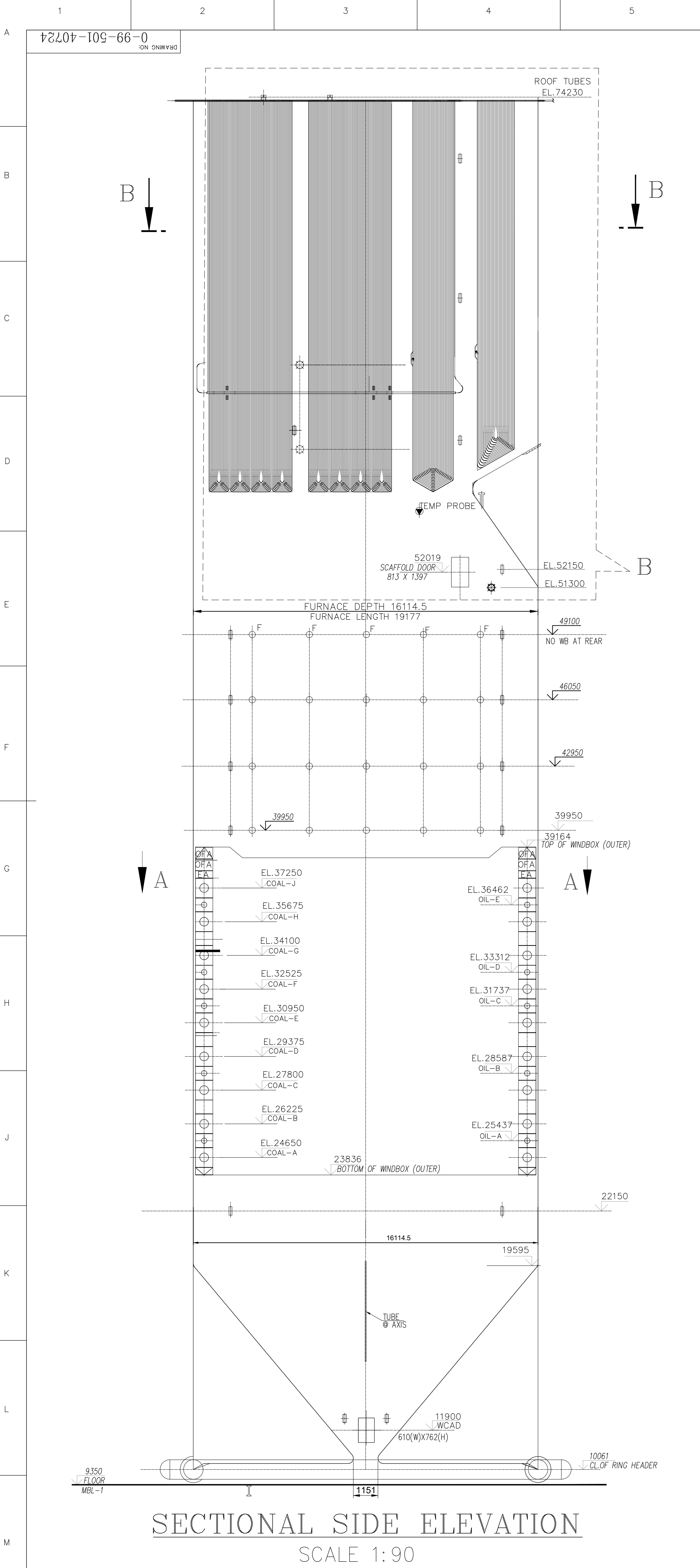
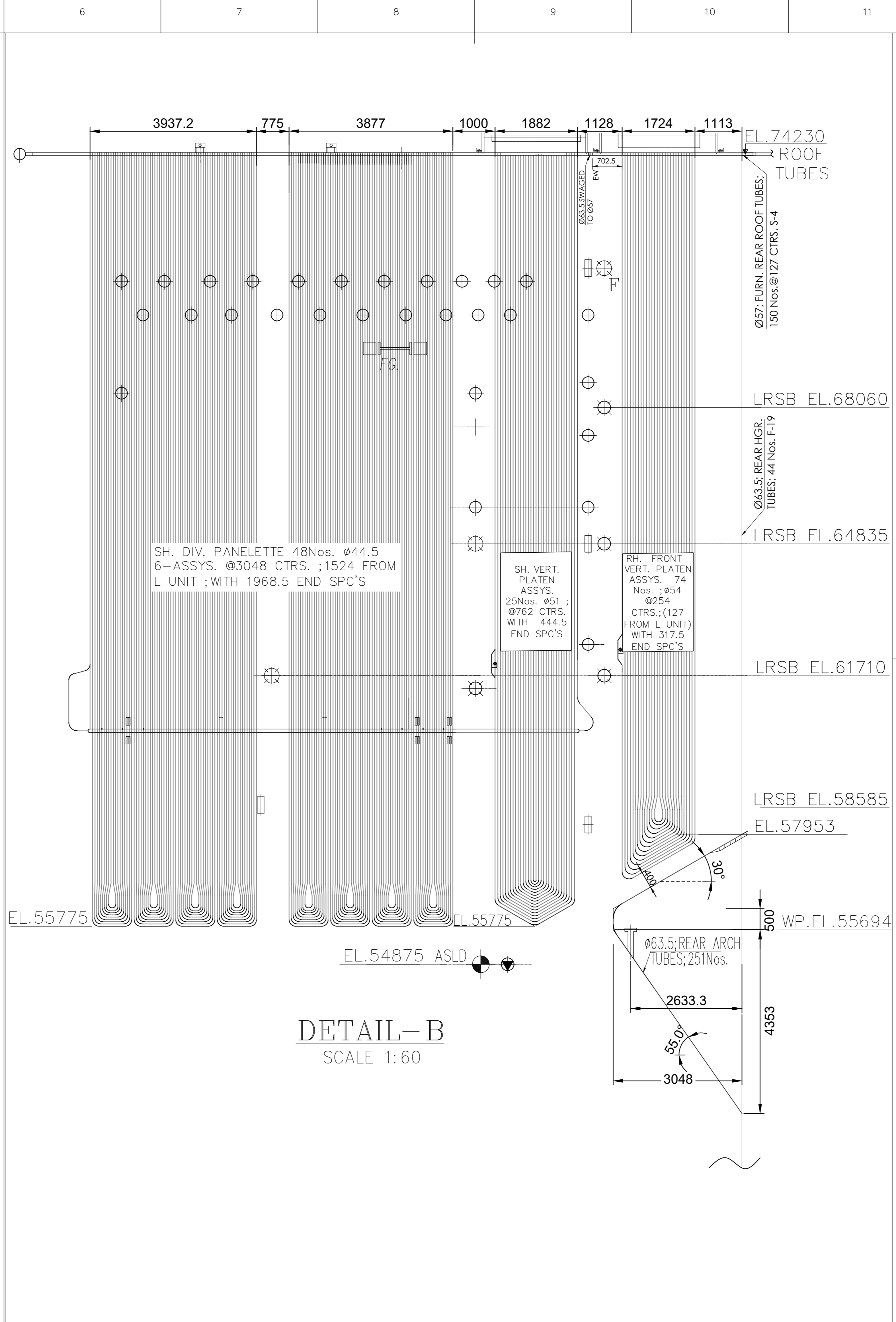


