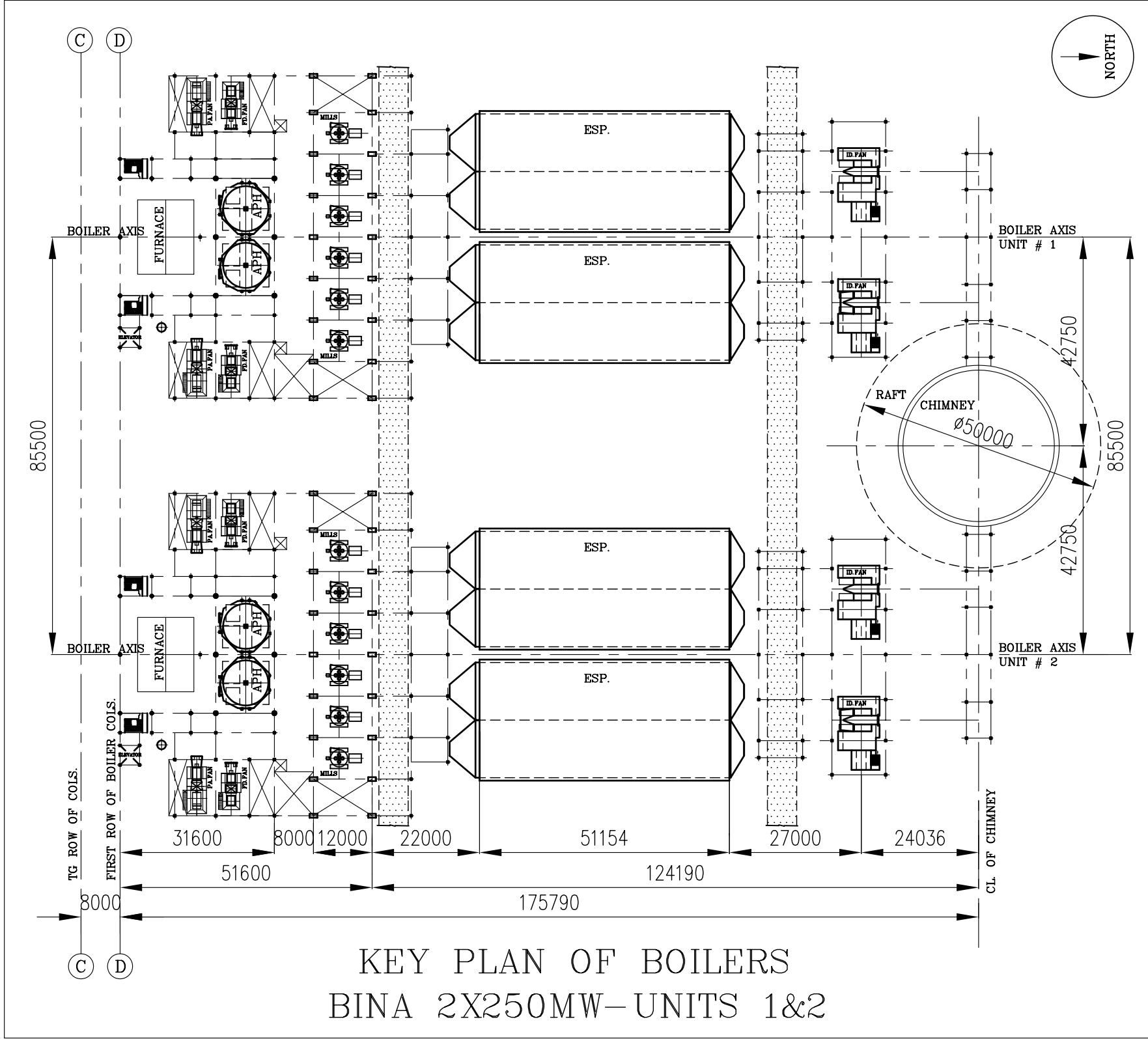
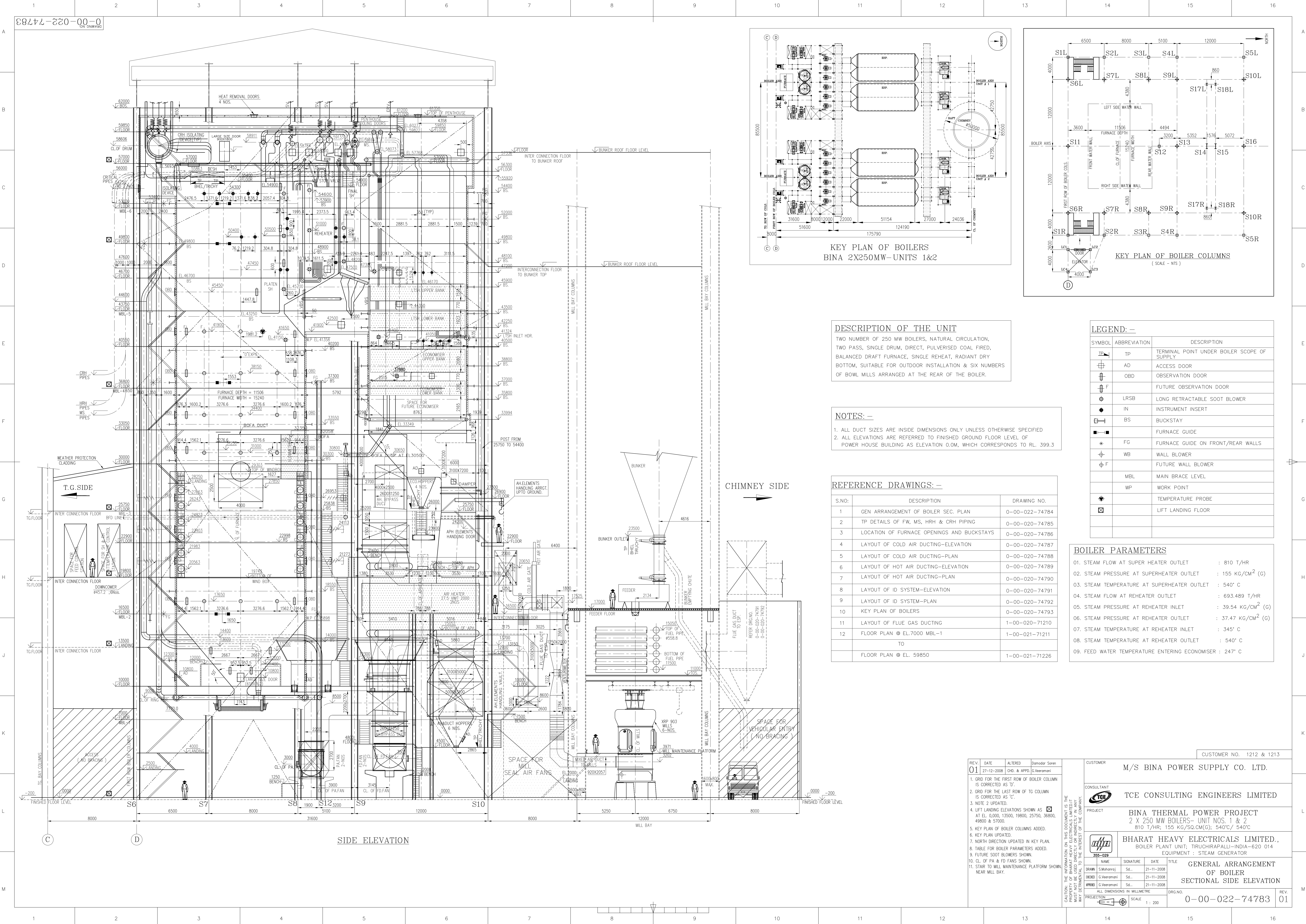




