

Corrigendum 4 dated 02-04-2022 to Tender Specification BHEL PSSR SCT 2019

Tender Specification BHEL PSSR SCT 2019 - Balance works Civil, Architectural, Mechanical, Electrical, C&I and Other Allied works of including supply of material, labour, Tools & Plants etc for Package 1 (NDCT 2) & Package 2 (NDCT 1) of 2X660 MW Udangudi Super Critical Thermal Power Project.

Some of the bidders had raised queries in the published tender specification. The Clarifications issued by BHEL are furnished below: -

Sl. No	Ref. clause	Existing provision	Bidder's query	BHEL's clarification
1	Price Bid (Volume-II)	Quantity figures of the BOQ items	The quantities mentioned in the tender BOQ are erroneous. Kindly furnish modified BOQ with correct quantities.	Tender condition prevails
2	Price Schedule	BOQ Sr. no. 21.7	This item is not applicable for NDCT. Please review.	Tender condition prevails
3	Notice for Inviting Tender (NIT) Clause 1 (vii)	EMD	Since we are willing to bid for both Package-A & Package-B, kindly confirm whether we can submit EMD as below: a) EFT of INR 2,00,000.00 b) A single Bank Guarantee of INR 1,91,00,000.00 (total for both the packages)	Bidder request is acceptable
4	NIT Clause 19	Reverse Auction	As a company policy, Reverse Auction is not applicable to us. We, therefore, request you to kindly waive off this particular clause.	Tender condition prevails
5	TECHNICAL CONDITIONS OF CONTRACT (TCC); VOLUME-IA PART-I CHAPTER – II Clause 2.1	Scope of Work	Please confirm that all structural steel required for incorporating in NDCT e.g for Handrails, ladders, access doors, hot water pipes, etc. will be free issued by BHEL at site (near cooling tower location).	Supply of Handrail, Ladders, hot water pipes shall be in the scope of bidder as per Price Bid BOQ item nos. A2322, A2323, 22.3. Only FRP access door is to be provided by the bidder as per price bid item no. A1850.

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6	TCC; VOLUME-IA PART-I CHAPTER – II	Clause 2.3 (I) i	We propose flexible hose pipe for sludge discharge. Kindly confirm.	Bidder to consider Cl. 2.01.01 of Sub-Section IA of Specification No. : PE-TS-435-165-N011 (REV. 01) and BOQ at S.No. 26.1 for scope of Sludge pump and associated pipe & fittings. MOC of piping shall be as per S.No. 8.13 of Sub-Section ID, Datasheet-A of Specification No. : PE-TS-435-165-N011 (REV. 01). Bidder to also follow complete Technical Specification for other technical details.
7	TCC, Vol-IA, Part-II, Chapter - 1	Clause 2.7.9.1	Milestone L/D is not acceptable to us. We shall comply to the specified overall completion periods from the date of commencement of civil work and will comply to BHEL tender condition for the completion schedule on best efforts basis subject to all inputs in BHEL's scope i.e. (a) providing encumbrance free site work front, (b) issuance of construction drawings, (c) issuance of free issue materials like cement, reinforcement steel & structural steel and (d) payment are received by us in a required timely manner as per the L3 schedule submitted by us and finalized between BHEL and us during post contract award stage. We assure you that we would deploy all necessary resources / plant &	Tender condition prevails

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			equipment / manpower to meet the project schedule as per tender requirement. For this, it is also important that there be no disruption in availability of working capital. In the interest of achieving the extremely challenging completion schedule required for this project, L/D for delay (if any) can be assessed based on the final delay analysis at the end of the job holistically taking into account the delays due to reasons attributable to us and also BHEL for related inputs availability in time as mentioned above.	
8	Cooling Tower Drawings	--	Please furnish the cooling tower shell inlet diameter / diameter of shell at the bottom for the NDCTs.	Drawings enclosed for reference purpose only.
9	General	--	We request BHEL to furnish all the construction drawings of NDCT for our ready reference and planning.	Approved drawings are enclosed for reference purpose only. Balance drawings of NDCT shall be furnished at site progressively during construction.

