NTPC Tenders
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Published Corrigendum Details

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Organisation Chain :	NTPC Limited||Southern Region Headquarter
Tender ID :	2021_NTPC_46421_1
Tender Ref No :	NTPC/SSC - SR(Simhadri)/9900214969
Tender Title :	NTPC Simhadri Design, Supply and Installation of electrochlorinators for CW chlorination
Corrigendum Type :	Date

Corrigendum:6

Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
BSED_extn5	BSED_extn5	01-Jun-2021 05:50 PM	BSED_Extn.pdf	182.36

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Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
BSED_Extn4	BSED_Extn4	20-May-2021 04:09 PM	BSED_Extn.pdf	182.36

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Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
BSED_extn2	BSED_extn2	20-Apr-2021 12:55 PM	GepNICBIDEXT.pdf	180.67

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Corrigendum:1

Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
BSED_extn1	BSED_extn1	10-Apr-2021 09:44 AM	GepNICBIDEXT.pdf	180.67

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Details Before Corrigendum

Critical Dates			
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Tender Ref.NTPC/SSC - SR(Simhadri)/9900214969

PROJE SIMHADRI SUPER THERMAL POWER PROJECT - 2 x 500 MW Stage I, 2 x 500 MW Stage II

Clarifications for Design, Supply and Installation of Electro-Chlorinators for CW chlorination

Sl. No	Spec. Reference	Description	BIDDDER QUERY	NTPC reply
1	TECHNICAL SPECIFICATIONS, PART - A, PAGE 18 OF 29	DC RECTIFIERS - Electro chlorination system	Please clarify the type Transformer and Rectifier for Electro chlorination System	The Tranformer and rectifier Unit for each Each Electrolyser (50kg/hr) shall be based on Voltage and Current rating of Choosen Electrolyser, The transformer shall be preferbly Dry type with H class Insulation, other technical specifications as per tender document
2	TECHNICAL SPECIFICATIONS, PART - A, PAGE 24 OF 29	PART - A Sub Sec-III 1.00.00 TERMINAL POINTS - Mechanical	Please provide the pipeline distance & maximum elevation for Hypo solution piping from Electro Chlorination Plant to CW Unit-I Dosing point.	Pipeline distance from electrochlorination plant to CW Unit-1 dosing point is approx 300 meter and the available trestle height is 10-15meter. However exact height and routing to be decided during design stage.
3	TECHNICAL SPECIFICATIONS, PART - A, PAGE 24 OF 29	General	Please provide the pipeline routing drawing for 3KM Hypo solution piping for Unit-II.	Pipeline routing to be provided by the vendor for approval of NTPC after the award of the contract
4	TECHNICAL SPECIFICATIONS	General	Please provide the maximum elevation in the pipeline for CW Unit-II in hypo dosing pipeline.	Available trestle height is approx 15-20m. However exact height and routing to be decided during design stage.
5	TECHNICAL SPECIFICATIONS	General	CW hypo solution dosing pipeline is above ground piping (or) below ground piping? Please clarify.	Mostly Above ground. If any road crossings are encountered along the path of pipeline where trestles are not available, the pipeline may be required to be taken underground. For rest of the routing the pipeline shall be on the trestle. Design and engineering are in the scope of the contractor.
6	TECHNICAL SPECIFICATIONS	General	Please provide the Material of Construction for Self cleaning strainers in Electro Chlorination system.	SS316L or better
7	TECHNICAL SPECIFICATIONS	General	Please provide the Material of Construction for Blowers in Electro Chlorination system. Shall we offer SS 304 MOC.	SS316 or better
8	TECHNICAL SPECIFICATIONS, PART - A, 13 OF 29 (i)	Booster pumps & Strainers - Working Configuration during shock dosing.	During Shock dosing all three streams electrolyzer will run and it is presumed that all three numbers Transformer Rectifiers, Booster pump & Strainers will run during shock. Please confirm.	Yes.