DESCRIPTION OF THE UNIT

TWO NUMBER OF 250 MW BOILERS, NATURAL CIRCULATION, TWO PASS, SINGLE DRUM, DIRECT, PULVERISED COAL FIRED, BALANCED DRAFT FURNACE, SINGLE REHEAT, RADIANT DRY BOTTOM, SUITABLE FOR OUTDOOR INSTALLATION & SIX NUMBERS OF BOWL MILLS ARRANGED AT THE REAR OF THE BOILER.

NOTES: -

- 1. ALL DUCT SIZES ARE INSIDE DIMENSIONS ONLY UNLESS OTHERWISE SPECIFIED
- 2. ALL ELEVATIONS ARE REFERRED TO FINISHED GROUND FLOOR LEVEL OF POWER HOUSE BUILDING AS ELEVATION 0.0M, WHICH CORRESPONDS TO RL. 399.3

REFERENCE DRAWINGS: -

S.NO:	DESCRIPTION	DRAWING NO.
1	GEN ARRANGEMENT OF BOILER SEC. PLAN	0-00-022-74784
2	TP DETAILS OF FW, MS, HRH & CRH PIPING	0-00-020-74785
3	LOCATION OF FURNACE OPENINGS AND BUCKSTAYS	0-00-020-74786
4	LAYOUT OF COLD AIR DUCTING-ELEVATION	0-00-020-74787
5	LAYOUT OF COLD AIR DUCTING-PLAN	0-00-020-74788
6	LAYOUT OF HOT AIR DUCTING-ELEVATION	0-00-020-74789
7	LAYOUT OF HOT AIR DUCTING-PLAN	0-00-020-74790
8	LAYOUT OF ID SYSTEM-ELEVATION	0-00-020-74791
9	LAYOUT OF ID SYSTEM-PLAN	0-00-020-74792
10	KEY PLAN OF BOILERS	0-00-020-74793
11	LAYOUT OF FLUE GAS DUCTING	1-00-021-71210
12	FLOOR PLAN @ EL.7000 MBL-1	1-00-021-71211
	TO	
	FLOOR PLAN @ EL. 59850	1-00-021-71226

LEGEND: -

SYMBOL	ABBREVIATION	DESCRIPTION
TP	TP	TERMINAL POINT UNDER BOILER SCOPE OF SUPPLY
AD	AD	ACCESS DOOR
OBD	OBD	OBSERVATION DOOR
F	F	FUTURE OBSERVATION DOOR
LRSB	LRSB	LONG RETRACTABLE SOOT BLOWER
IN	IN	INSTRUMENT INSERT
BS	BS	BUCKSTAY
FG	FG	FURNACE GUIDE
WB	WB	WALL BLOWER
F	F	FUTURE WALL BLOWER
MBL	MBL	MAIN BRACE LEVEL
WP	WP	WORK POINT
TP	TP	TEMPERATURE PROBE
LF	LF	LIFT LANDING FLOOR

