



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**TCN - 01**

Ref: PSER:SCT:BAR-B997:TCN-01

Date: 21-04-2009

Sub	Tender change notice (TCN) 01.	
Job	Erection and Commissioning of Boiler, Rotating Machines and Duct, Critical Piping, Misc Piping, etc. including Civil works of Elevator Pit & Machine Room of both the Units of 2 X 660MW Barh (STG-II) STPP Project., PO-Barh, Dist-Patna, Bihar.	
Ref	1.0	Tender no PSER:SCT:BAR-B997:09.
	2.0	BHEL's NIT, vide reference no Ref: <b>PSER:SCT:BAR-B997:09</b> Dated 03-04-2009
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:BAR-M997:TCN-01, dated 21-04-05.
	4.0	Other references (if any).

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 Due date of submission of offer is extended from **24-04-2009** to **30-04-2009, 15-00 hrs.**
- 2.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 3.0 Technical clarifications attached in vide annexure-I.
- 4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

DGM (SCT)

Encl

- 1.0 Revised format of 'No deviation certificate'.
- 2.0 Technical clarifications (annexure-I)

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

RECORD NOTES OF PRE-BID DISCUSSION HELD ON 17-04-2009 AT BHEL-PSER-KOLKATA AGAINST TENDER NO. PSER:SCT:BAR-B997:09 FOR 2X660 MW, UNIT 4 & 5 - BOILER AT BARH, BIHAR

During pre-bid discussion following points were discussed and clarified by BHEL :ANNEXURE-I

SL.	REF. DOCUMENT	ISSUE	BIDDER'S QUERY	CLARIFICATION GIVEN BY BHEL
1	NIT –	PACT Agreement format.	Please inform the method of getting the Principal (BHEL) signature before submission of bid as this agreement has to be submitted along with bid.	Bidders to furnish <b>PACT format</b> sealed & signed (in Rs 100/- non judicial stamp paper) along with their tech Bid.
2	SCC – 4 of 42, 4.4	Omission of specific reference to any fabrication.....	Please specify the extent of fabrication work involved in this package.	This shall be similar to any 600/660 MW set. As per tender. This pertains to mismatch / mistake in work done by the contractor.
3	SCC – 21 of 42,25.7	The machines as prescribed in annexure will be provided to.....	We do not envisage provision of T&P that are in BHEL scope. We presume these T&P shall be provided by BHEL to meet the project schedule. Please confirm.	Agreed & as per tender.
4	SCC – 22 of 42, 28.1	Deployment of all T&Ps for this tender shall be contractor's responsibility. However, if BHEL issues any T&Ps.....	We presume the T&Ps listed in Appendix-II, Page 34 of 42 shall be provided by BHEL free of charge with required operator, fuel, power. Please confirm.	This cl. pertains to Appendix -III , PAGE 35 of 42. It is clarified that 2 nos 75T crane will be deployed for this work . Deployment shall be either by contractor or by BHEL based on the price evaluation. .
5	SCC – 24 of 42, 34.6	All the repair/ rectification / rework of damaged and fabrication of materials lost.....	Repairs and rectification etc. not attributable to us shall be paid separately. Please confirm.	Agreed & as per tender
6	SCC – 24 of 42, 35.3	The actual date of start of work of each will be certified.....	We presume that the date of start of erection will be date of erection of first column of each unit. Please confirm.	Agreed. It is clarified that SOE shall be considered from date of erection of 1st column of each unit .

7	SCC – 27 of 42, 39.0	ORC not applicable for Package A.	We presume ORC will be applicable for Package A also. Please confirm.	It is clarified that ORC shall be applicable for Pkg A (BOILER) & Pkg B (Civil Works of elevator pit & machine room). ORC shall not be applicable for Pkg C (Crane).
8	SCC – 29 of 42, 41.1	Extra charges for rectification/ modification. Man hour limit per incident.	We request you to reduce the manhour limit per incident from 200 to 100 in line with Koderma , Maithon & other projects. Please confirm.	Free man hour limit shall be 150 hrs.
9	SCC – 30 of 42, 43.0	Liquidated damages.	The LD cap shall be limited to 10% of the Contract price of the delayed unit only. Please confirm.	Max ceiling limit of LD shall be 5%
10	SCC – 34 of 42, Appendix II, Tech. Spec. 19 of 48, 2.2.49.1	T&Ps by BHEL. Hydraulic test.....	We presume that the following T&P also in BHEL scope. 1) Huck bolting machine. 2) Hydraulic test pump. 3) Passenger cum goods lift. Please confirm.	Huck Bolting Machine not applicable. Cl . No. 2.2.49.1 of Vol-II stands deleted. It is clarified that hydraulic test pump & Passenger cum goods elevator shall be in contractors scope in line with appendix -III of SCC Vol-ID.
11	SCC – 42 of 42, Drawings Appendix VII:- SI.NO20	Ceiling Girders.	Please clarify whether ceiling girders will be supplied in fully fabricated ready for erection condition (or) assembly welding needs to be done at site. Please indicate the numbers of joints also in case of assembly & welding. Also inform regarding NDT & heat treatment requirement.	Ceiling Girders shall be supplied in pieces and fabrication/ assembly etc shall be done at site by the contractor.

12	SCC – 42 of 42, Drawings :-	Appendix VII	The following drawings are missing. Please provide. Sl.No: 01,02,03,04,05,06,07,08,09,10,09,22 – 12 Drawings.	The relevant missing drawing as follows are attached. Drg. Nos.: 9560-102-01-TR-PVM-B-002-SH02OF02, 9560-102-01-TR-PVM-B-003, 9560-102-01-TR-PVM-B-004-SH01OF06, 9560-102-01-TR-PVM-B-004-SH02OF06, 9560-102-01-TR-PVM-B-004-SH03OF06, 9560-102-01-TR-PVM-B-004-SH04OF06, 9560-102-01-TR-PVM-B-004-SH05OF06, 9560-102-01-TR-PVM-B-004-SH06OF06 and 00108-1E0100 00000331.
13	Tech. – 4 of 48, 1.36.1	Installation of all supports and hangers.....	We presume that concrete shall be paid under respective civil items. Please confirm.	No separate payment envisaged for this work
14	Tech. – 5 of 48, 1.39	Vendor is also expected to expedite the process of layout drawing approval by Bihar Boiler Directorate.....	We presume all design / drawing approval shall be taken care by BHEL. Please confirm.	As per Tender
15	Tech. – 9 of 48, 2.1.5.6	Oil system main line supports shall be supplied at .....	These items shall be paid under 5.5 of Volume III A. Please confirm.	Agreed & as per tender.
16	Tech. – 11 of 48, 2.1.7.7	.....However for revalidation test of these welders .....	We presume that pipes & tubes for revalidation test of welders shall also be supplied by BHEL free of charge. Please confirm.	As per Tender

17	Tech. – 12 of 48, 2.1.7.13	.....While all the filler wire required for TIG welding of boiler tubular joints.....	We presume as per Appendix IV of SCC all TIG wires will be supplied by BHEL free of charge. Please confirm.	TIG filler wires for pr. parts & piping as received from BHEL units shall be supplied free of cost. Any additional quantity over & above the supplied quantity of BHEL unit shall be provided by contractor at his cost.
18	Tech – 15 of 48, 2.1.8.27 Tech. – 18 of 48, 2.2.47.1	Touch-up paint.	We request you to supply the touch up paint in order to have compatibility (or) indicate the specification for touch up paint.	As per Tender. Details shall be furnished during execution.
19	Tech. – 38 of 48, 2.2.50.4.4.23	Welding electrodes for P91 welding.	We presume filler wires also shall be supplied by BHEL free of charge. (Pl. refer Appendix IV of SCC, page 38 of 42)	Filler rods for P-91 welding shall be supplied free of cost as received from BHEL units. Addl qty if required, shall be arranged by contractor at his cost.
20	Spiral Wall	Corner loose tubes.	We presume that corner tubes shall be supplied in bent shape of required angle. Fins & Wear rod shall be welded with SMAW process. Please confirm	Corner tubes shall be supplied in bent shape. Fins & Wear bar shall be welded by SMAW process.
21	Vol.IIIA, Preamble, 04	Unless specifically mentioned other wise.....	The strengthening of roads, bridges, culverts etc are not included in this package. Please confirm.	This is excluded . But strengthing of roads for crane movement is included in scope of work.
22	Vol.IIIA, Preamble, 05	The rate quoted shall be inclusive.....	We presume these works are not envisaged in this package. Please confirm.	These works are excluded except levelling & cleaning of work area.
23	NIT – 2 of 9, 4.0	Due date of offer submission.	Please extend the bid submission date upto 18.05.2009.	<b>Bid submission date is hereby extended upto 30-04-09</b>
24	Cl. No.43.1- Page 30 & 31 of Vol-ID			UNIT#3 shall be read as UNIT#5