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10	General	--	Please confirm whether any existing machineries / construction equipments (like tower cranes, etc.) already deployed at site by the existing / original contractor are usable or can be issued by the contractor for balance works for the subject project. If so, please furnish the list of such facilities which can be handed over to the successful bidder by BHEL.	No T&Ps shall be provided from BHEL to the bidder. Bidder to visit site for further details about actual site conditions.
11	General	--	Kindly provide the approved concrete mix design for our ready reference.	The approximate design mix proportions are as mentioned below, M35 - C:FA:CA 20mm: CA 12.5mm = 1:1.80:1.69:1.12 , admixture 1.76kg W/C ratio - 0.45
12	General	--	Please furnish approved vendor list for electrical and C&I items, applicable within our scope.	No such approved vendor list is available. Bidder to obtain approval from BHEL before supply.
13	General	CONTROL & INSTRUMENTATION FOR SUMP PUMP SYSTEM	Instruments required for performance guarantee testing of the cooling tower(s) will remain the property of the testing team of the contractor and will be taken back by the contractor after the test. Please confirm.	Noted for Testing Instruments only.

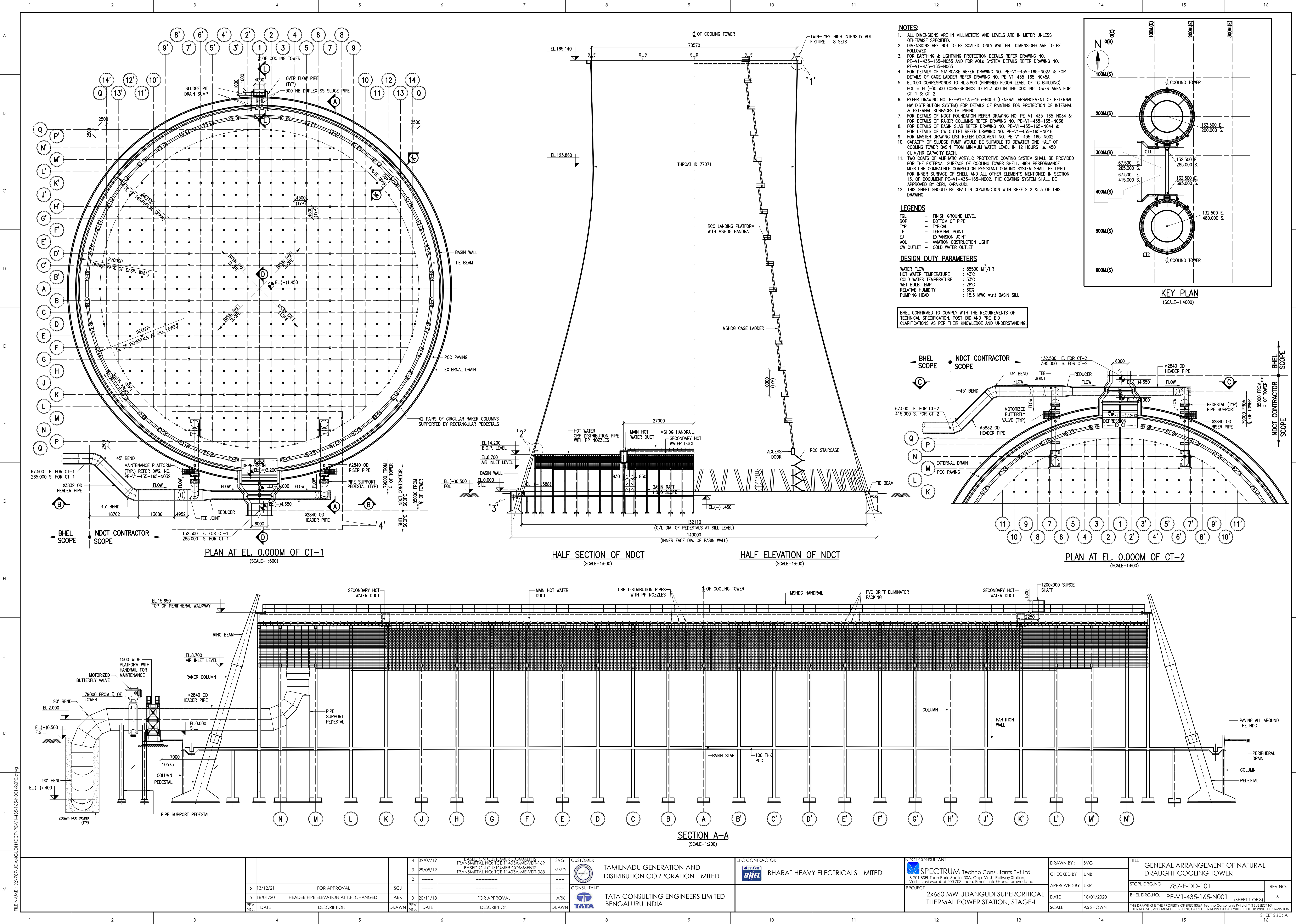
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14	General	--	Demobilization of any equipment, machinery, materials used by the original / existing contractor should be in scope of BHEL as and where required. Kindly confirm.	Any equipment, machinery, materials used by the existing contractor, will be cleared from the construction site by BHEL.
15	General	--	Please note that due payments for construction equipment / bought out Items of the original / existing contractor have to be taken care of by BHEL. Please confirm.	Noted.