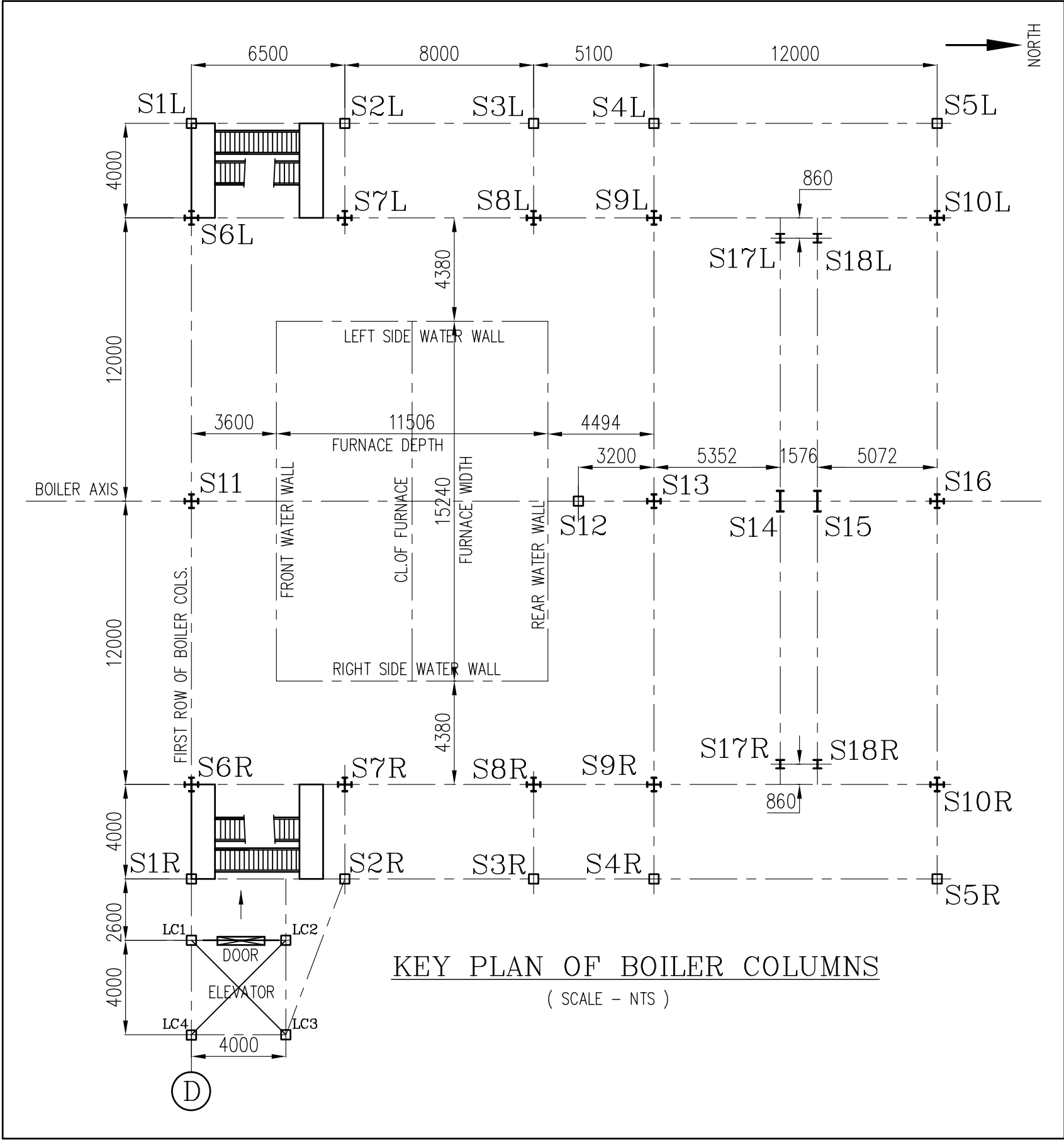