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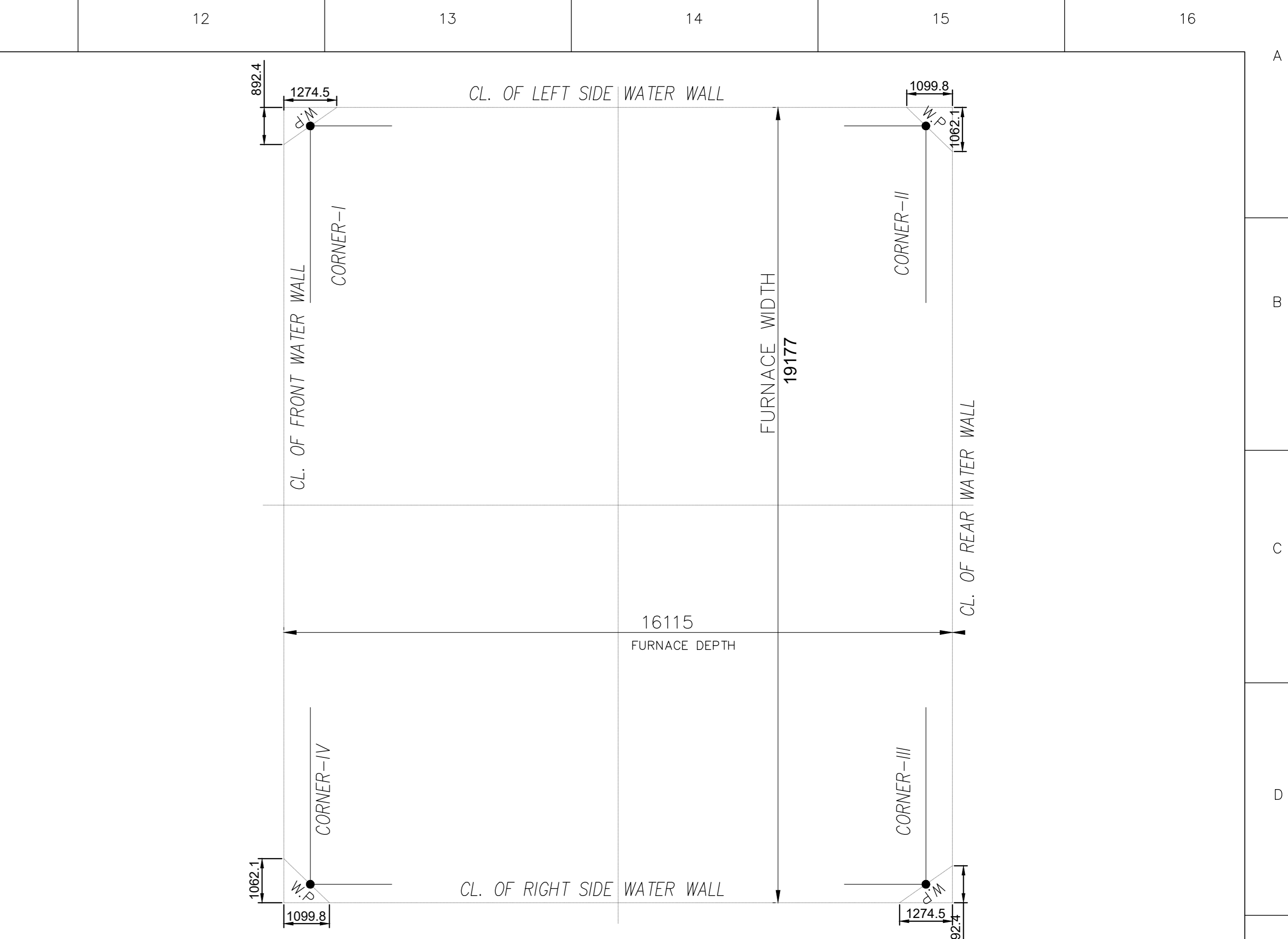
SECTIONAL SIDE ELEVATION
SCALE 1:90



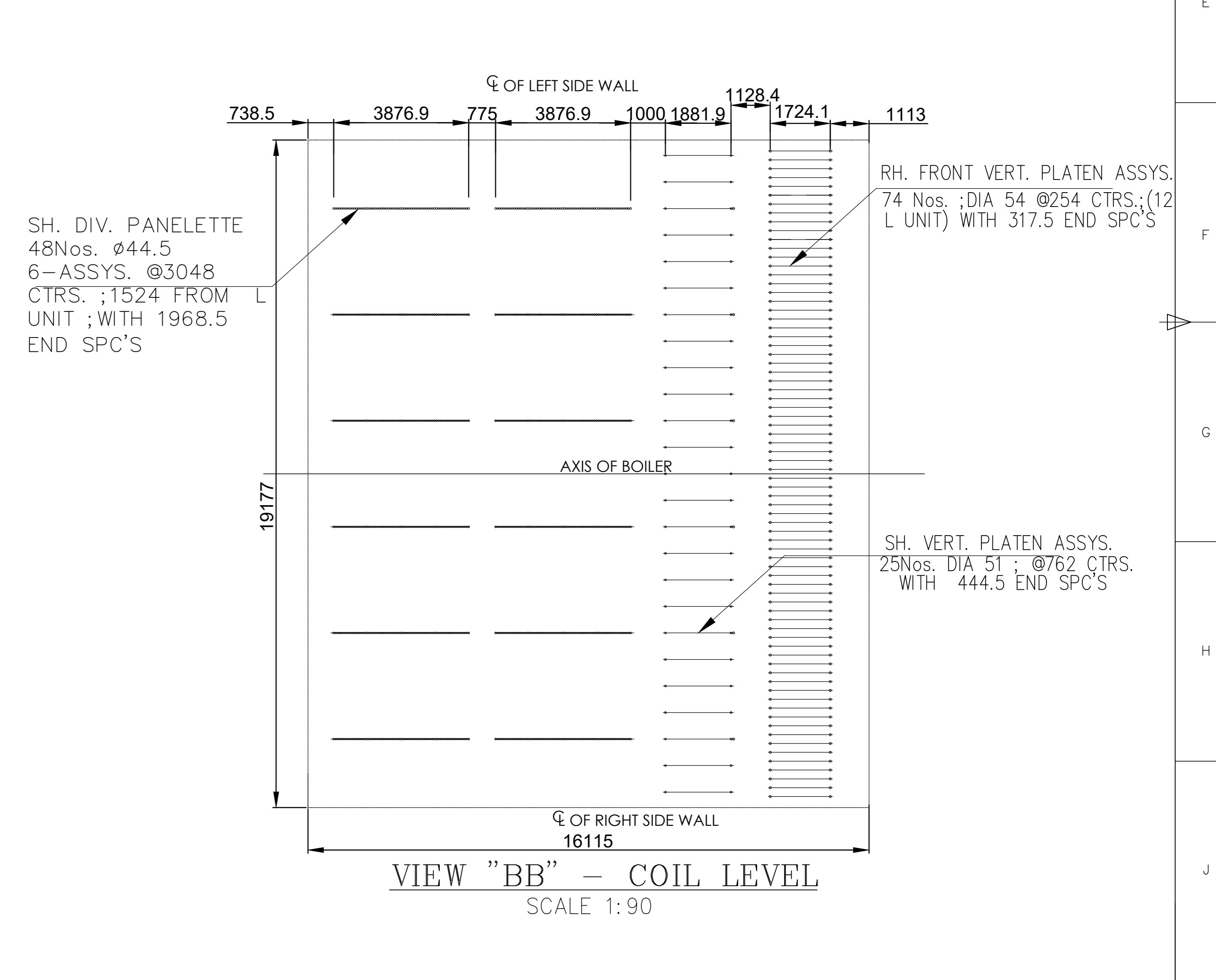
DETAIL-B
SCALE 1:60

- LEGEND:**
- ⊕ LRSB LONG RETRACTABLE SOOT BLOWER
 - ⊕ OBD OBSERVATION DOOR - Ø109
 - ⊕ ASLD ACOUSTIC STEAM LEAK DETECTION SYSTEM
 - ⊕ WB WALL BLOWER
 - ⊕ FLRSB FUTURE LRSB.
 - ⊕ AD. SCAFFOLD ACCESS DOOR IN FURNACE UPPER SIDE WALL-813X1397
 - ⊕ AD ACCESS DOOR - 610(W)X762(H)
 - ⊕ FWB FUTURE WALL BLOWER

- NOTES:**
1. REFERENCE DRAWINGS:
 - a. 2-47-260-01955 -LOCATION OF CORNER FUEL PIPE.
 - b. 0-00-027-46275 PPA G.A OF PRESSURE PARTS ARRANGEMENTS.
 - c. 0-00-027-46276 PPA SEC.SIDE ELEVATION UPPER FURNACE.
 - d. 0-00-027-46277 PPA SEC.SIDE ELEVATION LOWER FURNACE.
 - e. 0-00-027-46285 PPA PLAN OVER ROOF TUBES.
 - f. 0-00-020-76001 LOCATION OF FURNACE OPENINGS & BUCKSTAYS.
 - g. 0-00-022-75995 GA OF BOILER SECTIONAL SIDE ELEVATION.
 - h. 0-00-022-75996 GA OF BOILER SECTIONAL PLAN
 2. THE QUICK ERECT SCAFFOLDING(QES) SHALL HAVE ACCESS TO COAL NOZZLE,OIL GUNS,LRSB,WB ,SOFA,ACCESS DOOR &BOILER ROOF TUBES.
 3. THIS DRG. DEPICTS THE BOILER 1st PASS DETAILS IN ORDER TO PROVIDE FOR DESIGNING THE QES BY THE SCAFFOLD VENDOR.
 4. ANY ADDITIONAL DATA REQUIRED FOR SCAFFOLD DESIGNING TO BE SUITABLY CLARIFIED BEFORE OFFER SUBMISSION.
 5. THE DESIGN,SUPPLY AND INITIAL ERECTION SUPERVISION OF QES TO SUIT THE BOILER IS IN VENDORS SCOPE.
 6. ALL ELEVATIONS ARE MARKED WITH RESPECT TO T.G. HALL FINISHED FLOOR LEVEL AS EL.0.00 m WHICH CORRESPONDS TO RL.34.5m ABOVE MSL.