All other conditions of the tender specification remain unchanged.

Bidders are requested to consider this corrigendum as part of tender specification and quote accordingly.

-Sd-
Shailendra Kumar
Senior Engineer / Subcontracts



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. FOR EARTHING & LIGHTNING PROTECTION DETAILS REFER DRAWING NO. PE-VI-435-165-N055 AND FOR AOLs SYSTEM DETAILS REFER DRAWING NO. PE-VI-435-165-N065.
4. FOR DETAILS OF STAIRCASE REFER DRAWING NO. PE-VI-435-165-N023 & FOR DETAILS OF CAGE LADDER REFER DRAWING NO. PE-VI-435-165-N045A.
5. EL.0.00 CORRESPONDS TO RL.3.800 (FINISHED FLOOR LEVEL OF TG BUILDING) FGL = EL(-)10.500 CORRESPONDS TO RL.3.300 IN THE COOLING TOWER AREA FOR CT-1 & CT-2.
6. REFER DRAWING NO. PE-VI-435-165-N059 (GENERAL ARRANGEMENT OF EXTERNAL HW DISTRIBUTION SYSTEM) FOR DETAILS OF PAINTING FOR PROTECTION OF INTERNAL & EXTERNAL SURFACES OF PIPING.
7. FOR DETAILS OF NDCT FOUNDATION REFER DRAWING NO. PE-VI-435-165-N034 & FOR DETAILS OF RAKER COLUMNS REFER DRAWING NO. PE-VI-435-165-N036.
8. FOR DETAILS OF BASIN SLAB REFER DRAWING NO. PE-VI-435-165-N044 & FOR DETAILS OF CW OUTLET REFER DRAWING NO. PE-VI-435-165-N016.
9. FOR MASTER DRAWING LIST REFER DOCUMENT NO. PE-VI-435-165-N002.
10. CAPACITY OF SLUDGE PUMP WOULD BE SUITABLE TO DEWATER ONE HALF OF COOLING TOWER BASIN FROM MINIMUM WATER LEVEL IN 12 HOURS i.e. 450 CUM/HR CAPACITY EACH.
11. TWO COATS OF ALIPHATIC ACRYLIC PROTECTIVE COATING SYSTEM SHALL BE PROVIDED FOR THE EXTERNAL SURFACE OF COOLING TOWER SHELL. HIGH PERFORMANCE MOISTURE COMPATIBLE CORROSION RESISTANT COATING SYSTEM SHALL BE USED FOR INNER SURFACE OF SHELL AND ALL OTHER ELEMENTS MENTIONED IN SECTION 13. OF DOCUMENT PE-VI-435-165-N002. THE COATING SYSTEM SHALL BE APPROVED BY CERI, KARAUKUDI.
12. THIS SHEET SHOULD BE READ IN CONJUNCTION WITH SHEETS 2 & 3 OF THIS DRAWING.