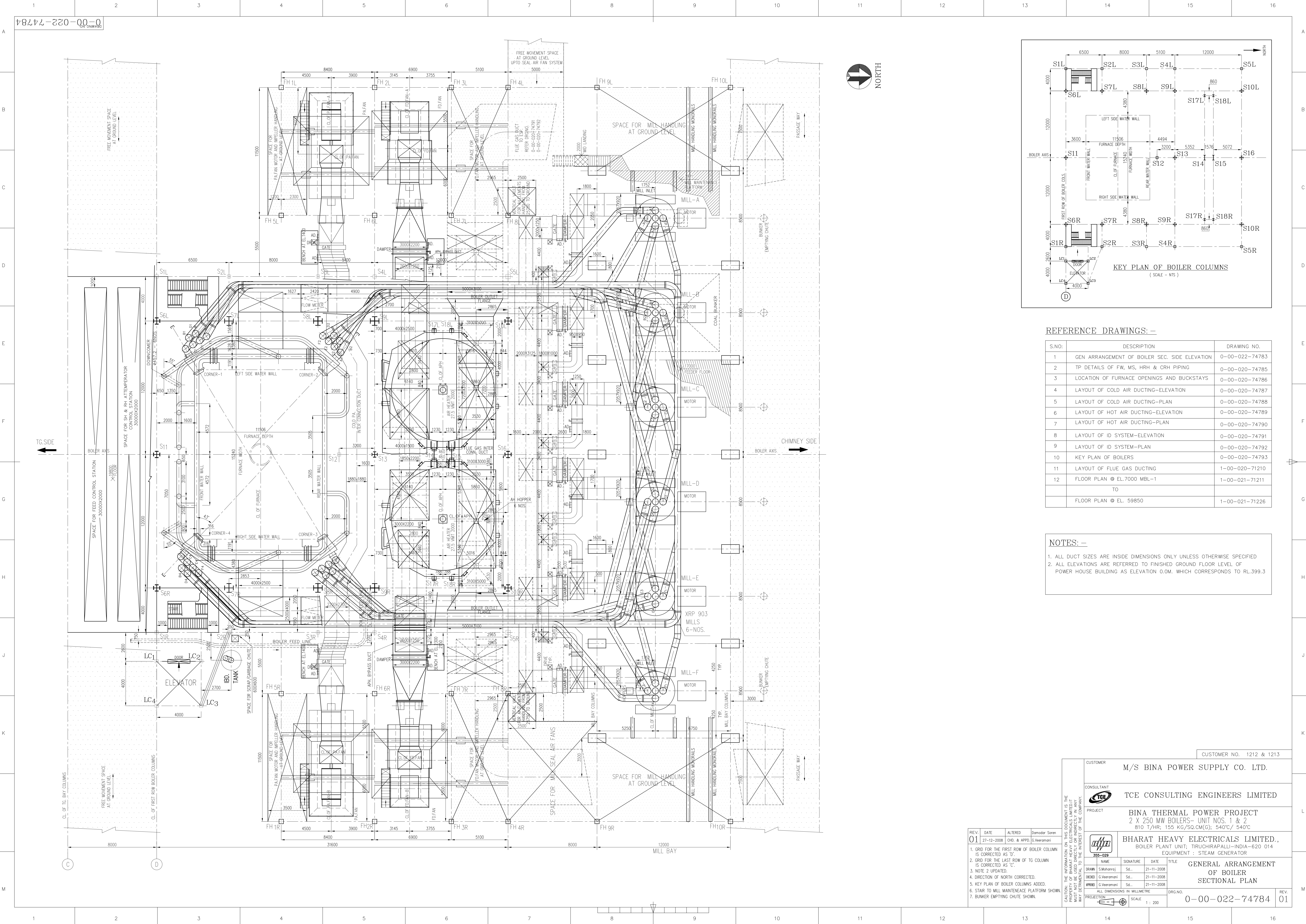
BOILER PARAMETERS