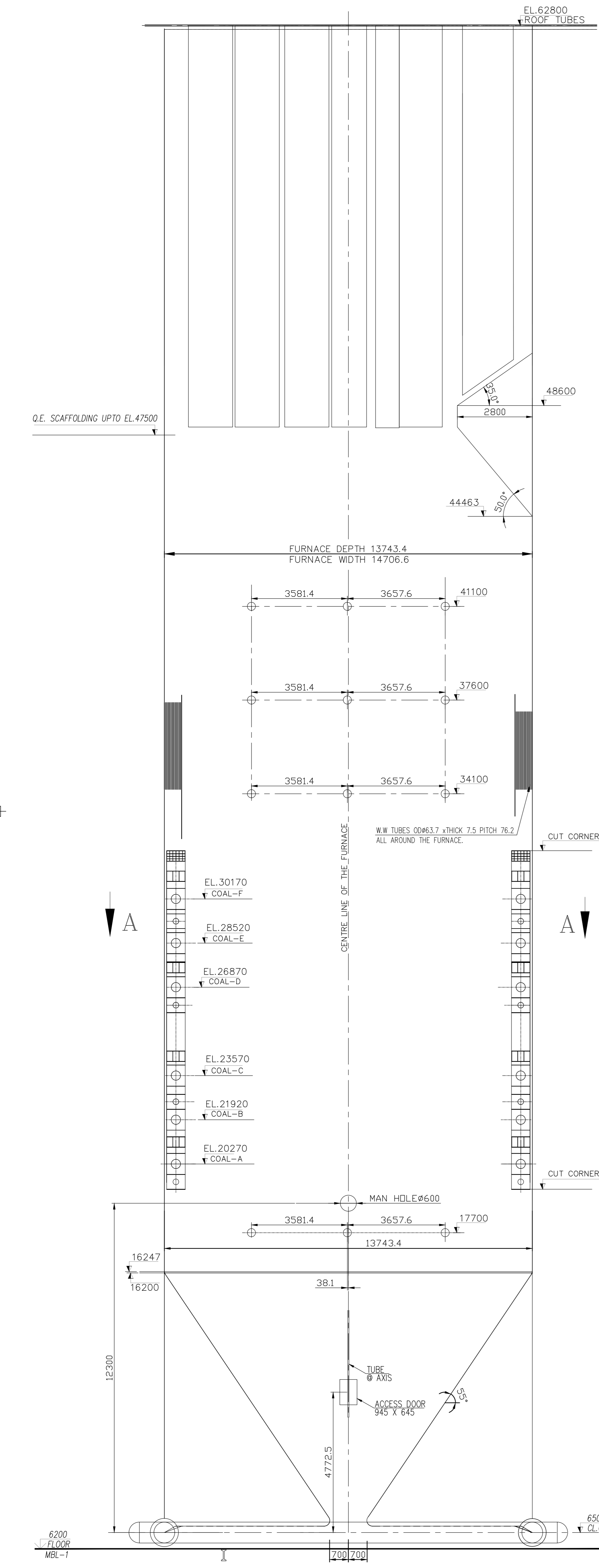


PLAN VIEW - "AA" BURNER LEVEL WITH CUT-CORNER
SCALE 1:80

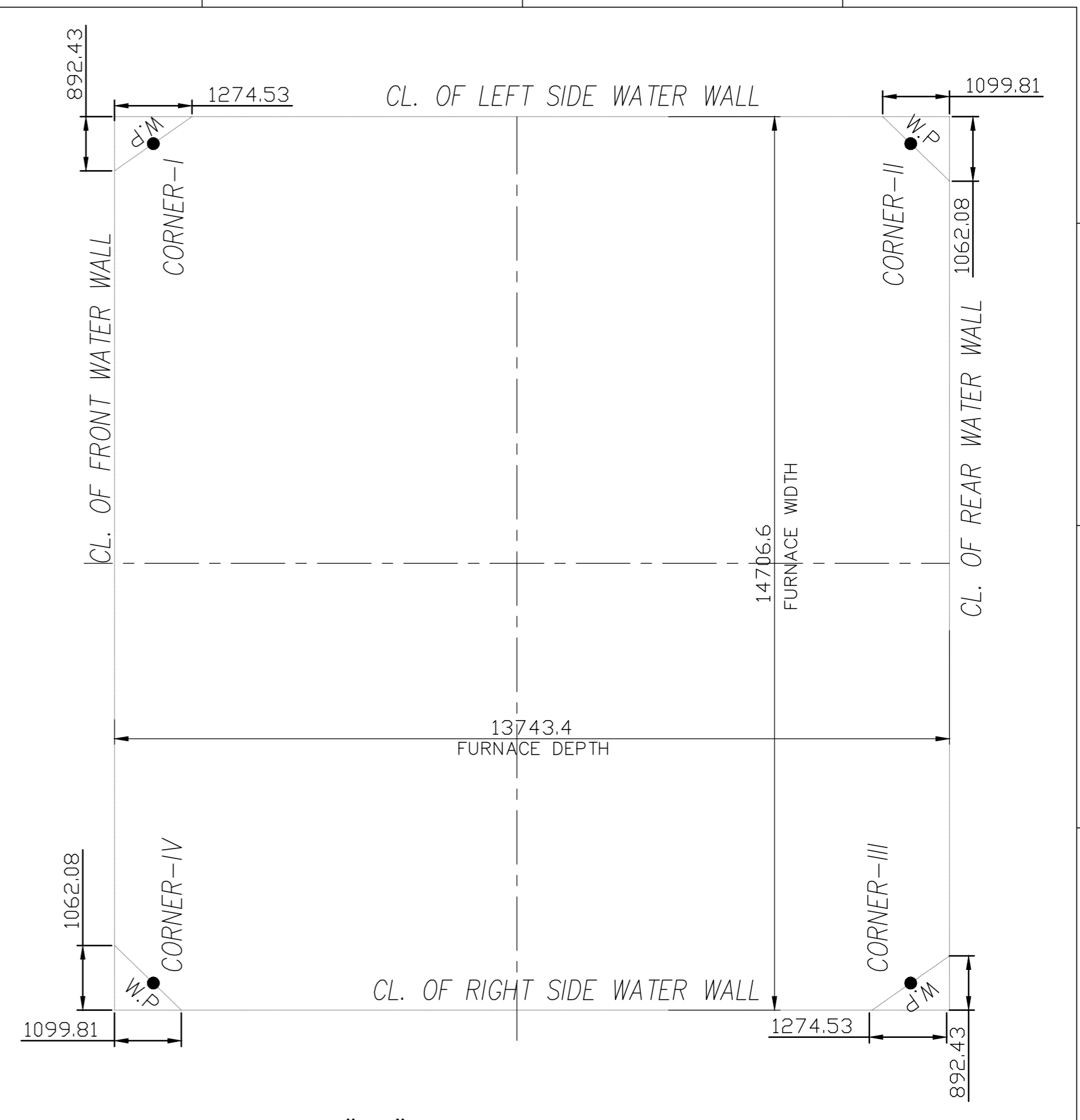


VIEW "BB" - COIL LEVEL
SCALE 1:90

CUSTOMER No.:0680-0681	
CUSTOMER THE WEST BENGAL POWER DEVELOPMENT CORPN. LTD.(WBPDCL) 2x500MW,SAGARDIGHI THERMAL POWER EXTENSION PROJECT	
CONSULTANT DEVELOPMENT CONSULTANTS PRIVATE LIMITED KOLKATA	
CLIENT BHARAT HEAVY ELECTRICALS LIMITED BOILER PLANT UNIT; TIRUCHIRAPALLI-INDIA-620014 EQUIPMENT : STEAM GENERATOR	
DEPT: FS CODE: 129 TITLE: FURNACE ARRANGEMENT FOR QUICK ERECTING SCAFFOLDING -500 MW	DRN: SIVARAMAN V CHD: NOORULFAZL APPR: SRINIVASURIGULA REF TO ASSY / OLD DRG: -- DATE: 10.07.2023 DATE: 10.07.2023 DATE: 10.07.2023
REV: 01 DATE: 10.07.2023 ZONE: --	DRAWING NO: 0-99-501-40724-00 REV: 00



SECTIONAL SIDE ELEVATION



PLAN VIEW - "AA" BURNER LEVEL WITH CUT-CORNER

*CORNER DIMENSION TYPICAL FROM SAGARDHIGI 500MW.