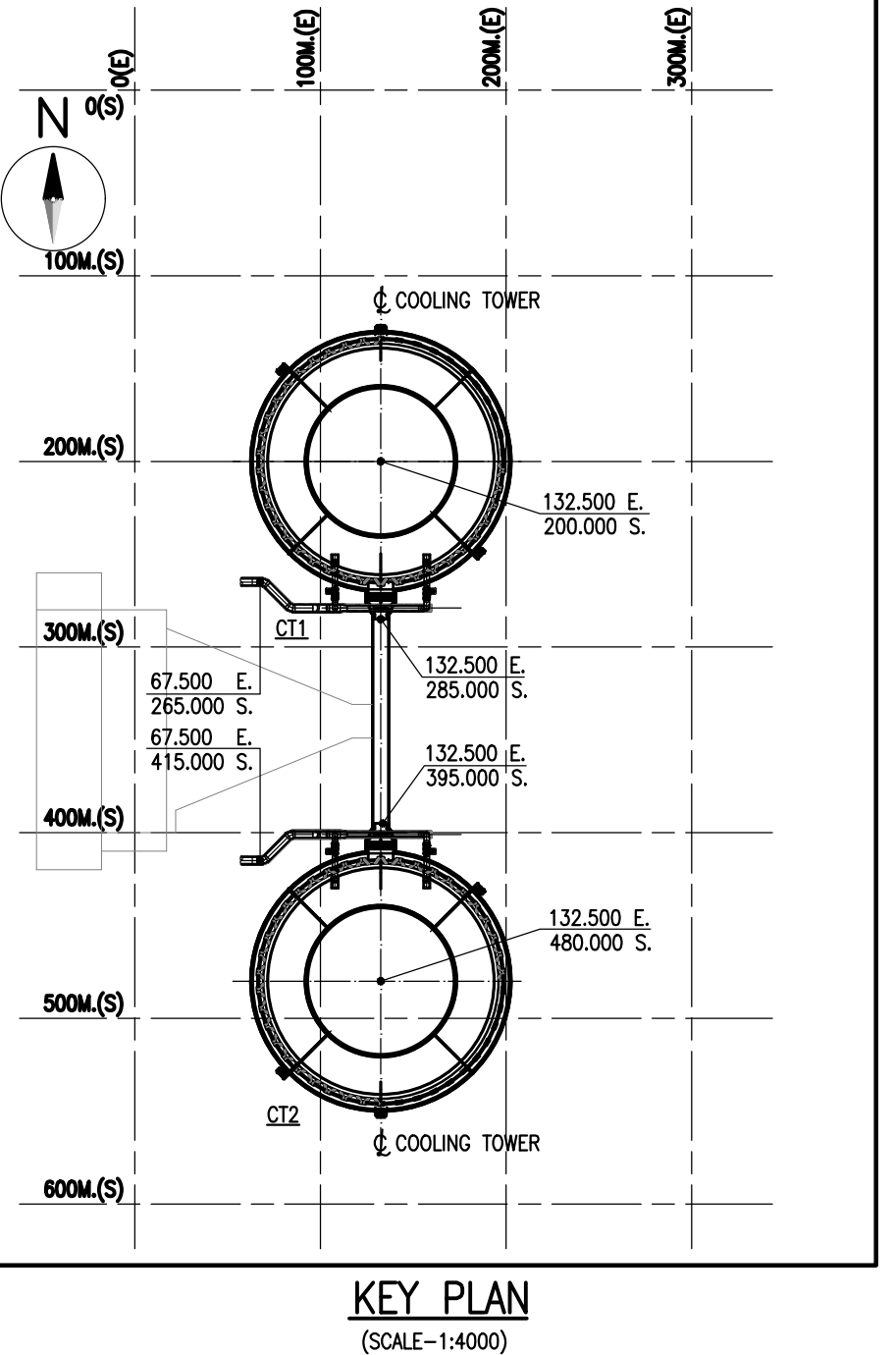
LEGENDS

FGL - FINISH GROUND LEVEL
BOP - BOTTOM OF PIPE
TYP - TYPICAL
TP - TERMINAL POINT
EJ - EXPANSION JOINT
AOL - AVIATION OBSTRUCTION LIGHT
CW OUTLET - COLD WATER OUTLET