- 01. STEAM FLOW AT SUPER HEATER OUTLET : 810 T/HR
- 02. STEAM PRESSURE AT SUPERHEATER OUTLET : 155 KG/CM² (G)
- 03. STEAM TEMPERATURE AT SUPERHEATER OUTLET : 540° C
- 04. STEAM FLOW AT REHEATER OUTLET : 693.489 T/HR
- 05. STEAM PRESSURE AT REHEATER INLET : 39.54 KG/CM² (G)
- 06. STEAM PRESSURE AT REHEATER OUTLET : 37.47 KG/CM² (G)
- 07. STEAM TEMPERATURE AT REHEATER INLET : 345° C
- 08. STEAM TEMPERATURE AT REHEATER OUTLET : 540° C
- 09. FEED WATER TEMPERATURE ENTERING ECONOMISER : 247° C

REV.	DATE	ALTERED	BY
01	27-12-2008	CHD. & APPD. G.Veeramani	Damodar Soren

1. GRID FOR THE FIRST ROW OF BOILER COLUMN IS CORRECTED AS 'D'.
2. GRID FOR THE LAST ROW OF TG COLUMN IS CORRECTED AS 'C'.
3. NOTE 2 UPDATED.
4. LIFT LANDING ELEVATIONS SHOWN AS AT EL. 0.000, 13500, 19800, 25750, 36800, 49800 & 57000.
5. KEY PLAN OF BOILER COLUMNS ADDED.
6. KEY PLAN UPDATED.
7. NORTH DIRECTION UPDATED IN KEY PLAN.
8. TABLE FOR BOILER PARAMETERS ADDED.
9. FUTURE SOOT BLOWERS SHOWN.
10. CL. OF PA & FD FANS SHOWN.
11. STAR TO MILL MAINTENANCE PLATFORM SHOWN NEAR MILL BAY.

CUSTOMER NO. 1212 & 1213	
M/S BINA POWER SUPPLY CO. LTD.	
CONSULTANT TCE CONSULTING ENGINEERS LIMITED	
PROJECT BINA THERMAL POWER PROJECT 2 X 250 MW BOILERS- UNIT NOS. 1 & 2 810 T/HR; 155 KG/SQ.CM(G); 540°C/ 540°C	
BHARAT HEAVY ELECTRICALS LIMITED., BOILER PLANT UNIT; TIRUCHIRAPALLI-INDIA-620 014 EQUIPMENT : STEAM GENERATOR	
NAME S.Mohananj G.Veeramani G.Veeramani	SIGNATURE Sa... Sa... Sa...
DATE 21-11-2008 21-11-2008 21-11-2008	TITLE GENERAL ARRANGEMENT OF BOILER SECTIONAL SIDE ELEVATION
PROJECTION SCALE 1 : 200	PRG.NO. 0-00-022-74783



S.NO:	DESCRIPTION	DRAWING NO.
1	GEN ARRANGEMENT OF BOILER SEC. SIDE ELEVATION	0-00-022-74783
2	TP DETAILS OF FW, MS, HRH & CRH PIPING	0-00-020-74785
3	LOCATION OF FURNACE OPENINGS AND BUCKSTAYS	0-00-020-74786
4	LAYOUT OF COLD AIR DUCTING-ELEVATION	0-00-020-74787
5	LAYOUT OF COLD AIR DUCTING-PLAN	0-00-020-74788
6	LAYOUT OF HOT AIR DUCTING-ELEVATION	0-00-020-74789
7	LAYOUT OF HOT AIR DUCTING-PLAN	0-00-020-74790
8	LAYOUT OF ID SYSTEM-ELEVATION	0-00-020-74791
9	LAYOUT OF ID SYSTEM-PLAN	0-00-020-74792
10	KEY PLAN OF BOILERS	0-00-020-74793
11	LAYOUT OF FLUE GAS DUCTING	1-00-020-71210
12	FLOOR PLAN @ EL.7000 MBL-1	1-00-021-71211
	TO	
	FLOOR PLAN @ EL. 59850	1-00-021-71226

NOTES: -

1. ALL DUCT SIZES ARE INSIDE DIMENSIONS ONLY UNLESS OTHERWISE SPECIFIED

2. ALL ELEVATIONS ARE REFERRED TO FINISHED GROUND FLOOR LEVEL OF POWER HOUSE BUILDING AS ELEVATION 0.0M. WHICH CORRESPONDS TO RL.399.3