NOTES:

1. THIS DRG. DEPICTS THE BOILER 1'ST PASS DETAILS IN ORDER TO PROVIDE FOR DESIGNING THE QES BY THE SCAFFOLD VENDOR.
2. ANY ADDITIONAL DATA REQUIRED FOR SCAFFOLD DESIGNING TO BE SUITABLY CLARIFIED BEFORE OFFER SUBMISSION.
3. THE DESIGN, SUPPLY AND INITIAL ERECTION SUPERVISION OF QES TO SUIT THE BOILER IS IN VENDORS SCOPE.
4. ALL ELEVATIONS ARE MARKED WITH RESPECT TO FGL 0.0M.

REV 01	DATE	ALTERED :
ZONE		CHD & APPD :

<p>CAUTION: The information on this drawing is the property of Bharat Heavy Electricals Ltd. It must not be used directly or indirectly in any way without the prior written consent of the company to the interest of the company.</p>	<p>CUSTOMER WBPDCL</p> <p>THE WEST BENGAL POWER DEVELOPMENT CORPN. LTD.(WBPDCL) 300MW,SAGARDIGHI THERMAL POWER PROJECT</p>
	<p>BHARAT HEAVY ELECTRICALS LIMITED BOILER PLANT UNIT, TIRUCHIRAPALLI-INDIA-620014 EQUIPMENT : STEAM GENERATOR</p>
<p>DEPT FS CODE 129</p>	<p>Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014</p>
<p>PROJECTION SCALE NTS</p>	<p>DRN SIVARAMAN V CHD NOORULFAZIL APPD SRINIVASUARUGULA</p>
<p>TITLE FURNACE ARRANGEMENT FOR QUICK ERECTING SCAFFOLDING-300MW</p>	<p>NAME SIVARAMAN V SIGNATURE -Sd- DATE 08.09.2023</p> <p>NAME NOORULFAZIL SIGNATURE -Sd- DATE 08.09.2023</p> <p>NAME SRINIVASUARUGULA SIGNATURE -Sd- DATE 08.09.2023</p>
<p>WEIGHT (Kg) REF TO ASSY / OLD DWG</p>	<p>DRAWING NO : 1-99-501-40941</p>
<p>REV 00</p>	<p>REV 00</p>

BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI-620 014
Fuel Systems/PE(FB)



Title Sheet

Quick Erect Scaffolding System

(Material: Aluminium / Aluminium alloy)

Specification Number: MHS-HEQ-078

Revision No. : 05

05	12.05.2023	Clauses Added:3.4,4.9 & clause 4.2 updated.	SKS/SA
04	31.12.2018	Clauses revised:4.4 & 4.6 updated	SKS/NFM
03	30-05-2018	Revisit on specification. Clauses revised: 3.2,3.7, 3.8,3.9,4.0,5.0,6.2,6.5,6.10, 6.11,7.1, 7.6, 7.7, 7.8, 11.0, 14.1	NFM/MCHS
02	20-02-2016	Clause 3.3.1,3.7,6.2,6.10.5,6.14,14.1updated.	Arul / MTP
01	20-10-2016	Staircase width & angle updated. Peripheral platform width updated. Clause 3.7, 4.4, 6.2, 6.10, 6.11, 6.14, 7.6 & 14.1 modified.	Arul / MTP
Revision No.	Revision Date	Revision statement	Checked & Approved

	Name	Signature	Date
Prepared	D.V.Kumar	-Sd-	06.11.2015
Checked	D.V.Kumar	-Sd-	06.11.2015
Reviewed	M.Thandapani	-Sd-	07.11.2015
Approved	M.Thandapani	-Sd-	07.11.2015



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Tender documents in addition to this specification

Annexure – I ----- Specific Project Requirements

Annexure – II ----- Check list (To be filled in by the Vendor)

Annexure – III ----- BHEL Drawing (Furnace Arrangement for Quick Erect Scaffold)



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1.0 Intent:

The quick erect scaffolding system is intended for carrying out maintenance work inside a boiler furnace, which comprises water walls, Burners, SOFA, Soot blowers, Super heaters, Re-heaters etc. during shut down period. As the name implies, the scaffolding shall be safely erected and dismantled in the shortest possible time with less manpower and with minimum supervision.

The scaffolding system shall be sufficient enough to cover all the water wall areas, in a single set up, including inclined area of the boiler above rear wall and furnace bottom (Bottom hopper).

The system shall be preferably of modular and interchangeable construction and easily and quickly assembled inside the furnace.

2.0 Scope:

This specification covers design, manufacture, inspection and supply of quick erect scaffolding system. The specification is for ensuring a safe and trouble free quick erect scaffolding system used during shutdowns and overhauls, for inspection and maintenance of furnace internals of steam generator like Water walls, Burners, SOFA, Super heaters etc.,

3.0 Requirements of the system

3.1 Quick erect scaffolding system shall be of fast erecting with suitable connecting/coupling arrangement.

3.2 Codes & standards

All equipment parts, systems and works covered under this specification shall comply with all currently applicable statutory regulations and safety codes of the Republic of India as well as of the Company/Country where they will be installed. The offered system shall conform to national / international standards and the same are listed below:

BS EN 12811-1	.....	Temporary works equipment. Scaffolds. Performance requirements and general design
BS 1139-1.2	.....	Metal Scaffolding – Specification for Aluminium tubes
ANSI/ASSE A10.8	.....	American national standard construction & demolition Operations – Scaffold Safety Requirements
EN 1999-1-1	.....	Eurocode 9: Design of aluminium structures

3.3 Material of construction

3.3.1 The material of construction of various components including floors shall be Aluminium / Aluminium alloy of proven design for Scaffolding application. It is suggested that the selected



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material shall also be light in weight to hasten the erection of scaffold in the shortest possible time. For general requirements of materials, refer to cl.8.1 of this specification.

3.3.2 All materials used for construction of different components shall individually conform to latest revisions of National / International Standards and it shall be specified in the offer.

3.3.3 All the components of the scaffolding system shall have *appropriate colour code* for easy identification. The colour code shall be specified in the offer and will have Purchaser's approval.

3.4 Locking arrangement shall be of Aluminium/Galvanized Steel with proven design and should have been supplied for earlier similar application.

3.5 The quick erect scaffolding system shall provide flexibility in erection of vertical posts & horizontal / diagonal connecting members.

3.6 Vertical posts & horizontal / diagonal connecting members shall have equal spacing for easy erection. Connections of the above shall be with suitable quick connect hardware arrangement. Vertical posts / horizontal / diagonal members shall have equal and standard lengths for easy interchangeability & modular assembly and disassembly.

3.7 The vertical posts and horizontal members shall be so designed to fill the space of furnace configuration.

3.8 Vendor shall offer a system which is erectable and can be dismantled at the quickest possible time. Vendor shall indicate, in the offer, the man-hours required and also manpower (skilled and unskilled) needed to carry out erection and dismantling of the system. Vendor shall also provide the total erection /assembly time of the full scaffold. **The total time required for erection shall not exceed 4 days (96 hours) and dismantling 2 days (48 hours), considering the work force deployed for 24 hrs in 3 shifts a day.** In support of the above, vendor shall furnish erection & dismantling schedule.

3.9 Quick erect scaffolding system shall meet the shape & configuration of the Furnace arrangement to have easy access to all parts of furnace including rear water wall arch. (Ref. Annexure-III). The corner design of the scaffolding shall conform to the cut corner requirement of the boiler (in burner region) and wherever there are no cut corners, the scaffolding should meet the shape & configuration as shown in Annexure-III.

3.10 The requirement of the system, as spelt above, is minimal and indicative only. Vendor shall offer the most appropriate system for the intended specification and duty condition. The offered system shall be clearly illustrated with sketches and elaborate details which shall be subject to purchaser's review and acceptance.

3.11 All the required materials shall be introduced into the furnace for assembly through the access door opening (Refer Annexure-I) and or furnace bottom opening and all components shall be sized accordingly.



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3.12 Vendor shall include the required number of Initial Spares in the base offer itself. *Initial spares mean the spares required during first erection/commissioning of the system to replace the items that are either damaged or lost during transit/storage. Hence, vendor shall quote for the initial spares along with the base offer. The list of initial spares shall be clearly furnished in the offer.*

The spares required for long term usage shall be quoted separately.

4.0 Safety and Design Requirements

- 4.1 The general requirements for scaffold should be as per ANSI A10.8-2011/Section 4.
- 4.2 The locking arrangement for the scaffolding shall not call for any welding during erection.
- 4.3 Quick erect scaffolding system shall be arranged in such a manner to remove /erect individually without affecting other boiler components.
- 4.4 Safety accessories like safety belt etc. shall also form part of the offer.
- 4.5 Scaffolds, as per ANSI A10.8-2011 / Section 4.8, shall be capable of supporting, without failure, their own weight and at-least **four** times the maximum **intended load of 6000 Kg.**
- 4.6 Platforms & scaffold decks shall be designed to withstand a **Uniformly distributed load**, not less than **150 kg/sq. m.**
- 4.7 Intended load and uniformly distributed load are not cumulative but the requirement which is most restrictive shall govern the design of scaffold deck / platform. In line with this, Scaffolding, which includes work platforms, bracings, and supporting members, shall be designed for a minimum safety factor of '4' which is applied to the intended load.
- 4.8 Vendor shall indicate the overall permissible load and Load per square metre in their G.A drawing at any given instant on the scaffolding system offered.
- 4.9 Locking arrangement shall be of proven design and should have supplied and used for similar application.