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Erection and Commissioning of Boiler, Rotating Machines and Duct, Critical Piping, Misc Piping, etc. including Civil works of Elevator Pit & Machine Room of both the Units of 2 X 660MW Barh (STG-II) STPP Project., PO-Barh, Dist-Patna, Bihar.	
Ref	01	Tender no PSER:SCT:BAR-B997:09.
	02	BHEL's NIT, vide reference no Ref: PSER:SCT:BAR-B997:09 Dated 03-04-2009
	03	BHEL's TCN-01, vide reference no PSER:SCT:BAR-M997:TCN-01, dated 21-04-05.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)



- ERECTOR'S NOTES:**
- FIELD FABRICATION AND/OR WELDING SHALL COMPLY TO A.S.M.E. CODE SECTION I & IBR.
  - QUANTITIES SHOWN ARE FOR (1) ONE UNIT. (2) TWO UNITS PER CONTRACT.
  - ALL DIMENSIONS INDICATED ARE IN MILLIMETERS.
  - ALL CIRCUIT NUMBERS ARE TO BE PAINTED ON COMPONENTS FOR FIELD IDENTIFICATION AS SHOWN. (F-01, ETC....)
  - WP= WORKPOINT  
FW= FIELD WELD  
SW= SHOP WELD  
NS= NEAR SIDE  
FS= FAR SIDE  
FWA= FIELD WELDED ATTACHMENTS
  - ERECTOR SHALL FURNISH FOR OMEGA LUGS THE FOLLOWING:  
a) THREADED RODS 1" DIA. SA-675 GR 70 H.R. LENGTH AS REQUIRED.  
b) NUTS & WASHERS FOR ITEM (a).
  - OMEALUGS HAVE BEEN LOCATED WHERE THERE IS SUFFICIENT STRENGTH. THE ERECTOR IS NOT TO ADD OMEGA LUGS INDISCRIMINATELY.
  - OMEALUGS ARE NOT TO BE USED AS LIFTING DEVICES.
  - OMEALUGS FOR SH & RH HORIZONTAL SURFACES ARE SIZED TO CARRY THE WEIGHT OF ALL SUPERHEATER AND REHEATER ASSEMBLIES DIRECTLY BELOW THEM.
  - ERECTOR ATTACHMENTS ON ANY PANEL ARE DESIGNED TO SUPPORT ONLY THE WEIGHT OF THE PANEL DIRECTLY BELOW. THEY ARE NOT DESIGNED TO SUPPORT THE WEIGHT OF MORE THAN ONE PANEL.
  - REMOVE & TRIM ERECTION ATTACHMENTS PER ALSTOM STD INSTR SI-20-67. FOR MORE INFO TO APPLICATION OF ERECTION ATTACHMENTS CONTACT ALSTOM ERECTION REPRESENTATIVES.
  - PANEL ERECTION ATTACHMENTS ARE NOT TO BE USED AS LIFTING DEVICES.
  - ERECTOR SHALL FURNISH FOR PANEL ERECTION ATTACHMENTS THE FOLLOWING:  
a) THE RODS 22mm DIA. THREADED AT BOTH ENDS (3" LG THROUGH LGTH) W/ 22mm-9 UNC-2A, MATERIAL A-307, GR. A.  
b) 22mm-9 UNC-2B HEAVY HEX NUT, MATERIAL A-307, GR. A.

**REFERENCE DRAWINGS:**

1. P.P.A.- SECTIONAL SIDE ELEVATION (UPPER FURNACE).....	00108-1E0101
2. P.P.A.- SECTIONAL SIDE ELEVATION (BACKPASS).....	00108-1E0102
3. P.P.A.- SECTIONAL SIDE ELEVATION (LOWER FURNACE).....	00108-1E0103
4. P.P.A.- FRONT ELEV VIEW "E1-E1" (ECONOMIZER).....	00108-1E0104
5. P.P.A.- PLAN VIEW "A-A" HDRS & LINKS (FURN).....	00108-1E0105
6. P.P.A.- PLAN VIEW "A1-A1" HDRS & LINKS (BP).....	00108-1E0106
7. P.P.A.- PLAN VIEW "B-B" ROOF TUBES (FURN).....	00108-1E0107
8. P.P.A.- PLAN VIEW "C-C" (SECT THRU FURNACE).....	00108-1E0108
9. P.P.A.- PLAN VIEW "D-D" (FURN REAR ARCH TUBES).....	00108-1E0109
10. P.P.A.- FLUID COOLED SPOR'S (SHT 1 OF 4).....	00108-1E0110
11. P.P.A.- FLUID COOLED SPOR'S (SHT 2 OF 4).....	00108-1E0111
12. P.P.A.- FLUID COOLED SPOR'S (SHT 3 OF 4).....	00108-1E0112
13. P.P.A.- ELEV VIEW "R-R" & "R1-R1"(LWR FURN).....	00108-1E0113
14. P.P.A.- PLAN VIEW "S-S".....	00108-1E0114
15. N/A.....	00108-1E0115
16. P.P.A.- PLAN VIEW "B1-B1" & "C1-C1" (SECTS THRU BP).....	00108-1E0116
17. P.P.A.- SIDE ELEV VIEW RH INLET & OUTLET HDRS.....	00108-1E0117
18. P.P.A.- FRONT ELEV VIEW RH INLET & OUTLET HDRS.....	00108-1E0118
19. P.P.A.- SIDE ELEV VIEW SH PLATEN INLET & OUTLET HDRS.....	00108-1E0119
20. P.P.A.- FRONT ELEV VIEW SH PLATEN INLET & OUTLET HDRS.....	00108-1E0120
21. P.P.A.- SECT "SP-SP" SEPARATOR PIPING ARRANGEMENT.....	00108-1E0121
22. P.P.A.- FURN UPP FRT OUTL HDR & FURN RE INL HDR ARRGT.....	00108-1E0122
23. P.P.A.- FURN UPP SIDEWALL HEADER ARRANGEMENT.....	00108-1E0123
24. P.P.A.- ECON MIXING LINE ARRANGEMENT.....	00108-1E0124
25. P.P.A.- PLAN VIEW "E-E" (BP RING HDR).....	00108-1E0125
26. P.P.A.- FRONT ELEV VIEW LTRH OUTLET HDR.....	00108-1E0126
27. P.P.A.- ARRGT AT BP STM COOL SUPT OUT HEADER.....	00108-1E0127
28. N/A.....	00108-1E0128
29. N/A.....	00108-1E0129
30. P.P.A.- ARRGT OF TV CAMERA.....	00108-1E0130
31. P.P.A.- PLAN VIEW "F-F" (ECON OUTLET & LTRH INLET).....	00108-1E0131
32. N/A.....	00108-1E0132
33. N/A.....	00108-1E0133
34. P.P.A.- FLUID COOLED SPOR'S (SHT 4 OF 4).....	00108-1E0134
35. P.P.A.- SPIRAL/VERTICAL TRANSITION AT SIDEWALL.....	00108-1E0135
36. P.P.A.- SPIRAL/VERTICAL TRANSITION AT FRT & REAR WALL.....	00108-1E0136
37. P.P.A.- PLAN VIEW "D1-D1" (EXT SIDE FLOOR TUBES).....	00108-1E0137
38. P.P.A.- SIDE ELEV VIEW SH FINISH INLET & OUTLET HDRS.....	00108-1E0138
39. P.P.A.- FRONT ELEV VIEW SH FINISH INLET & OUTLET HDRS.....	00108-1E0139
40. P.P.A.- RH INLET HDR SUPPORT TUBES.....	00108-1E0140
41. P.P.A.- RH INLET HDR SUPPORT TUBES.....	00108-1E0141
42. N/A.....	00108-1E0142
43. N/A.....	00108-1E0143
44. N/A.....	00108-1E0144
45. P.P.A.- ARRGT OF 46" WINDBOX TUBE PANEL.....	00108-1E0145
46. P.P.A.- ARRGT OF 38" WINDBOX TUBE PANEL.....	00108-1E0146
47. P.P.A.- ARRGT OF UPPER SOFA TUBE PANELS.....	00108-1E0147
48. P.P.A.- WINDBOX/SOFA TUBE PANEL (SECT'S & DETL'S).....	00108-1E0148
49. P.P.A.- ARRGT OF UPPER SOFA TUBE PANELS.....	00108-1E0149
50. P.P.A.- OPEN.....	00108-1E0150
51. P.P.A.- OPEN.....	00108-1E0151
52. P.P.A.- OPEN.....	00108-1E0152
53. P.P.A.- FIELD WLD ATM'S- SUPERHEATERS.....	00108-1E0153
54. P.P.A.- FIELD WLD ATM'S- SH & RHLT PEND.....	00108-1E0154
55. P.P.A.- FIELD WLD ATM'S- DETAILS (RH).....	00108-1E0155
56. P.P.A.- PANEL ARRANGEMENT FURN VERTICAL WALLS.....	00108-1E0500
57. P.P.A.- PANEL ARRGT SPIRAL FURN- RIGHT SIDEWALL.....	00108-1E0501
58. P.P.A.- PANEL ARRGT SPIRAL FURN- LEFT SIDEWALL.....	00108-1E0502
59. P.P.A.- PANEL ARRANGEMENT- BACKPASS.....	00108-1E0503
60. P.P.A.- PANEL ARRGT SPIRAL FURN- REAR WALL.....	00108-1E0504
61. P.P.A.- PANEL ARRGT SPIRAL FURN- REAR WALL.....	00108-1E0505
62. P.P.A.- PANEL ARRGT- RIGHT HOPPER SIDEWALL.....	00108-1E0506
63. P.P.A.- PANEL ARRGT- LEFT HOPPER SIDEWALL.....	00108-1E0507
64. P.P.A.- PANEL ARRGT- FRT & REAR HOPPER WALL.....	00108-1E0508