9	TECHNICAL SPECIFICATIONS, PART - A, 13 OF 29 (iv)	Two Nos (1W+1S) of Bulk Sodium Hypochlorite Storage Tanks as per IS 10661 (or any suitable IS/ASTM codes) of capacity that is 125% of shock dosing capacity suitable for storage of NaOCl and degassing of Hydrogen.	Since the shock dosing is going to be done unit wise (Unit I - 30 minutes, Unit II - 30 minutes), we request you to please clarify the capacity of each hypo tanks shall be 125% of hypo required for one unit shock dosing requirement.	Shock dosing SHALL NOT be done simultaneously in both stages. Shock dosing shall be done for 1.5 hours in Morning shift and 1.5 hrs in Evening shift in stage I & Stage II at different timings
10	TECHNICAL SPECIFICATIONS, PART - A, PAGE 24 OF 29	PART - A Sub Sec-III 1.00.00 TERMINAL POINTS - Mechanical	Please provide the pressure of Sea water pressure at terminal point @ CW return duct.	approx 2.5 KSC
11	TECHNICAL SPECIFICATIONS, PART - A, PAGE 24 OF 29	PART - A Sub Sec-III 1.00.00 TERMINAL POINTS - Mechanical	Please provide the distance between Sea water pressure at terminal point (CW return duct) upto Electro-Chlorination building.	aprox 300meter from Sea water tapping point to designated Electrochlorination Building
12	TECHNICAL SPECIFICATIONS, PART - A, PAGE 23 OF 29	The PLC systems shall be provided with necessary interface hardware and software for dual fiber optic connectivity & interconnection with Water system DCS (make – EMERSON OVATION VERSION 3.2) for two - way transfer of signals for the purpose of information sharing. Required cable for above interconnection shall be approx. 2KM . and same shall be in Bidder's	Please clarify whether the 2 KM is the distance between CW Electro chlorination PLC & Water System DCS (or) 1 KM cable with redundant cable is mentioned as 2KM.	the length of single cable along cable route will be approx 2kmfrom electrochlorination plant to water system dcs panels.
13	TECHNICAL SPECIFICATIONS, PART - A, PAGE 18 OF 29, PART -B PAGE 4 OF 67	"MOTORS-All motors shall be of IE3 only" as per page 18/29 - part A, where as as per part B "Continuous duty LT motors upto 160 KW Output rating (at 50 deg.C ambient temperature), shall be Energy Efficient motors,Efficiency conforming to IS 12615, High efficiency (IE3) as per IEC:60034-30"	Please clarify whether the 2 KM is the distance between CW Electro chlorination PLC & Water System DCS (or) 1 KM cable with redundant cable is mentioned as 2KM.	the length of single cable along cable route will be approx 2kmfrom electrochlorination plant to water system dcs panels.
14	TECHNICAL SPECIFICATIONS, PART - A, PAGE 25 OF 29	Electrical - General (MCC Incomer)	We need 415 V A.C. Dual Incomer to feed our Electro chlorination system plant load of 1200 KW (for all three streams working). Please confirm the availability of feeder of this capacity at two different sources PCC/MCC's	Two Sources of suitable capacity will be made available in existing MCC, necessary cabling and other connections are in vendor scope
15	TECHNICAL SPECIFICATIONS, PART - A, PAGE 25 OF 29	Electrical Power supply of the required rating shall be provided by the Employer at 415V, 3 phase, 50Hz MCC Nearest available MCC is at Stage-II DM Plant MCC which will be 100 to 200mtrs away from the identified Electro Chlorination Plant, necessary cable laying from identified source is in vendor scope	As Electro chlorination plant MCC will have dual incomer source, please confirm the distance between 2nd additional source and Electro chlorination MCC location.	Both Sources to Electrochlorination plant is approx 200Mtrs away.