5.0 Load Transfer

Vendor shall clearly spell out in his offer the load that is likely to be transferred to the furnace walls. This load shall include the dead weight of the scaffolding including the platforms and the safe working load that can be loaded on to the platform. With respect to the Load transfer, the following details shall be furnished in the offer.

- The no of support points
- The location of support points
- The load per vertical post at the support points
- The load transfer points shall be clearly marked up in the drawing



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- No load shall be transferred onto the Windbox / burner.
- Vendor shall indicate the type of supports proposed with an aid of sketch/drawing. (load transfer through all supports shall be at the fins zone only and not on the tubes)

6.0 Scaffolding system:

The Scaffolding system shall be provided with:

- 6.1 Close access to inspection / maintenance of boiler tubes / water wall, burner, SOFA & other components including boiler furnace roof.
- 6.2 Stair case with a width of minimum 500 mm and not more than 55⁰ inclinations. Staircase shall be provided with hand rails. However, for stairs within the braced towers, when flights of stairs are interrupted by platforms at less than or equal to 2.1 m intervals, the handrails may be omitted if due care is taken in design for safety of personnel. The number of staircases in a particular scaffold level shall be such that - quick access to all corners of subsequent work platforms is available from any point of that scaffold level.
- 6.3 System shall have upper / mid guard rail without any special components.
- 6.4 Access to Panel and Platen super heater and rear wall upper arch portion to be envisaged.
- 6.5 The scaffolding shall also have access to horizontal pass up to the level where transverse tube pitching in the direction of gas flow path is equal to and greater than 600 mm.
- 6.6 Arrangement for stable floor.
- 6.7 Suitable arrangement for supporting at furnace bottom without additional attachment with boiler tubes.
- 6.8 In total, the assembly shall have amongst other things – vertical posts, horizontal members, vertical /horizontal / diagonal bracings, trusses and other fastening arrangements etc.

6.10 Handrails and guardrails

- 6.10.1 Handrails / guardrails shall be with a height between 900 mm to 1000mm.
- 6.10.2 Handrails / guardrails and components shall be of sufficient strength to withstand a 90kg force applied at any point, in any outward or downward direction, except upwards, without failure.
- 6.10.3 Handrails / guardrails system shall not be required on the furnace wall side when the space between platform/scaffold and furnace walls is less than 200 mm. However, toe boards as per 6.11.5 shall be envisaged everywhere to prevent accidental rolling down of tools.



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6.11 Floors

6.11.1 Floors are to be provided peripherally at all elevations except at the levels specified in clause 6.11.3 where full planking is required. The elevation levels shall be determined by the vendor. However, the space between two floors shall be preferably 2.5 m below the top of wind box and shall not exceed 3.5 m there after (above wind box). Nowhere the space between the working floors be less than 1.8 m, so as to provide comfortable headroom.

6.11.2 However, to provide access to all the areas within the floor space, suitable ladders shall be provided which can be safely fixed on to the floors. Minimum 6 nos. of such ladders shall be provided.

6.11.3 Full platforms/floors (not just peripheral) shall be provided at just below the access door near upper rear arch and below the access door opening in the furnace hopper. The full floor elevation details shall be furnished by the vendor.

6.11.4 Floors shall be provided with guard rails, mid rails and toe boards installed on all open sides and ends. Mid-rails shall be of dismantable type. All rails and posts shall be suitable for easy assembly & disassembly.

6.11.5 Toe boards/guards shall extend to a minimum of 150mm above the working surface.

6.11.6 The material of construction of the flooring shall be of Aluminium / Aluminium Alloy as indicated in clause 3.3.1.

6.11.7 The width of the floor and gap between the furnace wall and floor shall be clearly specified by the vendor and the same shall be clearly shown in the drawing. Floor width (peripheral) shall be minimum 600mm.

6.11.8 The number of floors offered with “elevation” details shall be clearly mentioned in the drawing.

6.11.9 The floor elevations and no. of floors shall be decided in such a way that access is available to all parts (especially burner area) of the water walls. (For burner level elevations refer to Annexure-III).

6.12 Tools and tackles

6.12.1 The Vendor shall supply with the main equipment one complete set of special tools and tackles required for erection, assembly, dismantling and proper maintenance of the equipment and system. These special tools will also include special material handling equipment, jigs and fixtures if applicable. The list of such tools and tackles shall be submitted by the vendor along with the offer.

6.12.2 The price of each tool/tackle shall be deemed to have been included in the total bid price. These tools and tackles shall be packed and sent to site. All the tools and tackles shall be of reputed make acceptable to the Purchaser.



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6.13 Any other items though not specifically mentioned in this specification but needed to complete the equipment and system [unless specifically mentioned under exclusions shall form part of the offer].

6.14 Vendor shall specify the storage space requirement of the system components and shall furnish suggested storage layout with special instructions, if any, for proper storage of the material.

6.15 Vendor may also submit necessary documents for justifying the design aspects of the scaffold offered both for stability and safety.

7.0 General requirements

7.1 All materials, components used in the design, construction and installation of scaffolds shall meet the requirements of its specified application in accordance with good engineering practice. All material shall be supplied as per vendor's bill of quantity document and if any shortage of material found later or during installation of the scaffolding system at site, Vendor is responsible for the same and shall agree to supply the additional material at free of cost.

7.2 The material of construction and its duty class shall be clearly spelt out in the offer and the same shall conform to specified National / International Standards. All materials used for the construction of the equipment shall be new and shall be in accordance with the requirements of this specification. Materials utilised for various components shall be those which have established themselves for use in such applications for at least a period in excess of 2 years.

7.3 All fasteners used, if applicable, shall be of Metric threads only. (No British / American threads in the inch system is permitted)

7.4 Vendor shall follow International colour Code wherever applicable for various components, assembly and sub-assembly for easy identification of components of the system.

7.5 All assemblies /sub-assemblies and individual components shall bear proper identification numbers. The methodology followed shall be clearly spelt out in the base offer.

7.6 Supervision & Training:

7.6.1 The Vendor shall extend all possible assistance and co-operation to the purchaser regarding the development of expertise in the area of assembly, disassembly, identification, storage & retrieval and safety aspects of the system offered.

7.6.2 Vendor shall also impart the necessary training - training of personnel for the required days at the vendor's engineering/manufacturing facility - training at the job site for the required period by the vendor's representative.

7.6.3 Vendor shall undertake guarantee to demonstrate clause 3.7 (manpower & man days) during the installation (both erection and dismantling) of scaffold in any one of the shutdown



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period as and when demanded by the end user within 2 years after commissioning of the boilers or 48 months after completion of supply.

7.6.4 The cost applicable for clauses 7.6.2 & 7.6.3 shall be indicated separately in the offer as supervision and training charges. The above charges shall be paid only after site/ end-user certification on installation / dismantling as per clause 3.7 and training as described above.

7.7 Drawing and Documents:

7.7.1 All documents/text information shall be in MSWord 2000 or above version.

7.7.2 All drawings shall be made in AutoCAD- Release 2016 or above version.

7.7.3 All vendor documents & BHEL filled in datasheets that form the part of offer shall be duly filled, signed with vendor seal before submission. However, care should be taken to ensure legibility.

7.7.4 The vendor drawings shall include – scaffold general arrangement inside boiler, floor elevations with floor numbers, space between floors, plan view for each floor, access door elevation and size, space between furnace wall & floor end.

7.7.5 All drawings submitted by the Vendor including those submitted at the time of bid shall be in sufficient detail indicating the type, size, arrangement, weight of each component for packing and shipment, the external connection, fixing arrangement required, the dimensions required for installation and interconnections with other equipment and materials, clearance and spaces required between various portions of equipment and any other information specifically requested in the drawing schedules.

7.7.6 Each drawing submitted by the Vendor (including those of sub-vendors) shall bear a title block at the right hand bottom corner with clear mention of the name of the Purchaser, the system designation, the specifications title, the specification number, the name of the Project, drawing number and revisions. If standard catalogue pages are submitted the applicable items shall be indicated therein. All titles, notes, markings and writings on the drawing shall be in English. All the dimensions should be in metric units. If standard BHEL title block is furnished, the same shall be incorporated in vendor's drawings.