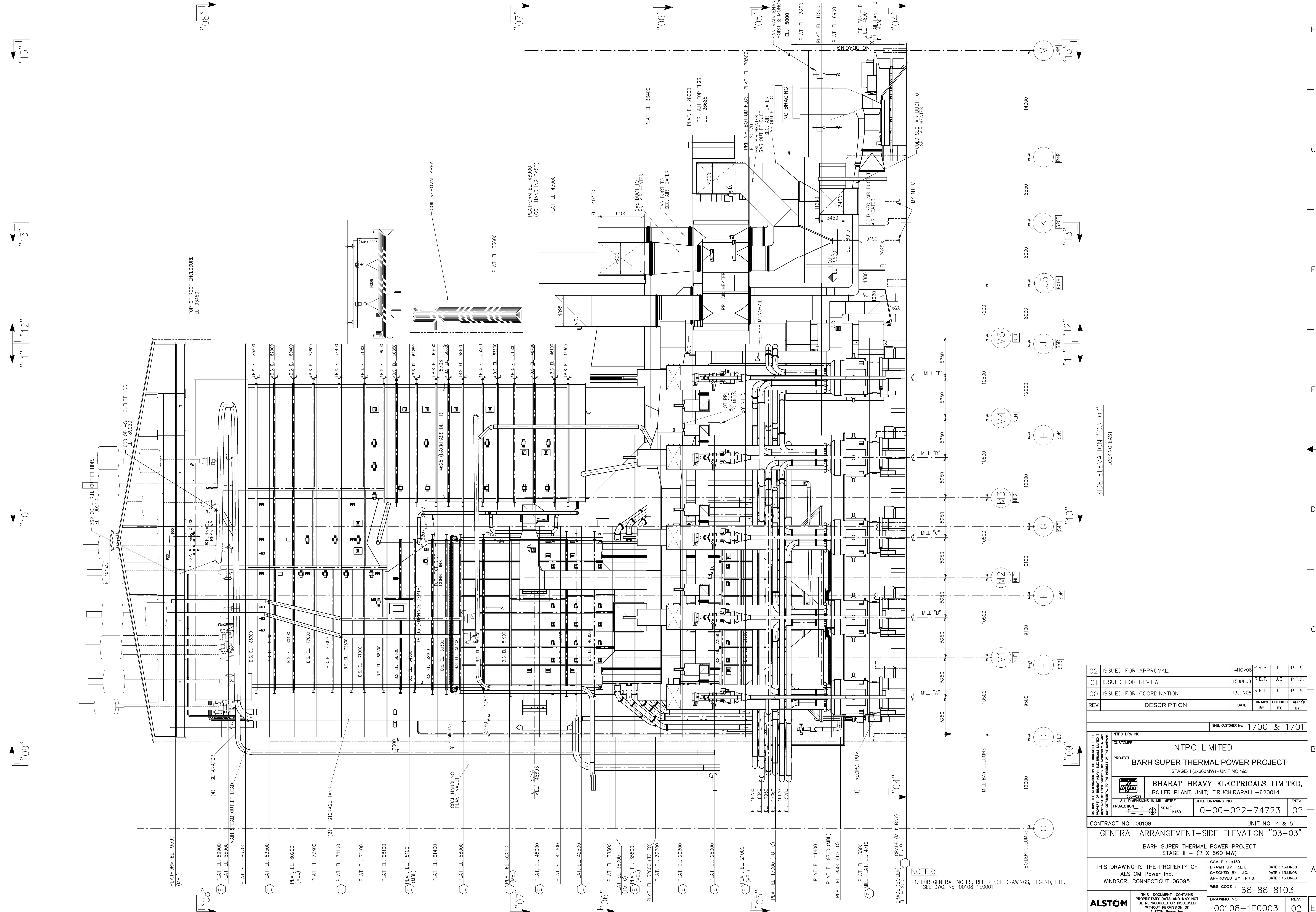
SECTIONAL SIDE ELEVATION

S-01	273.05 O.D. SH CONNECTING PIPE	15050683
S-02	355.6 O.D. SH FURN ROOF INLET HEADER	14011100
S-03	47.6 O.D. & 50.8 O.D. SH FURN ROOF FIN WLD PANEL	14121100
S-04	50.8 O.D. SH FURN ROOF TUBES	14121400
S-05	609.6 O.D. SH FURN ROOF OUTLET HEADER	14011200
S-06	406.4 O.D. BP EXT SIDE INLET HEADER	14015710
S-07	57 O.D. BP EXT SIDE FIN WLD PANEL	14125700
S-08	57 O.D. BP EXT SIDE FLOOR FW PANEL	14126200
S-09	457.2 O.D. BP EXT SIDE FLOOR OUT HEADER	14016200
S-10	457.2 O.D. BP EXT SIDE COVN LINK	14035763
S-11	406.4 O.D. BP UPP SIDE INLET HEADER	14012800
S-12	63.5 O.D. BP UPP SIDE FIN WLD PANEL	14122800
S-13	63.5 O.D. BP LWR SIDE FIN WLD PANEL	14123200
S-14	355.6 O.D. BP LWR SIDE HEADER	14013200
S-15	50.8 O.D. BP FRONT FIN WLD PANEL	14121500
S-16	50.8 O.D. BP FRONT SCREEN TUBES	14151520
S-17	355.6 O.D. BP LWR REAR HEADER	14028000
S-18	57 O.D. BP STM COOLED HDR TUBES	14150027
S-19A	57 O.D. BP LTRH INL HEADER HDR TUBES	14158602
S-19B	57 O.D. BP ECON OUTLET HEADER HDR TUBES	14151007
S-20	57 O.D. BP UPP REAR FIN WLD PANEL	14122200
S-20L	57 O.D. BP LWR REAR FIN WLD PANEL	14122600
S-21	44.5 O.D. BP ROOF FIN WLD PANEL	14129800
S-22	355.6 O.D. BP FRONT OUTLET HEADER	14015200
S-24	323.9 O.D. BP BYPASS PIPE	14050377
S-25	457.2 O.D. LINK TO SH PLATEN	15034210
S-25A	406.4 O.D. LINK FROM BP SC SUPT OUT HDR	14033227
S-25B	406.4 O.D. LINK FROM BP FRONT OUT HEADER	14033227
S-32	355.6 O.D. SH PLATEN INLET HEADER	15014210
S-33	SH PLATEN INLET TERM TUBES	15154203
S-33	44.5 O.D. SH PLATEN ASSY	15029200
S-34	406.4 O.D. SH PLATEN OUTLET HEADER	15154204
S-35	558.8 O.D. LINK TO SH DESUPERHEATER	15039810
S-36	558.8 O.D. SH DESUPERHEATER	15030050
S-37	558.8 O.D. LINK TO FINISH SH	15032210
S-38	457.2 O.D. FINISH SH INLET HEADER	15012210
S-39	FINISH SH INLET TERM TUBES	15154203
S-39	44.5 O.D. FINISH SH FRONT ASSY	15022700
S-40	44.5 O.D. FINISH SH REAR ASSY	15022800
S-41	609.6 O.D. SH OUTLET HEADER	15152604
S-44	SH FLUID COOLED SPACER TUBES	15150500