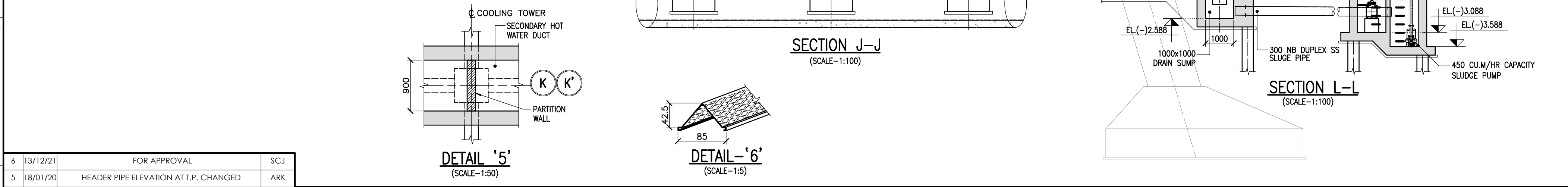
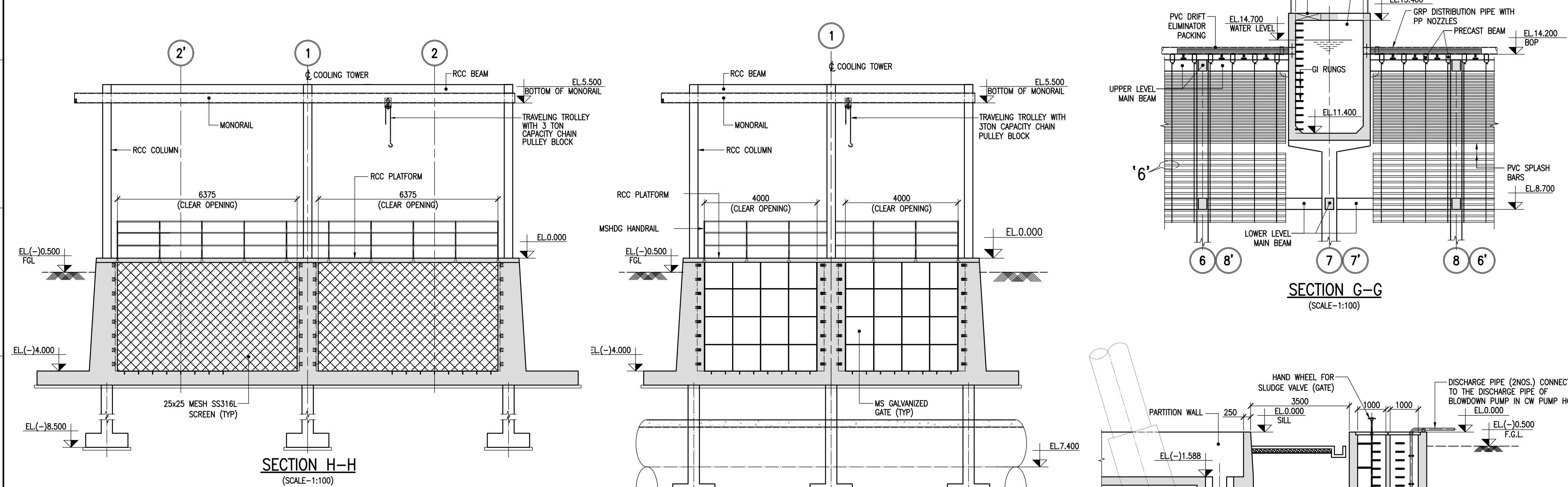
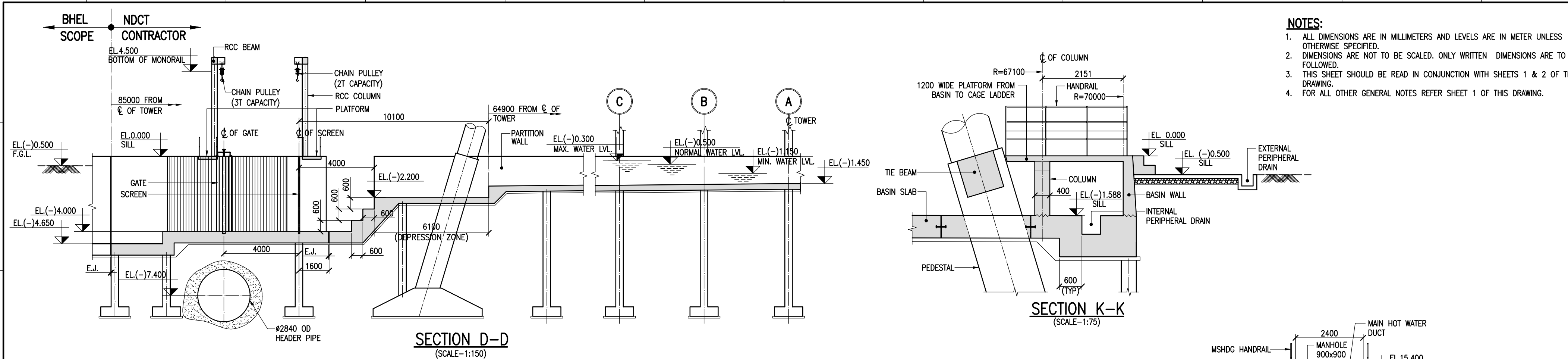
DESIGN DUTY PARAMETERS