7.7.7 The Vendor shall also furnish a "Master Drawing List" which shall be a comprehensive list of all drawings/documents/calculations envisaged to be furnished by him during the detailed engineering to the Purchaser. Such list should clearly indicate the purpose of submission of these drawings i.e., "FOR APPROVAL" or "FOR INFORMATION ONLY". Similarly, all the drawings/documents submitted by the Vendor during detailed engineering stage shall be stamped "FOR APPROVAL" or "FOR INFORMATION" prior to submission.

7.7.8 The furnishing of detailed engineering data and drawings by the Vendor shall be in accordance with the time schedule for the project. The review of these documents / data / drawings by the Purchaser will cover only general conformance of the



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data/drawings/documents to the specifications and contract, interfaces with the equipment provided by others. The review by the Purchaser should not be construed to be a thorough review of all dimensions, quantities and details of the equipment, materials, any devices or items indicated or the accuracy of the information submitted. The review and/or approval by the Purchaser shall not relieve the Vendor of any of his responsibilities and liabilities under this contract.

7.7.9 After the approval of the drawings, further work by the vendor shall be in strict accordance with these approved drawings and no deviation shall be permitted without the written approval of the purchaser.

7.7.10 The Vendor shall submit adequate points of drawing/data/document for Purchaser's review and or approval. When changes are required, drawings shall be resubmitted promptly, with revisions clearly marked, for final review. Any delays arising out of the failure of the Vendor to submit/rectify and resubmit in time shall not be accepted as a reason for delay in the contract schedule.

7.8 Operation & Maintenance (O & M) Manual

Typical O&M manual for the type of system offered shall be submitted along with the offer. Manuals generally shall contain the following:

- Brief description
- Assembly drawings with part list, dimensional drawings and other applicable drawings.
- Manuals should pertain only to the type or model supplied for this contract.
- Drawing and catalogues.
- Sequence of erection.
- Erection instructions.
- Critical checks and permissible deviation/tolerances.
- List of tool, tackles.
- Bill of Materials.
- Procedure for erection and dismantling.
- Procedure/checklist for commissioning of the system.
- Procedure for initial checking after erection.
- Maximum permissible load and load per square metre at any given instant on the scaffolding system.



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7.8.1 Format of manuals

- a) Manuals should be both in printed form and in electronic media with a text font size of 12.
- b) The size of manuals should be in correct A4 size with drawings in either A4 or A3 size. Large size drawings (greater than A3 size) should be reduced to A3 size and inserted.
- c) Drawings shall be of printed or laser printed only.
- d) Spiral or comb bound copies should be totally avoided.
- e) If manuals are supplied in folders, the folder shall have 3 hole punching system.
- f) **No of copies of manuals: 3 Sets + 3 CD –ROMS**
- g) O & M manuals, should be submitted to BHEL / Tiruchirappalli prior to despatch of the equipment.

8.0 Quality

8.1 General requirements

8.1.1 All materials used for equipment construction including plates, pipes, forgings, fittings etc., shall be of tested quality as per relevant codes/standards. All material shall be chosen from the fresh lots and shall be free from defects like scales, seam, lamination, pitting etc., Detail of results of the tests conducted to determine the mechanical properties, chemical analysis and the details of heat treatment procedure shall be recorded on certificates. Tests shall be carried out as per applicable material standards and or agreed details.

8.1.2 All plates of thickness more than 21mm shall be ultrasonically tested.

8.1.3 All bar-stock forgings above 21mm diameter shall be ultrasonically tested.

8.1.4 All codes standards or specifications with latest editions shall be referred.

8.2 Quality plan

Vendor shall submit along with the offer the quality plan for Purchase's review / comments / approval to ensure that the equipment and services, under the scope of contract whether manufactured or performed, within the Vendor's works or at his sub-vendor's premises or at the Purchaser's site or at any other place of work are in accordance with the specifications, the Vendor shall adopt suitable quality assurance programme to control such activities at all points, as necessary. Such programmes shall be outlined by the Vendor and shall be finally accepted by the Purchaser/authorised representative after discussions before the award of the contract. The offer which is not complying with this requirement will not be considered for evaluation.

8.3 Quality assurance- general requirements

8.3.1 All materials, components and equipment covered under this specification shall be procured, manufactured, erected, commissioned and tested at all the stages, as per a comprehensive Quality Assurance Programme which shall be submitted along with the offer. It is the vendor's responsibility to draw up and implement such programme duly approved by



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the Purchaser. The detailed Quality Plans for manufacturing should be drawn up by the Vendor and will be submitted to Purchaser for approval. Schedule of finalisation of such quality plans will be finalised before award of contract.

8.3.2 Manufacturing Quality Plan will detail out for all the components and equipment, various tests/inspection, to be carried out as per the requirements of this specification and standards mentioned therein and quality practices and procedures followed by the Vendor, the relevant reference documents and standards, acceptance norms, inspection documents raised, etc. during all stages of materials procurement, manufacture, assembly and final testing.

8.3.3 The Vendor shall also furnish copies of the reference documents/plant standards/acceptance norms/tests and inspection procedure, etc., as referred in Quality Plans along with Quality Plans. These Quality Plans and reference documents/standards, etc. will be subject to Purchaser's approval without which manufacture shall not proceed.

8.3.4 These approved documents shall form a part of the contract. In these approved Quality Plans, Purchaser shall identify customer hold points (CHP), i.e., test/checks which shall be carried out in presence of the Purchaser's engineer or his authorised representative and beyond which the work will not proceed without consent of Purchaser/Authorised representative in writing. All deviations to this specification, approved quality plans and applicable standards must be documented and referred to Purchaser along with technical justification for approval and dispositioning.

8.3.5 No material shall be despatched from the manufacturer's works before the same is accepted subsequent to pre-despatch final inspection including verification of records of all previous tests/inspections by Purchaser's engineer / Authorised representative.

8.4 Site checks/tests

The Vendor shall prepare and submit detailed field quality plans in the format setting out the quality practice and procedures to be adopted for assuring quality for each equipment of material at this specification from the receipt of material at site, during storage & erection. These procedures shall necessarily include all checks/tests conducted at site for preservation, assembly, alignment, positioning of the equipment etc. The Vendor shall also furnish detailed quality procedure proposed by him for storage & preservation to the Purchaser.

9.0 Inspection

9.1 The complete System has to be offered for inspection by Purchaser / end-user and the vendor shall give 30 days advance notice for arranging the inspection after the system is fully ready. After inspection the equipment can be despatched only after obtaining the MDCC (Material Despatch Clearance Certificate). No material shall be despatched without MDCC.



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9.2 The word “inspector” shall mean the Purchaser and / or his authorised representative and or an outside inspection agency acting on behalf of the Purchaser to inspect and examine the materials and workmanship of the works during its manufacture or erection.

9.3 The Purchaser or his duly authorised representative and / or an outside inspection agency acting on behalf of the Purchaser shall inspect the materials and workmanship of the works during its manufacture or erection and its part of the works, if any, being manufactured or assembled at other premises or works. In case of inspection at other premises/ works, the Vendor shall obtain from the sub- vendor permission to inspect as if the works were manufactured or assembled at the Vendor’s own premises or works.

9.4 The Vendor shall give the Purchaser / inspector fifteen (15) days written notice of any material being ready for testing. Such tests shall be to the Vendor’s account except for the expenses of the inspectors. The Inspector, unless the witnessing of the tests is virtually waived, will attend such tests within fifteen (15) days of the date on which the equipment is noticed as being ready for test/inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector’s presence and he shall forthwith forward to the inspector duly certified test reports in two (2) copies.

9.5 Scaffolds shall be inspected and tested as per approved quality plan. The certificates and documents generated during inspection of above shall be furnished.

9.6 The Inspector shall within fifteen (15) days from the date of inspection as defined herein give notice in writing to the Vendor of any objection to any drawings and / or any equipment and workmanship which is in his opinion not in accordance with the contract. The Vendor shall give due consideration to such objections and shall either carry out the necessary modifications as called for by the Purchaser/Inspector or inform in writing to the Purchaser / inspector giving reasons therein that no modifications are necessary to comply with the contract.

9.7 The inspection by Inspector and issue of inspection certificate thereon shall in no way limit the liabilities and responsibilities of the vendor in respect of the agreed quality assurance programme forming a part of the contract.

9.8 All inspection measuring and test equipment used by vendor shall be calibrated periodically depending on its use and criticality of the test / measurement to be done. The contractor shall maintain all the relevant records of periodic calibration and instrument identification and shall produce the same for inspection by Purchaser. Wherever asked specifically the vendor shall re-calibrate the measuring / test equipment in the presence of Purchaser/ Inspector.