HOLD- PENDING DESIGN

CIRC NO.	DESCRIPTION OF HEATING SURFACES, HEADERS & LINKS	WBS NO.
E-02	457.2 O.D. ECON INLET SPOOL	10030005
E-04	457.2 O.D. ECON INLET LINK	10030010
E-04A	457.2 O.D. ECON INLET LINK	10030010
E-04B	457.2 O.D. ECON INLET LINK	10010010
E-05	457.2 O.D. ECON INLET HEADER	10010010
E-06	44.5 O.D. ECON INLET TERM TUBES	10150003
E-06L	44.5 O.D. ECON LWR PLAIN TUBE ASSY	10022501
E-06R	44.5 O.D. ECON UPP PLAIN TUBE ASSY	10022502
E-06U	44.5 O.D. ECON UPP PLAIN TUBE ASSY	10022502
E-07	44.5 O.D. ECON OUTLET TERM TUBES	10010020
E-08	508 O.D. ECON OUTLET HEADER	10030020
E-09	508 O.D. ECON OUTLET LINK	10030022
E-10	609.6 O.D. ECON MIXING LINE	10030032
E-11	406.4 O.D. ECON WATERWALL INLET LINK	10030033
E-12	406.4 O.D. ECON WATERWALL INLET LINK	10030033
F-01	406.4 O.D. FURN LWR FRONT INLET HEADER	13012010
F-02	41.3 O.D. FURN LWR FRONT SPIRAL TERM TUBES	13152034
F-02L	41.3 O.D. FURN LWR FRT SPIRAL FW PANEL	13122534
F-02R	41.3 O.D. FURN LWR FRT SPIRAL FW PANEL	13121934
F-02U	41.3 O.D. FURN UPP FRT SPIRAL FW PANEL	13170434
F-03	355.6 O.D. FURN INTERM FRONT TUBES	13152634
F-04	381 O.D. FURN FRONT VERT TERM TUBES	13170200
F-04L	381 O.D. FURN UPP INT FRONT FIN WLD PANEL	13172700
F-04R	381 O.D. FURN UPP INT FRONT FIN WLD PANEL	13172700
F-05	323.9 O.D. FURN UPP FRONT OUTLET HEADER	13011620
F-06	2191 O.D. FURN FRONT RISERS	13091531
F-07	406.4 O.D. FURN LWR REAR INLET HEADER	13012610
F-08	41.3 O.D. FURN LWR REAR SPIRAL TERM TUBES	13152634
F-08L	41.3 O.D. FURN LWR REAR SPIRAL FW PANEL	13122634
F-08R	41.3 O.D. FURN UPP REAR SPIRAL FW PANEL	13122534
F-08U	41.3 O.D. FURN UPP REAR SPIRAL FW PANEL	13170434
F-09	355.6 O.D. FURN INTERM REAR TUBES	13152634
F-10	381 O.D. FURN UPP REAR VERT TERM TUBES	13152200
F-10	FURN VERT WALL FITTINGS	13170200
F-11	381 O.D. FURN REAR ARCH FIN WLD PANEL	13120700
F-12	381 O.D. FURN SCREEN TUBES	13152120
F-13	57.2 O.D. FURN REAR HANGER TUBES	13152102
F-14	323.9 O.D. FURN UPP REAR OUTLET HEADER	13012220
F-15	2191 O.D. FURN REAR RISERS	13052131
F-16	406.4 O.D. FURN LWR SIDE INLET HEADER	13013210
F-17	41.3 O.D. FURN LWR SIDE SPIRAL FW PANEL	13122334
F-17L	41.3 O.D. FURN LWR SIDE SPIRAL FW PANEL	13121334
F-17R	41.3 O.D. FURN UPP SIDE SPIRAL FW PANEL	13121334
F-17U	41.3 O.D. FURN UPP SIDE SPIRAL FW PANEL	13170434
F-18	41.3 O.D. FURN UPP SIDE SPIRAL TERM TUBES	13151334
F-18	355.6 O.D. FURN INTERM SIDE HEADER	13013031
F-19	381 O.D. FURN UPP SIDE VERT TERM TUBES	13152800
F-19	FURN VERT WALL FITTINGS	13170200
F-19L	381 O.D. FURN UPP INT SIDE FIN WLD PANEL	13122500
F-19R	381 O.D. FURN UPP INT SIDE FIN WLD PANEL	13122800
F-20	323.9 O.D. FURN UPP SIDE OUTLET HEADER	13012820
F-21	2191 O.D. FURN SIDE RISERS	13052131
F-31	558.8 O.D. SEPARATOR	13067000
F-32	355.6 O.D. FURN LINK TO STORAGE TANK	13039651
F-33	604.0 O.D. SEPARATOR STORAGE TANK	13261000
F-34	88.9 O.D. FURN STORAGE TANK VENT LINK	13039351
F-49	355.6 O.D. FURN DOWNCOMER TO CONN SPHERE	13039076
F-50	914.4 O.D. FURN CONNECTING SPHERE	13067600
F-51	558.8 O.D. WATER STORAGE DOWNCOMER	13039851
F-52	558.8 O.D. LINK TO BLR RECIRC SYS	13039853
F-53	558.8 O.D. LINK TO BLR RECIRC ISOL VALVE	13039855
F-56	558.8 O.D. LINK TO BLR RECIRC MIXING SPHERE	13039883
F-57	BLR RECIRC MIXING SPHERE	13039883
F-58A	508 O.D. GRC PUMP SUCTION SPOOL	13039881
F-58B	508 O.D. GRC PUMP SUCTION LINE	13039852
F-58C	508 O.D. GRC PUMP SUCTION LINE	13039852
F-60	REGULATION PUMP	13420400
F-61A	355.6 O.D. LINK TO BLR RECIRC CTRL VALVE	13039881
F-61B	355.6 O.D. BLR RECIRC LINK TO ECON	13039881
F-61C	355.6 O.D. BLR RECIRC LINK TO ECON	13039882
F-66A	323.9 O.D. BLR RECIRC LINK FROM ECON	13039886
F-66B	323.9 O.D. BLR RECIRC LINK TO MIXING SPHERE	13039888
F-67A	508 O.D. FURN LINK TO FLASH TANK	13039888
F-67B	406.4 O.D. FURN LINK TO HWL1 VALVE	-
F-67C	406.4 O.D. FURN LINK TO HWL2 VALVE	-
F-67A	FURN SSFA FIN WLD PANEL	13120115
F-67B	FURN WINDBOX PANELS	13120010
R-03	508 O.D. LTRH INLET HEADER	16010210
R-04	63.5 O.D. LTRH INLET TERM TUBES	16150203
R-04L	63.5 O.D. LTRH LOWER ASSY	16020200
R-04R	63.5 O.D. LTRH LOWER INTERM ASSY	16020300
R-04U	63.5 O.D. LTRH UPPER INTERM ASSY	16020500
R-07	63.5 O.D. LTRH PENDANT ASSY	16020600
R-07	63.5 O.D. LTRH OUTLET TERM TUBES	16020880
R-08	660.4 O.D. LTRH OUTLET HEADER	16010620
R-09	711.2 O.D. LEAD TO RH DESUPERHEATER	16039810
R-10	711.2 O.D. RH DESUPERHEATER	16030050
R-11	711.2 O.D. LINK TO FINSH RH	16032210
R-12	609.6 O.D. FINISH RH INLET HEADER	16012210
R-13	FINISH RH INLET TERM TUBES	16152203
R-13	63.5 O.D. FINISHING RH ASSY	16020200
R-13	FINISH RH OUTLET TERM TUBES	16152604
R-14	782 O.D. RH OUTLET HEADER	16010220