16	TECHNICAL SPECIFICATIONS, PART - A, PAGE 23 OF 29	**SCOPE OF SUPPLY & SERVICES- CIVIL WORKS :** The scope of work shall include carrying out analysis and detailed design of various structures covered in the scope of work, preparation of general arrangement drawings and construction/ fabrication, architectural, sanitary and plumbing drawings. Supply of civil material and civil construction is in owners scope	Civil materials supply & construction works are all excluded from bidder's scope, however detailed civil construction/ fabrication, architectural, sanitary and plumbing / Drawings are mentioned in bidder scope. Please confirm our understanding	Civil materials supply & construction works are in Owner scope based on bidders detailed civil construction/ fabrication, architectural, sanitary and plumbing / Drawings after anaysis and design as per package requirement.
17	TECHNICAL SPECIFICATIONS, PART - A, PAGE 24 OF 29	**PART –A Sub Sec-II D-01, SCOPE OF SUPPLY & SERVICES - CIVIL WORKS - Construction Facilities** The following are in the Bidder's scope of work pertaining to construction facilities for the package. (1.) Development of Bidder's temporary staff colony and labour colony along with fencing, etc. wherever required.	Please note that Civil work works are all excluded from our scope. Hence, we request you to clarify the need for Construction facilities in Bidder's scope.	Temporary Construction facilities whereever required to complete the scope of work as per the package excluding Civil Construction is in Bidders scope.
18	TECHNICAL SPECIFICATIONS, PART - A, PAGE 8 OF 29	1.14.00 All dismantling, modifications, alterations, relocation of the existing system/building(s) required to be done to complete the work shall be under Bidder's scope	Please clarify whether any dismantling works are there in Bidder scope.	Bidders requested to visit site. However for basic understanding some of the work area is cement concrete surface in addition to this any minor wall dismantlings may be necessary. Hence any Dismantling works wherever required are in bidder's scope a
19	TECHNICAL SPECIFICATIONS, PART - A, PAGE 194 of 197	CW Analysis report	COD, BOD, TOC, manganese these parameters are not reported in CW analysis. We presume these parameters are NIL in water analysis. Please confirm	No. COD <30 mg/L; BOD< 5 mg/L, TOC<15 mg/L ; Mn<0.01 mg/L
20	GENERAL TECHNICAL REQUIREMENTS (GTR) PART-C , pg 33 of 40	27.00.00 INSTRUMENT AIR SYSTEM : The instrument air supply system as supplied by the Contractor for various pneumatic control & instrumentation devices like pneumatic actuators, power cylinders, E/P converters, piping / tubing etc. shall be as per the details furnished elsewhere.	Please confirm whether we can go pneumatic actuators throughout the Electro chlorination plant.	electrical actuators only
21	GENERAL TECHNICAL REQUIREMENTS (GTR, PART-C, Page 4 of 40	8.01.00 The Contractor shall furnish engineering data/drawings and manuals in accordance with the schedule of information as specified in Technical Specification and data sheets (Attachment to 12 to Section VII).	Attachment 12 to section VII - is not available in specification. Please share the document.	In GTR,Part C, clause: 8.01.00-"(Attachment to 12 to Section VII)" may be ignored. The Contractor shall furnish engineering data/drawings and manuals in accordance with the schedule of information as specified in Technical Specification

22	ITB Instructions to Bidders	8.1 Techno-Commercial Bid 8.1.1 Documents to be submitted in physical form in separate sealed envelope (s) duly marked in accordance with ITB clause titled 'Sealing and Marking of Physical Documents' (Tender fee- online receipt, Integrity pact, Power of attorrney etc...)	Due to covid situation, we request to accept soft copy submission with self attestion / Digital sign in line with other NTPC recent tenders.	Tender Fee can be paid through Net Banking in GePNIC portal. By considerinf the covid19 situation bidders may submit the required offline documents in GePNIC portal with Digital signature.
23.1	Section 6-2 Terms of Payment	Payment terms clarifications Terms of Payment 1. Supply of Equipments: In respect of Supply of Equipments the following payment shall be made A. Ten Percent (10%) of the total ex-works supply of equipment's price component as Initial advance Payment on: a) Acceptance and signing of contract agreement b) Submission of an unconditional bank guarantee covering the advance amount, which shall be initially kept valid up to (ninety)90 days beyond the schedule date for successful completion of the last facility covered under the package. However, in case of delay in completion of the facilities, the validity of this Bank Guarantee shall be extended by the period of such delay. Proforma of Bank Guarantee is enclosed (Form of Advance Payment Security).	Noted. Ok	Payment terms are as per : Section 6-2-Terms of Payment