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10.0 Protection, preservation, packaging and transportation

10.1 Protection

All coated surfaces shall be protected against abrasion, impact, discoloration and any other damages. All exposed threaded portions shall be suitably protected with non-metallic protection device. The ends of all piping and conduit equipment connections shall be properly sealed with suitable devices to protect them from damage. The parts which are likely to get oxidized or corroded, due to exposure to weather, should also be properly treated and protected in a suitable manner. All primers/paints/coatings shall take into account the hot humid, corrosive & alkaline, over ground environment.

10.2 Preservation

All exposed metallic surfaces subject to corrosion shall be protected by shop application of suitable coatings. All surfaces shall be thoroughly cleaned of all mill scales, oxides and other coatings and prepared in the shop. The surfaces that are to be finish-painted after installation or require corrosion protection until installation, shall be shop painted with at least two coats of primer. *For special painting requirements refer to Annexure-I to this specification.*

10.3 Packaging and transportation

10.3.1 All the equipment shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection.

10.3.2 The over dimensional consignment (ODC) w.r.t Indian road / rail conditions shall be mutually discussed and finalised during the execution of contract.

11.0 Guarantee / Warranty

The offered system shall be guaranteed for 24 months from the date on which the equipment / system is put into use (by the end user) or 48 months from the date of supply whichever is earlier against defective design, defective material usage, defective workmanship, defective packaging and forwarding.

12.0 Deviations

Deviations to specification, if any, shall be clearly spelt out in the offer stage itself. During contract/ inspection/ final erection stages, the Purchaser reserves the right to entertain or deny such deviation.

13.0 Exclusions

Any exclusion from scope of supply shall be clearly spelt out in the offer. Exclusion of major / critical items shall make the offer liable for rejection.



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14.0 Documents to be submitted by vendor

14.1 Documents to be submitted along with the offer:

14.1.1 Product literature / catalogue and drawings in support of the offer shall be submitted in three copies along with the quotation to evaluate the offer.

14.1.2 Sectional arrangement drawing with plan, elevation, and end view along with major dimensions and weight particulars.

14.1.3 Filled in check list. (Annexure-II to this specification)

14.1.4 Weight and quantity of individual components as per the scope of supply shall be indicated in the drawing as bill of quantity / material. Also total weight of scaffold per boiler to be furnished.

14.1.5 Design Calculation:

Vendor shall submit the design calculation to satisfy the specification clause:4.5. Also, the permissible load on any scaffold vertical should be always greater than actual maximum load on that vertical due to the sum of scaffold self-weight and intended / distributed loads.

14.1.6 The quality plan for the product under supply shall be furnished along with the offer. (This will be amended in consultation with the ultimate customer/end user, if required).

14.1.7 List of Special tools and tackles.

14.1.8 List of initial spares.

14.1.9 A certificate for the components from Safety Steward/ Authority/ Body of the country of make shall be provided.

14.1.10 Document for justifying the design aspects of the offered system both from stability and safety aspects.

14.1.12 List of Deviations or no deviation declaration.

14.1.13 List of Exclusions.

14.1.14 Typical O&M manual of the offered system similar to the earlier job executed by the vendor. (Preferably that applicable for the certificate provider)

14.1.15 Erection & dismantling schedule as per clause 3.7 of this document.

14.2 Documents to be furnished after award of contract

14.2.1 Complete arrangement drawings giving particulars like:

- a) Bill of Quantity (of all individual components)
- b) Weight details of all components individually
- c) Identification marks / Numbers

14.2.2 Packaging procedure detailing the list of components shall be despatched individually with identification and with preservation and storage.

14.2.3 Test certificates shall be furnished before despatch of components.

14.2.4 Material test certificate for all the major components.



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14.2.5 Quality control / Inspection documents generated during the stages of inspection, performance inspection and final inspection in line with the final approved quality plan.

14.2.6 Guarantee certificate shall be furnished by the vendor.

14.2.7 Loading Schedule of the scaffolding indicating the safe working load in each floor level (including the number of persons allowed) shall be submitted by the Vendor.

14.2.8 O& M manual.

15.0 General

15.1 The language used in offer, O & M manual, Labels, drawings etc. shall be in “English only.”

15.2 For Equipment and other special requirements pertaining to the contract, refer **Annexure-I** to this specification.

15.3 **Annexure -II** is the Check list to be filled in completely by the vendor and submitted **along with the offer**. Offer with incomplete Check list is liable for rejection.

15.4 **Annexure – III (Drawing)**, Furnace arrangement for Quick Erect Scaffold, contains all details of the requirements like furnace width, depth, height, location of access / manhole doors, goose neck / furnace bottom position, elevation of burners etc.



**Annexure-I to Specification No.
MHS-HEQ-078/Rev.05**

- 1 Name of Project** : SAGARDIGHI 1X660 MW,2X500 MW &300 MW
- 2 Customer No.** : 1731
- 3 Quantity** : 1 Set (Complete QES for 660 MW and additional Components / base frames for interchangeable use for 500 MW & 300 MW separately.)
- 4 Material of construction** : Aluminium /Aluminium Alloy
- 5 Reference Drawing No.** : 0-99-501-40378 (for 660 MW);
0-99-501- 40724 (for 500 MW)
0-99-501-40941 (300 MW)
(Furnace arrangement for Quick Erect Scaffold)
- 6 Man Hole (Access Door) Opening Size in mm** : 610x762mm
- 7 Special Contract** : **1.**The scaffolding system shall be of Aluminium /Aluminium Alloy. Man-day required for erection shall not exceed 4 (four) days considering workforce deployed for 24 hrs per day (3 shifts a day). Dismantling shall be completed in 2 (two) days considering workforce deployed for 24 hours (3 shifts in a day).
2. The locking arrangement shall not call for any Welding.
3. One Set of complete Quick Erect Scaffold for 660 MW Boiler that can be used interchangeably for 500 MW boiler & 300 MW boiler.
4. Vendor shall furnish separate drawings for QES of 600MW, 500MW & 300MW designs. The drawing shall identify the interchangeable items and items specific to the Boiler separately in the Bill of materials.

	Name	Signature	Date
Prepared	Saurabh kr. Singh	-sd-	03.11.2023
Checked	Noorul Fazil	-sd-	03.11.2023
Approved	Srinivas Arugula	-sd-	03.11.2023

Annexure-II to Specification No.:MHS-HEQ-078/Rev.05

VENDOR'S CHECK LIST

<i>This check list is to be filled up by the vendor and submitted along with the offer. This shall form part of ordering specification and shall be approved by the purchaser incorporating all the comments if any. Vendor to completely fill up the column under "vendor's compliance/confirmation/comments". Non applicability shall be clearly spelt out. Offer with incomplete data sheet/ check list is liable for rejection.</i>					
S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
1	Name of the equipment	1.0	Quick Erect scaffolding system		
2	Type of sytem offered	.....	Vendor to specify		
3	Model of the system offered	.....	Vendor to specify		
4	Type of jointing arrangement Provided	3.1	Vendor to specify		
5	Standards / Codes followed	3.2	Vendor to specify		
6	Materials of construction:	3.3.1	Aluminium / Aluminium Alloy		
6.1	Tubes				
6.2	Coupler / Jointing				
6.3	Fastners				
6.4	Stair ways				
6.5	Decking				
6.6	Others				
6.7	Others				
6.8	Others				
7	All components shall have appropriate colour code	3.3.3	Vendor to confirm		
8.0	Quick erect / Quick dismantle	3.7			
8.1			Total Man-hours required for erecting the complete system		
8.2			No. of manpower required for erection:		
8.2.1			Skilled		
8.2.2			Unskilled		
8.3			Total Man-hours required for dismantling the complete system		
8.4			No. of manpower required for dismantling:		
8.4.1			Skilled		

Annexure-II to Specification No.:MHS-HEQ-078/Rev.05

VENDOR'S CHECK LIST

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
8.4.2			Unskilled		
8.5			User certificate for the time taken for assembly and dismantling of a similar system shall be furnished along with the offer.		
8.6	Vendor's confirmation to demonstrate the mandays & man power requirement during the actual installation of QES.		Vendor to confirm		
9	Furnace configuration	3.8	The offered system shall meet the shape and configuration as shown in BHEL drawing.(Refer Annexure-I). Vendor's compliance.		
10	Provision to introduce all materials thro Access door opening	3.10	Opening size given in annexure -I		
11	Spares	3.11		—	
11.1	Initial spares		Shall be included in the base offer		
11.2	List of initial spares		Vendor to furnish the list of initial spares offered		
11.3	Long term spares		To be quoted separately		
12	Safety Accessories	4.4	Shall form part of the offer. Vendor to furnish the list of accessories supplied.		
13	Factor of safety	4.5	4 times the Intended load		
13.1	Maximum intended load of 6 tons	4.5	Vendor to confirm for having taken this into the design		
13.2	Permissible load on each floor	4.5 to 4.7	Vendor to specify. Shall not be less than 150 kg/sq.m		
14	Load transfer	5.0			
14.1	No.of support points		Vendor to specify		