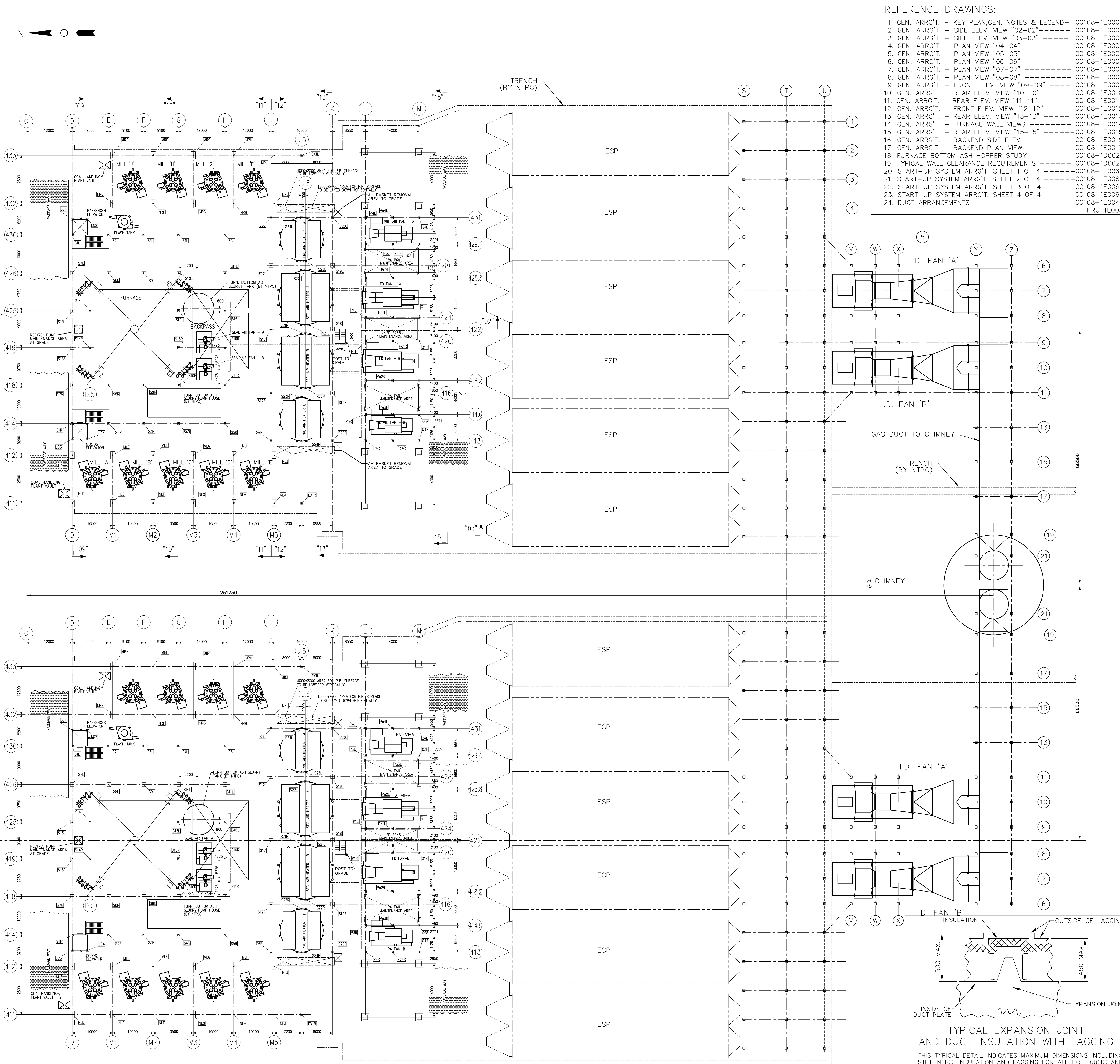
00	ISSUED FOR COORDINATION	19AUG08	CDS	JJK	P.T.S.
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPROV BY
BHEL CUSTOMER No.: 1700 & 1701					
CUSTOMER: NTPC LIMITED PROJECT: BARTH SUPER THERMAL POWER PROJECT STAGE-II (2x660MW) - UNIT NO.485					
BHARAT HEAVY ELECTRICALS LIMITED, BOILER PLANT UNIT, TIRUCHIRAPALLI-620014					
ALL DIMENSIONS IN MILLIMETRE PRODUCTION SCALE: REV					
CONTRACT NO. 00108 UNIT NO. 04 PPA- COMPOSITE SECTIONAL SIDE BARTH SUPER THERMAL POWER PROJECT STAGE-II (2 x 660 MW)					
THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095					
SCALE: 1 : 100 DRAWN BY: C.SIRANI DATE: 02 APR 08 CHECKED BY: J.P.K. DATE: 19 AUG 08 APPROVED BY: P.T.S. DATE: 19 AUG 08					
WBS CODE: 19-88-8100 DRAWING NO. 00108-1E0100 REV. 00					



SIDE ELEVATION "03-03"  
LOOKING EAST

02	ISSUED FOR APPROVAL.	14NOV08	P.M.P.	J.C.	P.T.S.
01	ISSUED FOR REVIEW	15JUL08	R.E.T.	J.C.	P.T.S.
00	ISSUED FOR COORDINATION	13JUN08	R.E.T.	J.C.	P.T.S.
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPROV BY
BHEL CUSTOMER No. : 1700 & 1701					
NTPC DRG NO CUSTOMER <b>NTPC LIMITED</b> PROJECT <b>BARH SUPER THERMAL POWER PROJECT</b> STAGE-II (2x660MW) - UNIT NO 4&5 BHEL CUSTOMER No. : 1700 & 1701 PROJECT <b>BHARAT HEAVY ELECTRICALS LIMITED,</b> BOILER PLANT UNIT, TIRUCHIRAPALLI-620014 ALL DIMENSIONS IN MILLIMETRE SCALE 0-00-022-74723 02 PROJECTION SCALE 1:150 BHEL DRAWING NO. REV.					
CONTRACT NO. 00108 UNIT NO. 4 & 5					
GENERAL ARRANGEMENT-SIDE ELEVATION "03-03"					
BARH SUPER THERMAL POWER PROJECT STAGE II - (2 X 660 MW)					
THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095			SCALE : 1:150 DATE : 13JUN08 DRAWN BY : R.E.T. CHECKED BY : J.C. DATE : 13JUN08 APPROVED BY : P.T.S. WBS CODE : 68 88 8103		
ALSTOM			THIS DOCUMENT CONTAINS PROPRIETARY DATA AND MAY NOT BE REPRODUCED OR DISCLOSED WITHOUT PERMISSION OF ALSTOM Power Inc.		00108-1E0003 REV. 02

NOTES:  
1. FOR GENERAL NOTES, REFERENCE DRAWINGS, LEGEND, ETC. SEE DWG. No. 00108-1E0001.



**REFERENCE DRAWINGS:**

1. GEN. ARR'G'T. - KEY PLAN, GEN. NOTES & LEGEND	00108-1E0001
2. GEN. ARR'G'T. - SIDE ELEV. VIEW "02-02"	00108-1E0002
3. GEN. ARR'G'T. - SIDE ELEV. VIEW "03-03"	00108-1E0003
4. GEN. ARR'G'T. - PLAN VIEW "04-04"	00108-1E0004
5. GEN. ARR'G'T. - PLAN VIEW "05-05"	00108-1E0005
6. GEN. ARR'G'T. - PLAN VIEW "06-06"	00108-1E0006
7. GEN. ARR'G'T. - PLAN VIEW "07-07"	00108-1E0007
8. GEN. ARR'G'T. - PLAN VIEW "08-08"	00108-1E0008
9. GEN. ARR'G'T. - FRONT ELEV. VIEW "09-09"	00108-1E0009
10. GEN. ARR'G'T. - REAR ELEV. VIEW "10-10"	00108-1E0010
11. GEN. ARR'G'T. - REAR ELEV. VIEW "11-11"	00108-1E0011
12. GEN. ARR'G'T. - FRONT ELEV. VIEW "12-12"	00108-1E0012
13. GEN. ARR'G'T. - REAR ELEV. VIEW "13-13"	00108-1E0013
14. GEN. ARR'G'T. - FURNACE WALL VIEWS	00108-1E0014
15. GEN. ARR'G'T. - REAR ELEV. VIEW "15-15"	00108-1E0015
16. GEN. ARR'G'T. - BACKEND SIDE ELEV.	00108-1E0016
17. GEN. ARR'G'T. - BACKEND PLAN VIEW	00108-1E0017
18. FURNACE BOTTOM ASH HOPPER STUDY	00108-1D0025
19. TYPICAL WALL CLEARANCE REQUIREMENTS	00108-1D0026
20. START-UP SYSTEM ARR'G'T. SHEET 1 OF 4	00108-1E0060
21. START-UP SYSTEM ARR'G'T. SHEET 2 OF 4	00108-1E0061
22. START-UP SYSTEM ARR'G'T. SHEET 3 OF 4	00108-1E0062
23. START-UP SYSTEM ARR'G'T. SHEET 4 OF 4	00108-1E0063
24. DUCT ARRANGEMENTS	00108-1E0040 THRU 1E0051

**DESCRIPTION OF UNIT:**

1 - 660 MW (4,629,660 LBS/HR) SLIDING PRESSURE SUPER-CRITICAL COMBINED CIRCULATION PLUS CUT CORNER, SINGLE FURNACE, OUTDOOR UNIT  
 FURNACE SIZE: 20726.4 WIDTH X 18592.8 DEPTH  
 42.2 O.D. TUBES ON 54.0 CENTERS - FURNACE SPIRAL WALL  
 38.1 O.D. TUBES ON 50.8 CENTERS - FURNACE VERTICAL WALL  
 NON-PRESSURIZED ROOF ENCLOSURE  
 FIRING EQUIPMENT: TT 812 WINDBOX  
 PULVERIZED COAL; (9) HP1103 MILLS W/STATIC CLASSIFIERS

**GENERAL NOTES:**

- FOR ALL INFORMATION & DIMENSIONS, SEE REFERENCE DRAWINGS.
- ALL DUCT DIMENSIONS ARE TO THE INSIDE OF DUCT PLATES.
- ALL INSIDE DUCT RADII TO BE 600, UNLESS NOTED.
- ALL FURNACE OPENINGS ARE IN BOTH SIDES OF FURNACE, UNLESS NOTED.
- ALL PLATFORM ELEVATIONS ARE TO TOP OF GRATING, UNLESS NOTED.
- ACCESS DOOR SIZES TO BE:  
 500mm X 500mm IN TUBE WALLS  
 450mm X 450mm IN DUCTS  
 600mm X 600mm IN ENCLOSURES  
 813mm X 1397mm - WATER-COOLED SCAFFOLD DOOR IN UPPER FURNACE SIDEWALL  
 610mm X 762mm - LOWER FURNACE SIDEWALL
- CENTERLINE OF ALL DUCT ACCESS DOORS TO BE LOCATED 600mm ABOVE BOTTOM INSIDE OF DUCT PLATES UNLESS NOTED.
- IT IS THE INTENT OF THE GEN. ARR'G'T'S. TO SHOW ONLY THE MAJOR BOILER EQUIPMENT COMPONENTS AND ACCESSORIES. ALL OTHER EQUIPMENT IS SHOWN TO A LIMITED EXTENT AND ONLY WHERE IT AFFECTS THE BOILER EQUIPMENT ARRANGEMENT.
- FOR THERMAL MOVEMENTS AT PIPING TERMINAL POINTS, SEE PRESSURE PART CONN'S. AND EXPANSION MOVEMENT DIAGRAMS DWGS. 00108-1E0355 THRU 00108-1E0362.