WATER FLOW : 85500 M³/HR
HOT WATER TEMPERATURE : 43°C
COLD WATER TEMPERATURE : 33°C
WET BULB TEMP. : 28°C
RELATIVE HUMIDITY : 60%
PUMPING HEAD : 15.5 MWC w.r.t BASIN SILL

BHEL CONFIRMED TO COMPLY WITH THE REQUIREMENTS OF TECHNICAL SPECIFICATION, POST-BID AND PRE-BID CLARIFICATIONS AS PER THEIR KNOWLEDGE AND UNDERSTANDING.



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6	13/12/21	FOR APPROVAL	SCJ
5	18/01/20	HEADER PIPE ELEVATION AT T.P. CHANGED	ARK
4	09/07/19	BASED ON CUSTOMER COMMENTS TRANSMITTAL NO: TCE.11403A-ME-VDT-169	SVG
3	29/05/19	BASED ON CUSTOMER COMMENTS TRANSMITTAL NO: TCE.11403A-ME-VDT-068	MMD
2			
1			
REV. NO.	20/11/18	FOR APPROVAL	ARK
DATE		DESCRIPTION	DRAWN

CUSTOMER		TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED		EPC CONTRACTOR		BHARAT HEAVY ELECTRICALS LIMITED		NDCT CONSULTANT		DRAWN BY :		SVG		TITLE		GENERAL ARRANGEMENT OF NATURAL DRAUGHT COOLING TOWER							
CONSULTANT		TATA CONSULTING ENGINEERS LIMITED BENGALURU INDIA						PROJECT 2x660 MW UDANGUDI SUPERCRITICAL THERMAL POWER STATION, STAGE-I		CHECKED BY		UNB		APPROVED BY		UKR		STCPL DRG.NO. 787-E-DD-101		REV. NO.		6	
										DATE		18/01/2020		BH&E DRG.NO.		PE-V1-435-165-N001		(SHEET 3 OF 3)					
										SCALE		AS SHOWN		THIS DRAWING IS THE PROPERTY OF SPECTRUM Techno Consultants Pvt Ltd IT IS SUBJECT TO THEIR RECALL, AND MUST NOT BE LENT, COPIED OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.									