REV.	DATE	ALTERED	By
01	27-12-2008	CHD. & APPD.	G.Veeramani

1. GRID FOR THE FIRST ROW OF BOILER COLUMN IS CORRECTED AS 'D'.

2. GRID FOR THE LAST ROW OF COLUMN IS CORRECTED AS 'C'.

3. NOTE 2 UPDATED.

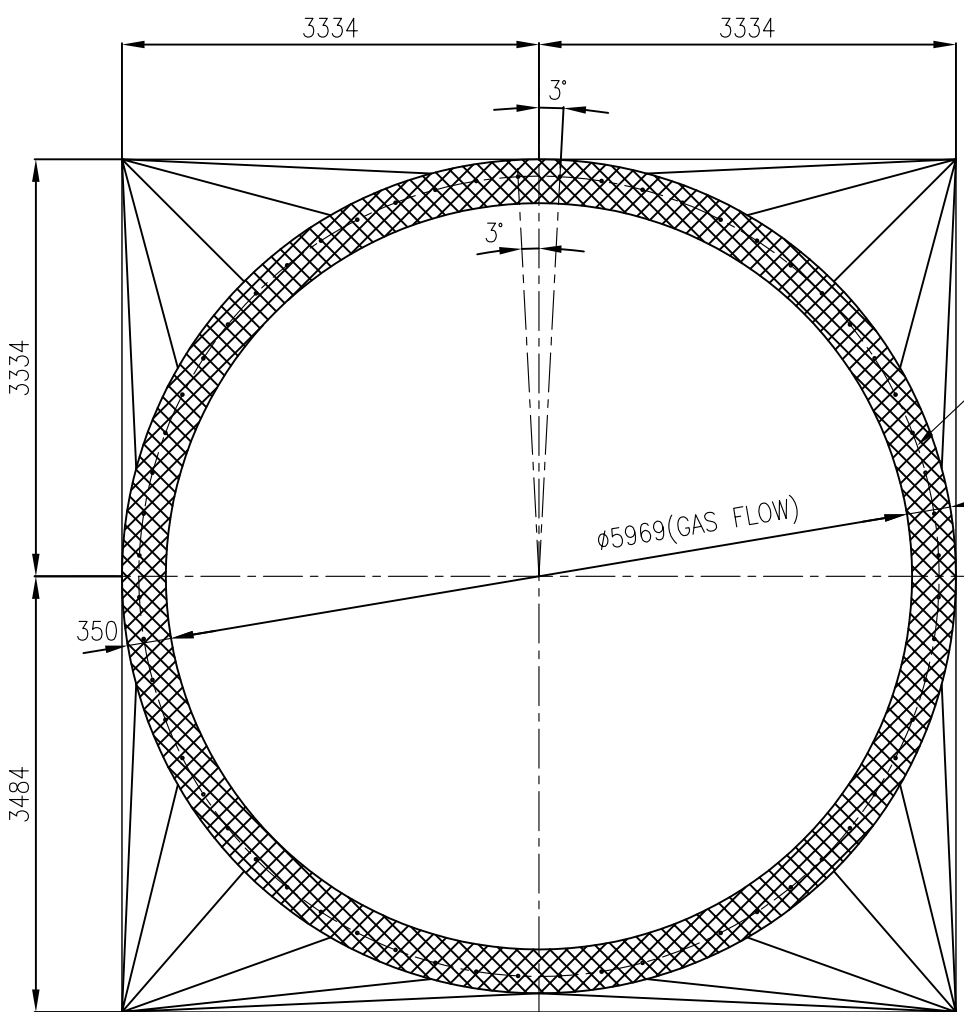
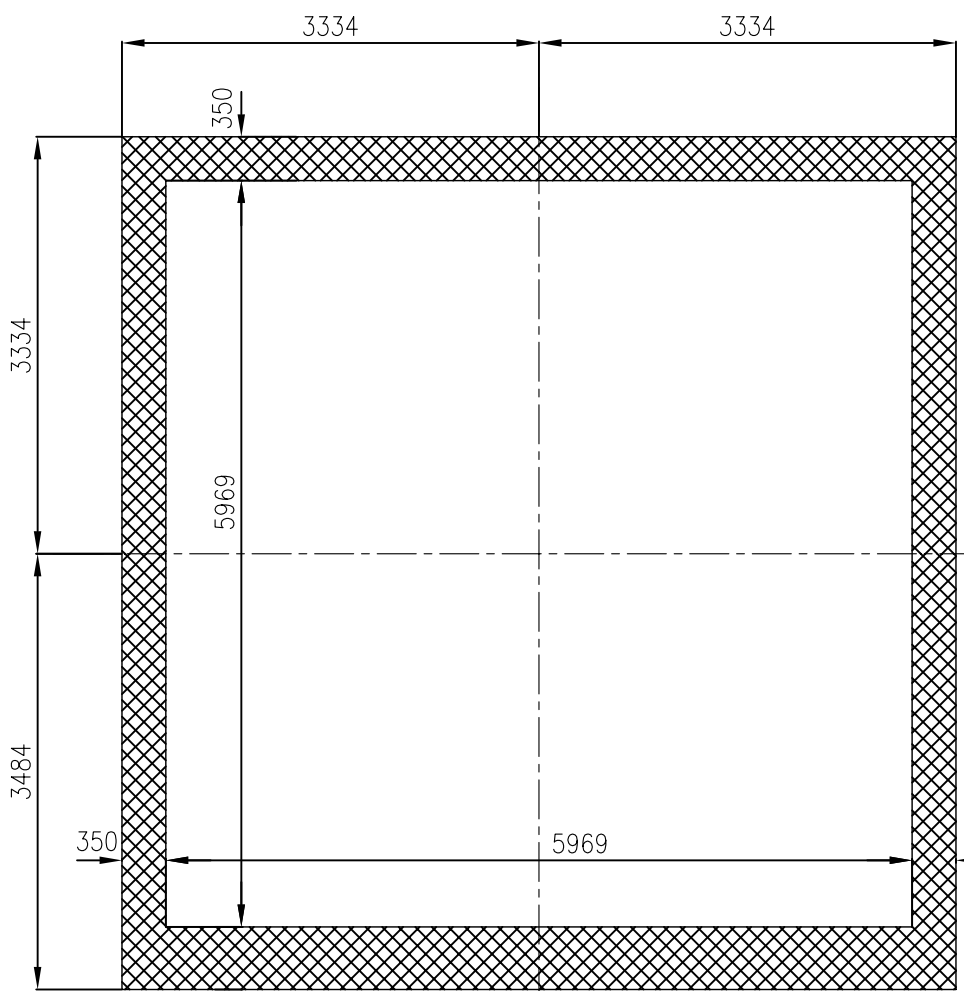
4. DIRECTION OF NORTH CORRECTED.