**LEGEND:**

- ☼ - LONG RETRACTABLE SOOT BLOWER
- ☼<sub>F</sub> - FUTURE LONG RETRACTABLE SOOT BLOWER
- ☼<sub>HT</sub> - HALF TRACK RETRACTABLE SOOT BLOWER
- ☼<sub>FHT</sub> - FUTURE HALF TRACK RETRACTABLE SOOT BLOWER
- ⊕ - WALL BLOWER INSTALLED
- ⊕<sub>FO</sub> - FUTURE WALL BLOWER WITH BLANKED-OFF TUBE WALL OPENING
- 📺 - TELEVISION CAMERA
- 🌡 - GAS TEMPERATURE PROBE
- 🔦 - INSTRUMENT INSERT
- \* - FURNACE GUIDE
- |— / —|— - DAMPER DRIVE LINKAGE (DIRECT DRIVE UNIT)
- 🚪 - 102 X 254 OBSERVATION DOOR
- 🚪<sub>F</sub> - FUTURE 102 X 254 OBSERVATION DOOR
- 🚪 - ACCESS DOOR - SEE NOTE NO. 6
- 🚪<sub>F</sub> - FUTURE ACCESS DOOR - SEE NOTE NO. 6
- 🚪 - 600 X 600 ACCESS DOOR - SEE NOTE NO. 6 (ROOF & FURNACE ENCLOSURE)
- E - ELEVATOR LANDING
- ⬠ - ALSTOM POWER INC./BH&L - SCOPE TERMINAL POINT BY OTHERS
- 🔊 - ACOUSTIC STEAM LEAK DETECTION SYSTEM
- 🔊 - ACOUSTIC PYROMETER

**INDEX DRAWINGS:**

1. PRESSURE PARTS ARRANGEMENTS	00108-1E0100
2. PIPING MISC. P.P. EQUIP.	00108-1E0300
3. PRESS. PARTS CONN.-EXP. MOVEMENT DIAG.	00108-1E0355
4. STRUCTURAL STEEL ARRANGEMENTS	00108-1E2001
5. DUCT ARRANGEMENTS	00108-1E2500
6. BUCKSTAY ARRANGEMENTS	00108-1E2901
7. P.P. HANGERS AND SUPPORTS ARR'G'T'S.	00108-1E3500
8. FUEL PIPE ARRANGEMENTS	00108-1E4000
9. WINDBOX ARRANGEMENTS	00108-1E4100
10. SEAL AIR SYSTEM PIPING ARRANGEMENT	00108-1E4400
11. SCANNER AIR SYSTEM ARRANGEMENT	00108-1E4410
12. P & ID'S	00108-1E8501
13. HP-1103 BOWL MILL ARRANGEMENT	E-PLVE-1003

02	ISSUED FOR APPROVAL	14NOV08	P.M.P.	J.C.	P.T.S.
01	ISSUED FOR REVIEW	15JUL08	R.E.T.	J.C.	P.T.S.
00	ISSUED FOR COORDINATION	13JUN08	R.E.T.	J.C.	P.T.S.
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPR'D BY

NTPC DRG NO. CUSTOMER: **NTPC LIMITED**

PROJECT: **BARH SUPER THERMAL POWER PROJECT**  
 STAGE-II (2x660MW) - UNIT NO 4&5

DESIGNED BY: **BHARAT HEAVY ELECTRICALS LIMITED,**  
 BOILER PLANT UNIT, TIRUCHIRAPALLI-620014

ALL DIMENSIONS IN MILLIMETRE. DRG. NO. **0-00-020-74721** REV. **01**

CONTRACT NO. 00108 UNIT NO. 4 & 5

**GEN. ARR'G'T-KEY PLAN, GENERAL NOTES & LEGEND**

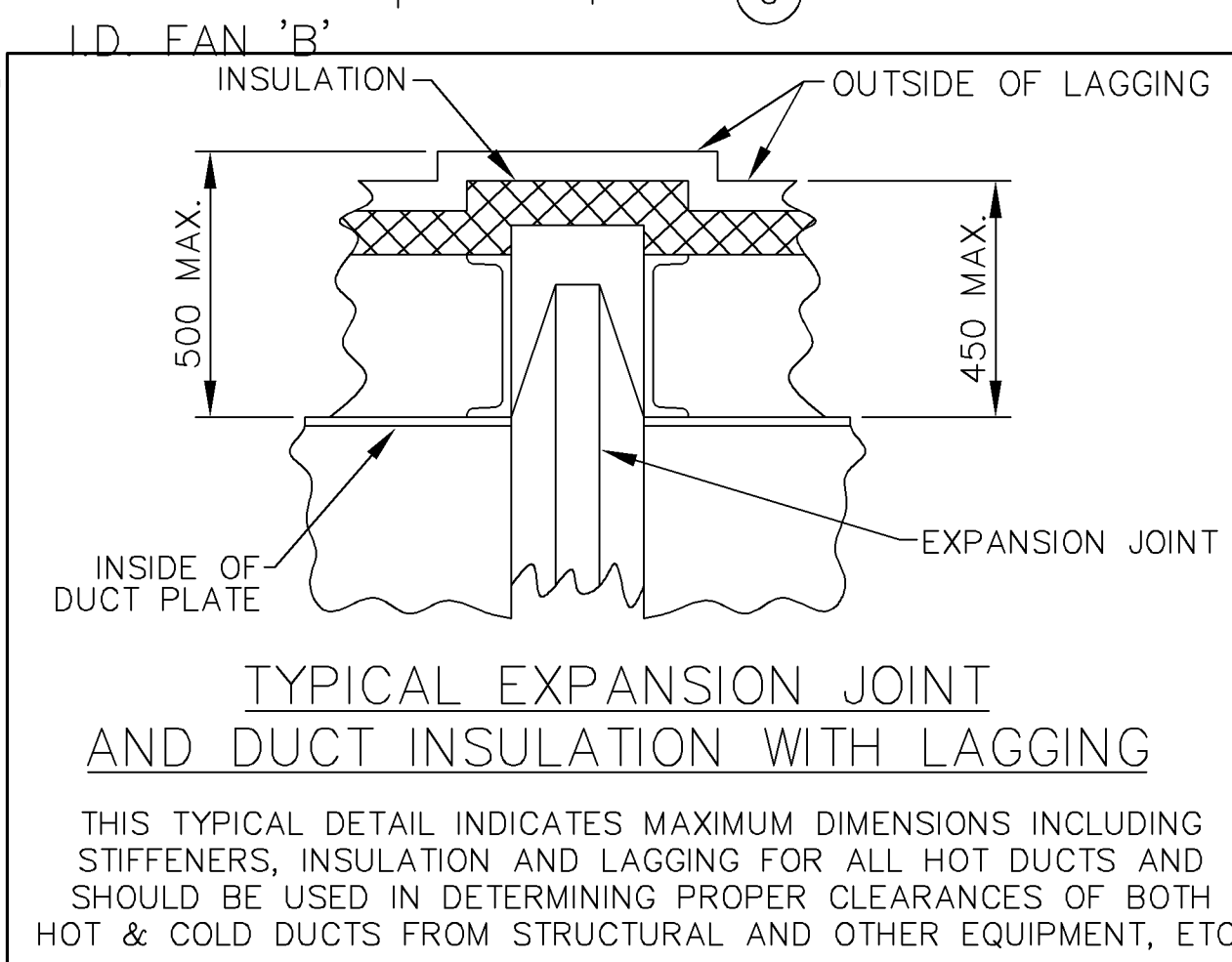
BARH SUPER THERMAL POWER PROJECT  
 STAGE-II (2 x 660 MW)

THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095

SCALE: 1:350  
 DRAWN BY: J.C. DATE: 13JUN08  
 CHECKED BY: J.C. DATE: 13JUN08  
 APPROVED BY: P.T.S. DATE: 13JUN08

WBS CODE: **68 88 8103**

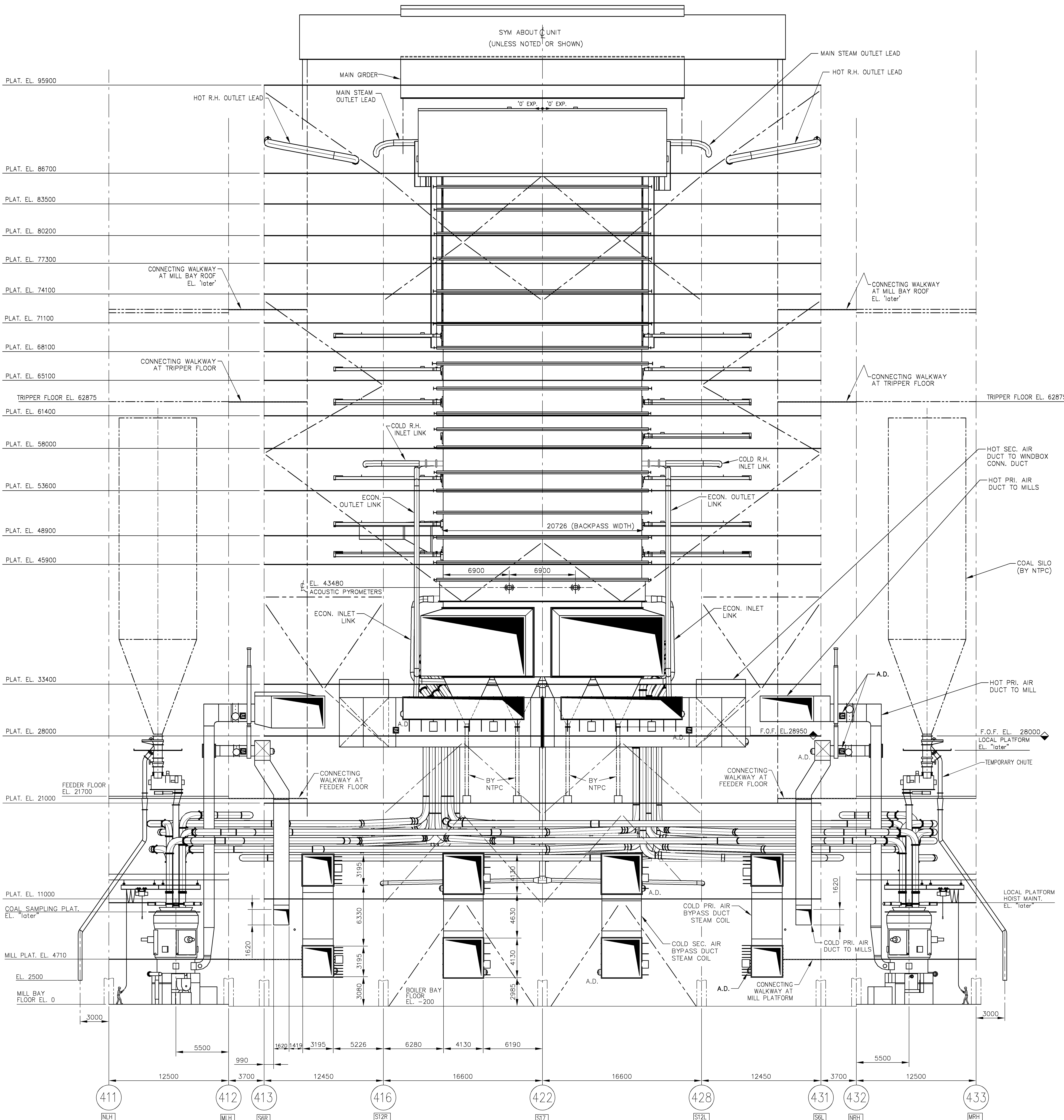
DRIVING NO. **00108-1E0001** REV. **02**



THIS TYPICAL DETAIL INDICATES MAXIMUM DIMENSIONS INCLUDING STIFFENERS, INSULATION AND LAGGING FOR ALL HOT DUCTS AND SHOULD BE USED IN DETERMINING PROPER CLEARANCES OF BOTH HOT & COLD DUCTS FROM STRUCTURAL AND OTHER EQUIPMENT, ETC.



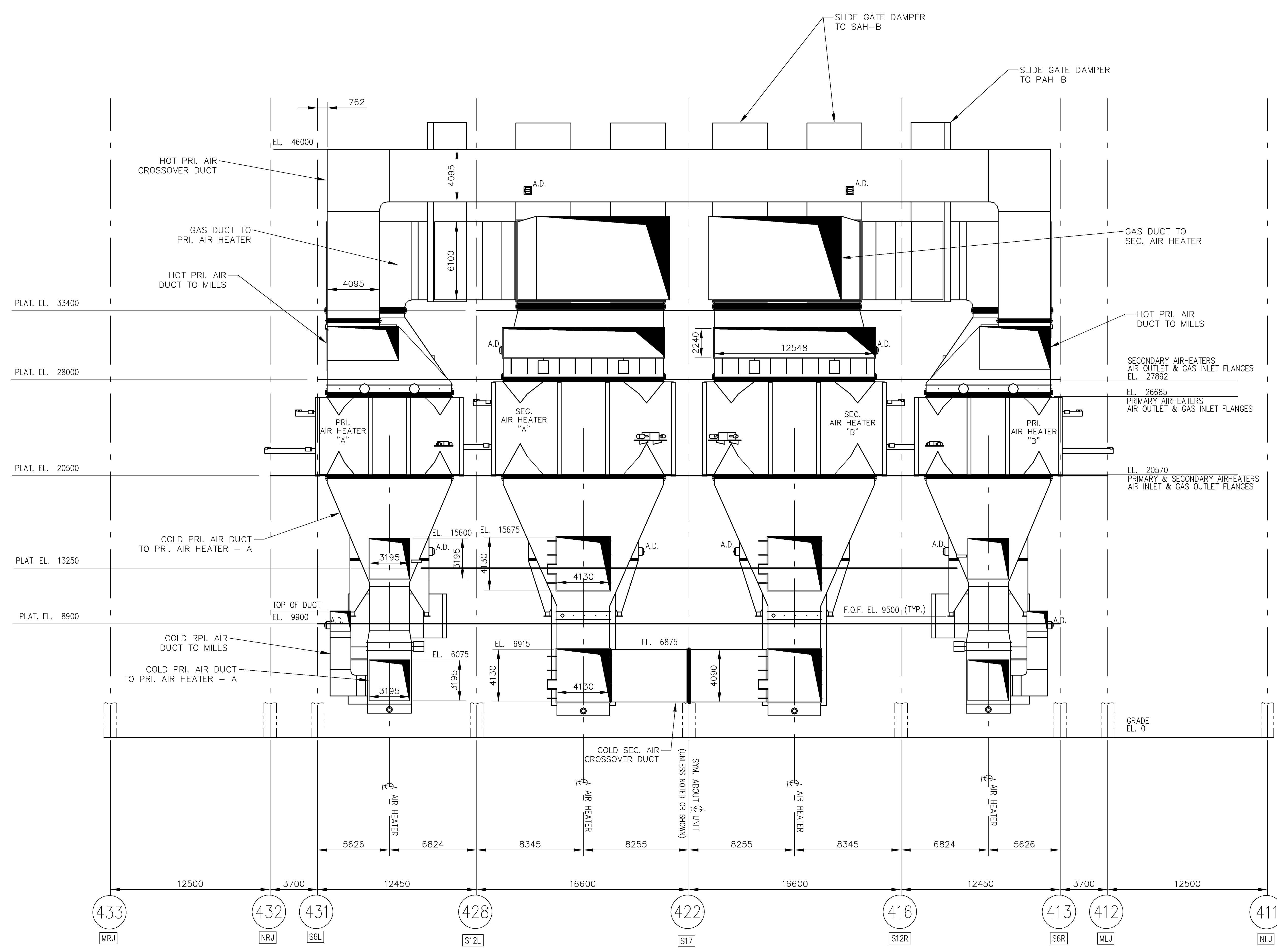




REAR ELEVATION VIEW "11-11"  
LOOKING NORTH

NOTES:  
1. FOR GENERAL NOTES REFERENCE DRAWINGS, LEGEND, ETC.  
SEE DWG. NO. 00108-1E0001.