Annexure-II to Specification No.:MHS-HEQ-078/Rev.05

VENDOR'S CHECK LIST

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
14.2	Location of support points		Vendor to furnish		
14.3	Load per vertical post at support point		Vendor to specify		
14.4	Load transfer points	5.0	To be marked up in the drawing		
14.5	Type of support at the furnace hopper		Explain with a drawing. Is the support calling for any welding? If yes, it is accommodated only at the fins and not on the water wall tubes.		
14.6	Maximum safe working load that can be loaded onto the platform		Vendor to specify		
15	Scaffolding System	6.0			
15.1	Staircase width	6.2	Min. 500mm		
15.2	Staircase inclination	6.2	Not more than 55 deg.		
15.3	Provision of upper / mid guardrail	6.3	Vendor to confirm		
15.4	Access to panel and platen superheater and upper rear arch areas	6.4	Vendor to confirm		
15.5	Hand rails height	6.10.1	900 - 1000mm		
16	Floors	6.11			
16.1	Provision of floor	6.11.1	Floors at specific Elevations- Peripheral floors & full floors		
16.2	Elevation details	6.11.1	Vendor to indicate in the drawing. Spacing between two successive floors shall not exceed 2.5 m shall not exceed 3.5m		
		6.11.3	Full floor platforms shall be provided at just below the upper arch and below the access door opening in the furnace hopper		
16.3	Provision of dismountable midrails	6.11.4	Vendor's compliance		
16.4	Height of Toe boards	6.11.5	Min. 150 mm		

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VENDOR'S CHECK LIST

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
16.5	Materials of construction of floors	6.11.6	Vendor to specify		
16.6	Width of peripheral floor	6.11.7	Min. 600 mm		
16.7	Arrangement drawing of floor	6.11.8	Vendor to enclose		
16.8	No.of floors offered	6.11.9	Vendor to specify		
16.9	Access to all parts	6.11.9	Vendor to confirm		
17	List of Tools & Tackles	6.12	List to be attached with the offer. If vendor states that special tools are required for the offered system, then the same has to be listed in detail		
18	Storage of scaffold		Storage volume required and the suggested storage layout		
19	Design justification document	6.15	Vendor to submit		
20	Fasteners with Metric threads	7.3	Vendor to confirm		
21	Applicable colour code	7.4	Vendor to specify		
22	Methodology followed for marking up identification number	7.5	Vendor to specify		
23	Training of purchaser's engineers	7.6.2	Vendor's compliance		
24	Drawing & documents	7.7	Vendor's compliance		
25	O & M manual	7.8	Vendor to furnish a typical O&M manual of the offered system. Vendor's compliance		
26	Quality plan	8.2	Vendor's compliance		
26.1	Site checks / tests	8.4	Field quality plan - vendor's compliance		
26.2	Inspection	9.0	Vendor's compliance		
27	Packaging and Transportation	10.3	Vendor's compliance		
28	Painting	Annexure-I	Vendor's compliance		
29	Guarantee / Warranty	11.0	Vendor's compliance		
30	Deviations	12.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		

Annexure-II to Specification No.:MHS-HEQ-078/Rev.05

VENDOR'S CHECK LIST

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
31	Exclusions	13.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		
32	Documents along with offer	14.1	Vendor to furnish all the documents along with the offer		
32.1	Product literature / catalogue				
32.2	Drawing --- covering:		Specify vendor drawing No.		
32.2.1	General Arrangement		Vendor's compliance		
32.2.2	Sectional arrangement		Vendor's compliance		
32.2.3	Plan view		Vendor's compliance		
32.2.4	Elevation		Vendor's compliance		
32.2.5	Illustrated sketch of coupler / jointing arrangement		Vendor's compliance		
32.2.6	Marking up of load transfer points		Vendor's compliance		
32.2.7	Elevation details of all floor levels		Vendor's compliance		
32.2.8	Weight details		Vendor's compliance		
32.2.9	BOQ covering all components		Vendor's compliance		
33	Documents after placement of Purchase Order	14.2	Vendor's confirmation to furnish all the documents enlisted in Cl.14.2 of specification.		

Technical Pre-Qualification Requirement for Quick Erect Scaffold- Aluminium/Aluminium Alloys:

"Bidder should have supplied similar Quick Erect Scaffold (QES) system in the past and the same should have put in use at least once in one thermal power station of capacity 210 MW and above. Also, vendor shall submit any one of the following correlated documents:

- a) At least one performance certificate along with corresponding PO copy
- b) At least one successful erection completion certificate by customer along with corresponding PO copy

OR

Alternatively, bidder shall submit minimum one reference of previous Quick Erect Scaffold - Aluminium supply made for application involving construction of access platform at a height of minimum 40 m along with necessary documents for proof of execution. In addition to this bidder shall carryout following activities after placement of Purchase Order (P.O.):

1. *Bidder shall demonstrate the construction of scaffolding arrangement simulating the boiler furnace application i.e. supporting from furnace hopper (hopper geometry as per the BHEL drawing) and*
2. *Bidder shall also carry out scaffolding load test as per the applicable standards and approved procedure by BHEL, which shall be witnessed and certified by BHEL / BHEL approved agencies.*

On Placement of Purchase Order, above mentioned demonstration activities as per sl.no 1 and 2 to be completed & performed without fail. After completion of above, further approval of documents and manufacturing clearance will be provided.

Instructions to Bidder

- A. Bidder should submit design documents to substantiate technical parameters specified in PQR, if the same is not mentioned in performance certificate/inspection report/ purchase order.
- B. All the above PQR satisfying document submissions should be enlisted and submitted as per Annexure-D (format given below).
- C. Bidder may also qualify based on the credentials of principal with whom the Bidder is having valid collaboration/licensing agreement to meet the package specific pre-qualifying requirements.
- D. In case the documents submitted for meeting PQR are in language other than English, notarized English translation shall also be submitted.
- E. BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, as per BHEL evaluation procedure.
- F. Final acceptance of the bidder is subject to BHEL and end customer's approval.

Format for submission of credentials as ANNEXURE-D

Sl.No.	Description of Project	Brief Scope of work	P.O. Ref. No. & Date	Purchase order value (Rs).	Date of completion as per P.O.	Performance Certificate enclosed (Y/N)	Remark



An ISO 9001
Company

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli-620 014, Tamil Nadu, India
Dept: MATERIALS MANAGEMENT/BOI

Financial Pre-Qualification Requirement

1. Indigenous suppliers shall submit Audited copies of annual reports (Balance Sheets), Profit & Loss statement for the last three years (or from date of incorporation whichever is less) and GST certificate.
2. In case of authorized representative/dealer of OEM participating in the tender, all the documents as per Sl. No.1 above shall be submitted for both the authorized representative/dealer and OEM.
3. Import suppliers shall submit latest report from reputed third party business rating agency like D&B /Credit reform etc.

**OEM signature and seal with Date
(If applicable)**

Vendor signature and seal with Date

BANK GUARANTEE FOR PERFORMANCE SECURITY

(Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s))

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY **IFSC**
AND MICR CODE

Dear Sirs,

1. In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at

_____ ¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) (VENDOR CODE) with its registered office at _____ ² hereinafter referred to as the 'Vendor / Contractor / Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (

Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Performance Security by way of a Bank

Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the due performance of all the contractual obligations of the Vendor / Contractor / Supplier including warranty obligations

2. we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs ----- ⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

3. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

4. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.
5. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of all the contractual obligations of the Vendor / Contractor / Supplier including satisfactory completion of the warranty period /obligations as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

6. We.....BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
7. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier's liabilities.
8. This Guarantee shall remain in force upto and including..... ⁷ and shall be extended from time to time for such period as may be desired by Employer.
9. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.
10. Unless a demand or claim under this guarantee is made on us in writing on or before the⁸we shall be discharged from all liabilities under this guarantee thereafter.
11. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirappalli.

12. We..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁶
- b) This Guarantee shall be valid up to⁷
- c) Unless the Bank is served a written claim or demand on or before (minimum 3 to 6 months from the expiry date⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

13. We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

BANK EMAIL ID:

BANK PHONE NO:

AUTHORISED SIGNATORIES CELL PHONE NO:

BANK FAX NO:

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

 BHEL - TRICHY	THIRD PARTY NON-DISCLOSURE AGREEMENT	Doc.No. : ISMS-04/TP/011	
		Ver. No: 3.0	Rev. No: 00
		Date : 27 - 10 - 14	

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Trichy Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Trichy all documents and property of BHEL, Trichy, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Trichy 's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Trichy and are reasonable given the nature of the business carried on by the BHEL, Trichy I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this ____ day of _____, 20__.

Name

Company

Signature