5. KEY PLAN OF BOILER COLUMNS ADDED.

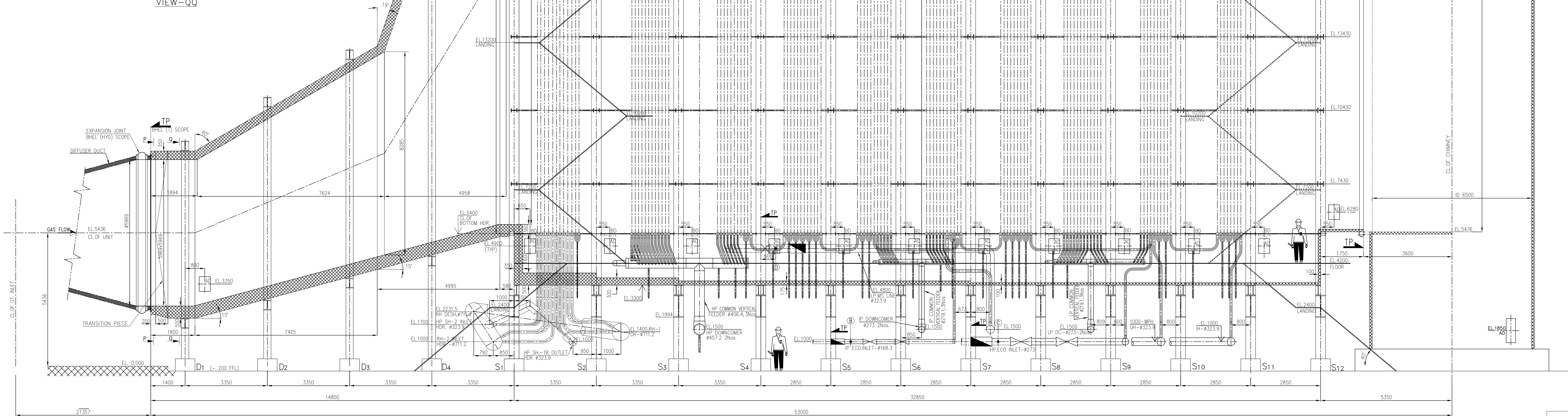
6. STAIR TO MILL MAINTENANCE PLATFORM SHOWN.