<p>CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.</p>	
<p>PROJECT: BHP SUPER THERMAL POWER PROJECT STAGE-III (24660MW) - UNIT NO.4&amp;5</p>	<p>CLIENT: NTPC LIMITED CUSTOMER: NTPC LIMITED</p>
<p>PROJECT: BHARAT HEAVY ELECTRICALS LIMITED, BOILER PLANT UNIT: TRUCHIRAPALLI-620014</p>	<p>PROJECT NO: 00-022-74731 SHEET NO: 02</p>
<p>SCALE: 1:150</p>	<p>DATE: 11/08</p>
<p>CONTRACT NO. 00108</p>	<p>UNIT NO. 4 &amp; 5</p>
<p>GENERAL ARRANGEMENT-REAR ELEVATION "11-11" BHP SUPER THERMAL POWER PROJECT STAGE II - (2 X 660 MW)</p>	<p>THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095</p>
<p>SCALE: 1:150 DRAWN BY: J.C. CHECKED BY: P.T.S. APPROVED BY: J.C.</p>	<p>DATE: 11/08 DATE: 11/08 DATE: 11/08</p>
<p>WBS CODE: 68 88 8103</p>	<p>REVISIONS: 00108-1E0011 02</p>
<p>ALSTOM</p>	<p>00108-1E0011 02</p>



ELEVATION VIEW "12-12"  
 LOOKING SOUTH

NOTES:  
 1. FOR GENERAL NOTES, REFERENCE DRAWINGS, LEGENDS, ETC.  
 SEE DRG. NO. 00108-1E0001.

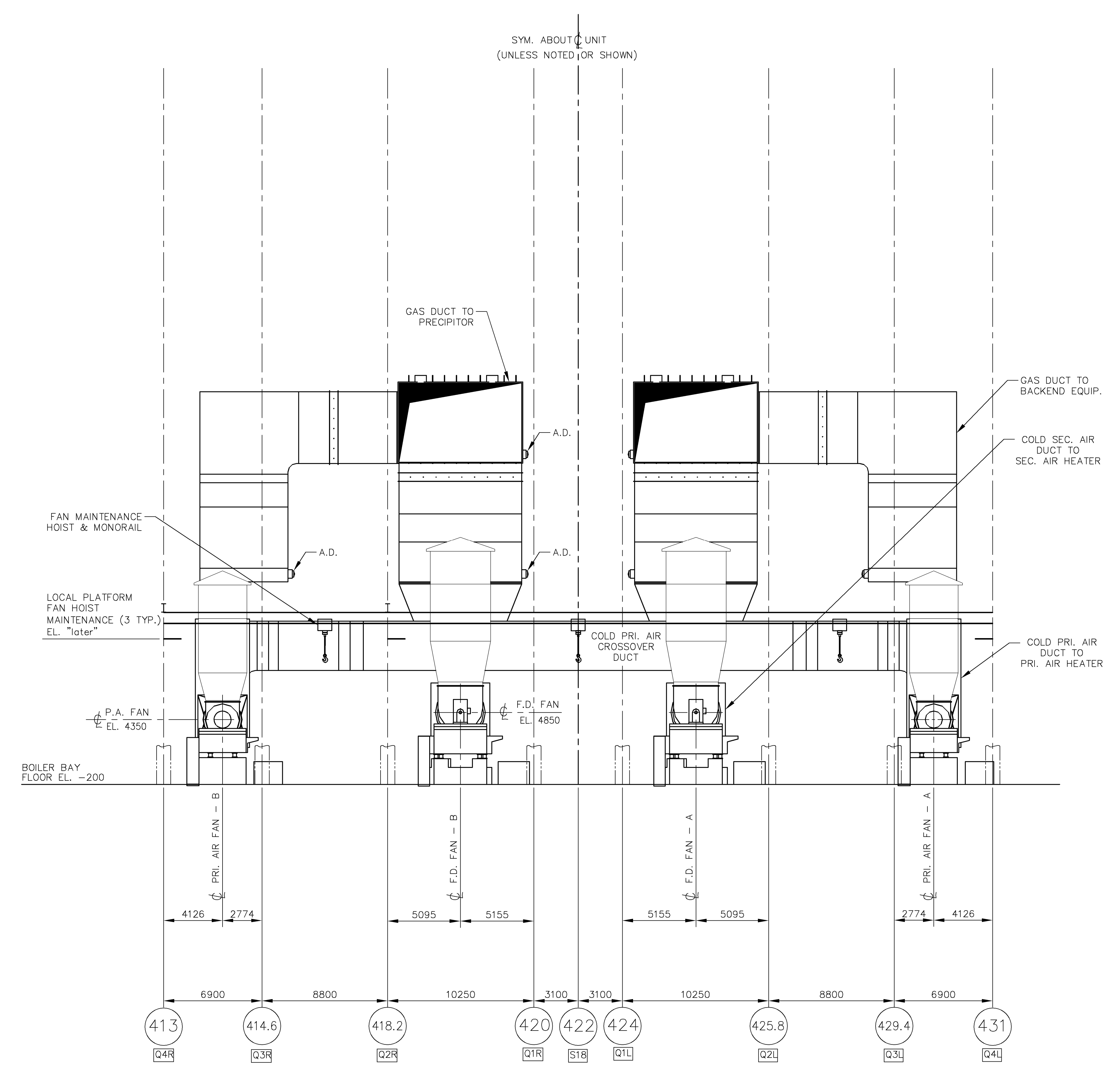
02	ISSUED FOR APPROVAL	14NOV08	R.E.T.	J.C.	P.T.S.
01	ISSUED FOR REVIEW	15JUL08	R.E.T.	J.C.	P.T.S.
00	ISSUED FOR COORDINATION	13JUN08	R.E.T.	J.C.	P.T.S.
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPROV BY
BHEL CUSTOMER No: 1700 & 1701					
NTPC DRG NO CUSTOMER: NTPC LIMITED PROJECT: BARH SUPER THERMAL POWER PROJECT STAGE-II (2x660MW) - UNIT NO 4&5 BHEL DRAWING NO. 0-00-022-74732 02 SCALE: 1:150 ALL DIMENSIONS IN MILLIMETRE PROJECTION: 1st Angle CONTRACT NO. 00108 UNIT NO. 4 & 5 GENERAL ARRANGEMENT-FRONT ELEVATION "12-12" BARH SUPER THERMAL POWER PROJECT STAGE II - (2 X 660 MW) THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095 SCALE: 1:150 DRAWN BY: R.E.T. DATE: 13JUN08 CHECKED BY: J.C. DATE: 13JUN08 APPROVED BY: P.T.S. DATE: 13JUN08 WBS CODE: 68 88 8103 DRAWING NO. 00108-1E0012 REV. 02 FILE NAME: 00108-1E0012 DIRECTORY: V./00108					



REAR ELEVATION VIEW "13-13"  
LOOKING NORTH

NOTES:  
1. FOR GENERAL NOTES, REFERENCE DRAWINGS, LEGEND, ETC. SEE DWG. No. 00108-1E0001.

02	ISSUED FOR APPROVAL	14NOV08	R.E.T.	J.C.	P.T.S.
01	ISSUED FOR REVIEW	15JUL08	R.E.T.	J.C.	P.T.S.
00	ISSUED FOR COORDINATION	13JUN08	R.E.T.	J.C.	P.T.S.
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY	APPROVED BY
BHEL CUSTOMER No. : 1700 & 1701					
NTPC DRG NO.					
CUSTOMER: NTPC LIMITED					
PROJECT: BARH SUPER THERMAL POWER PROJECT					
STAGE-II (2x660MW) - UNIT NO 4&5					
BHEL DRAWING NO. 0-00-022-74733					
PROJECT: BHARAT HEAVY ELECTRICALS LIMITED, BOILER PLANT UNIT: TIRUCHIRAPALLI-620014					
SCALE: 1:150					
CONTRACT NO. 00108 UNIT NO. 4 & 5					
GENERAL ARRANGEMENT-REAR ELEVATION "13-13"					
BARH SUPER THERMAL POWER PROJECT STAGE II - (2 X 660 MW)					
THIS DRAWING IS THE PROPERTY OF ALSTOM Power Inc. WINDSOR, CONNECTICUT 06095			SCALE: 1:150 DRAWN BY: R.E.T. DATE: 13JUN08 CHECKED BY: J.C. DATE: 13JUN08 APPROVED BY: P.T.S. DATE: 13JUN08		
WBS CODE: 68 88 8103			REV. 02		
ALSTOM					
DRAWING NO. 00108-1E0013					
REV. 02					



REAR ELEVATION VIEW "15-15"  
LOOKING NORTH

NOTES:  
1. FOR GENERAL NOTES, REFERENCE DRAWINGS, LEGEND, ETC. SEE DWG. No. 00108-1E0001.

01	ISSUED FOR APPROVAL	14NOV08	R.E.T.	J.C.	P.T.S.																																																						
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STAGE II - (2 X 660 MW)																																																											
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ALSTOM Power Inc.				DRAWN BY : R.E.T. DATE : 17JUL08																																																							
WINDSOR, CONNECTICUT 06095				CHECKED BY : J.C. DATE : 17JUL08																																																							
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