7. BUNKER EMPTYING CHUTE SHOWN.

CUSTOMER NO. 1212 & 1213	
CUSTOMER M/S BINA POWER SUPPLY CO. LTD.	
CONSULTANT TCE CONSULTING ENGINEERS LIMITED	
PROJECT BINA THERMAL POWER PROJECT 2 x 250 MW BOILERS- UNIT NOS. 1 & 2 810 T/HR; 155 KG/SQ.CM(G); 540°C/ 540°C	
BHARAT HEAVY ELECTRICALS LIMITED., BOILER PLANT UNIT, TIRUCHIRAPALLI-INDIA-620 014 EQUIPMENT : STEAM GENERATOR	
GENERAL ARRANGEMENT OF BOILER SECTIONAL PLAN	
PROJECTOR SCALE 1 : 200	
ORG.NO. 0-00-022-74784	
REV. 01	

VIEW-PP
GT.DUCT MATING FLANGE

VIEW-QQ



DESCRIPTION OF THE UNIT:-

ONE NUMBER OUT DOOR, UNFIRE, WATER TUBE, TRIPLE PRESSURE,
TRIPLE WIDTH, REHEAT, NATURAL CIRCULATION, HORIZONTAL TYPE HRSG.

COLUMN SIZE

D1 TO D3 1300x400
D4 1300x700
S1 TO S12 1400x1100

NOTES.

1. ALL ACCESS DOORS ARE LOCATED ON BOTH SIDES UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS OF DUCT INDICATED REPRESENTS INSIDE SIZE ONLY.
3. TERMINAL POINT FOR BHEL / TRICHY SCOPE OF SUPPLY
4. ARE DESIGNATIONS OF ANCHOR POINTS.

REFERENCE DRAWINGS

- | | |
|--|------------------|
| 1. GENERAL ARRANGEMENT OF BOILER - PLAN | - 0-00-561-93360 |
| 2. FLOOR PLAN AT EL.4200 | - 0-00-562-93361 |
| 3. FLOOR PLAN AT EL.31500,33500&34300 | - 0-00-562-93362 |
| 4. LAYOUT OF DUCTING - ELEVATION | - 0-00-565-93364 |
| 5. LAYOUT OF DUCTING - PLAN | - 0-00-565-93365 |
| 6. GENERAL ARRANGEMENT OF BOILER SECTION | - 0-00-561-93363 |
| 7. TERMINAL POINTS DETAILS | - 0-00-565-93366 |

LEGEND

- | | |
|--|-----|
| 1. ACCESS DOOR (450 x 600) (ON SIDE WALLS) | |
| 2. ACCESS DOOR (450 x 450) (OTHER AREA) | |
| 3. BOLTED DOOR (450 X 450) | BD |
| 4. SAFETY VALVE | SV |
| 5. STARTUP VENT | SUV |
| 6. SAFETY RELIEF VALVE | SRV |
| 7. ELECTROMATIC RELIEF VALVE | ERV |
| 8. DOWNCOMER | DC |
| 9. WATER PREHEATER | WPH |
| 10. TERMINAL POINT | |

- | | | | |
|-----|----------|--------|-------------|
| REV | DATE | ALTD | RP.Nathan |
| 01 | 17.08.08 | CHD | P.K.Sahoo |
| | | APPROV | V.Jothimani |
- ZONE
1. STACK CLOSURE DAMPER SHOWN.
 2. AD AT EL.6280 UPDATED AS PER FLOOR PLAN.
 3. TP LOCATION SHOWN NEAR CHIMNEY.
 4. AD AT EL.3350 UPDATED AS PER FLOOR PLAN NEAR D1 COLUMN.
 5. DUCT SIZE SHOWN AT TERMINAL POINT NEAR CHIMNEY.

CUSTOMER No. 5718 & 5719	
GSPC PIPAVAV POWER COMPANY LIMITED	
CONSULTANT TCE CONSULTING ENGINEERS LIMITED, BANGALORE	
PROJECT 2x350 MW COMBINED CYCLE POWER PLANT	
HEAT RECOVERY STEAM GENERATOR - BEHIND FRAME 9 FA GT.	
292 t/h, 134kg/cm ² (g), 540°C/540°C, 30.8 t/h, 34.2kg/cm ² (g), 330°C & 34.3 t/h, 4.4kg/cm ² (g) 230°C	
BHARAT HEAVY ELECTRICALS LTD.,	
BOILER PLANT UNIT, TIRUCHIRAPALLI-620 014.	
DRAWN	RP.Nathan -sd-
CHECKED	P.K.Sahoo -sd-
APPROVED	V.Jothimani -sd-
DATE	12.05.08 T.Radhakrishnan
ALL DIMENSIONS ARE IN MILLIMETRES	
SCALE	1:60
TITLE GENERAL ARRANGEMENT OF BOILER - ELEVATION	
DRG No.	0-00-561-93359
REV.	01