23.2	Section 6-2 Terms of Payment	B. Sixty Percent (60%) of ex-works supply of equipment price component of the Contract Price for each identified equipment shall be paid progressively on pro-rata basison receipt of equipment at site and physical verification and certification by the Project Manager of the equipment received and stored at site. The Contractor shall submit Material Dispatch Clearance Certificate(MDCC) issued by the Employer's QA & I representative wherever applicable for payment. The release of first	We request for Eight Percent(80%) against receipt of material at site.	Payment terms are as per : Section 6-2-Terms of Payment
23.3	Section 6-2 Terms of Payment	C. Twenty Percent (20%) of ex-works supply of equipment price component shall be paid progressively on pro-rata basis on successful installation and certification of Project Manager.	We request for Five Percent(5%) against prorate installation	Payment terms are as per : Section 6-2-Terms of Payment
23.4	Section 6-2 Terms of Payment	D. Ten Percent (10%) of ex-works supply of equipment price component on successful completion of commissioning and Guarantee Tests of entire package and certification of Guarantee Test result by Project Manager.	We request for Five Percent(5%) against successful completion of commissioning	Payment terms are as per : Section 6-2-Terms of Payment

24.1	IFB Section-1, Clause 7 - Brief Scope of Work	Project of capacity 3X50 kg/hr as available chlorine (CTE-"Concentric Tubular Electrodes" type)	The CTE (Concentric Tubular Electrodes), also called self-cleaning electrodes, are more suited where acid cleaning is prohibited, sites like offshore platforms. Tubular cells are easily replaced as and when required. However, the advantage and disadvantages as compared with plate type electrolyzers are as under: 1.Low capital cost (less titanium) but high maintenance cost for tubular cells; 2.Endless connections means possible leaks which cause further corrosion in the eplant area if leaky connections are not attended in time, a 50 kg/h CTE electrolyzer contains nearly 300 gasketed joints with threaded PVC unions – each joint is a potential leak point, whereas with plate type design, only 3 electrolyzers are sufficient; 3.Frequent failures–expensive spares, due to operation at high pressure (6-7 bar) to induce the high flow velocities of about 4 m/s through the annular cells. In essence, the electrolyzer is a long annular pressure vessel thin wall titanium tube for the inner and outer electrodes; 4.Excessive seawater impurities can cause tenacious scale deposits on electrode surfaces; 5.All calcium-magnesium deposits conveyed into the hypochlorite storage tank with a consequent cleaning and removal of deposits to be effected very often that otherwise would damage injection pumps;	CTE means Concentric Tube Electrodes by design having self cleaning characteristics and can operate under high pressures up to 10bar, These CTE tubes are inserted one in the other as anode and cathode and sea water is passed through the annular space and it forms Anode/Cathode cell. NTPC Decision: The specifications are as detailed in tender documents. There is no change in tender speciifcations
24.2	IFB Section-1, Clause 7 - Brief Scope of Work	Project of capacity 3X50 kg/hr as available chlorine (CTE-"Concentric Tubular Electrodes" type)	The following are attached: 1.Datasheet / drawing for a typical plate type electrolyzers (75 Kg/h capacity) supplied by us is attached. 2.The above includes the operating parameters as desired. 3.The performance certificate is attached as desired.	These documents are only for academic interest. Tender specifications remain same.
25.1	**Technical Specifications:** PART –A Sub Sec-II Intent of Specification	The volumetric flow rate of Circulating Water system in each stage (viz; stage-1 and stage-2) is 118000 m3/hr	Please furnish the following: 1.Continuous dosage rate 2.Shock dosage rate; 3.Shock dosing frequency (number of times per day); 4.Shock dosing duration (per shock dose). The above help optimize the hypochlorite tank capacity.	1. Continuous dosage rate -40 kg/hr 2. Shock dosage rate; 80 kg/hr 3. Shock dosing frequency (number of times per day); 2 times a day per each stage 4. Shock dosing duration (per shock dose).1.5 hrs in Morning shift and 1.5 hrs in Evening shift in both stages . Shock dosing shall not be done simultaneously in both stages

25.2	4.00.00 Brief description	Stage 2 CW forebay is located at a distance of approximately 3 km away from proposed location of electrolysers near stage 1 CW chlorination plant.	Please furnish the pipe rack / trussle layout drawing to work out the exact quantity of pipes and fittings to optimize the cost.	Design is in the scope of party. The party has to visit the site and propose a suitable routing for approval of NTPC afer the award of contract. For tendering purpose the approx length of pipeline given in tender documenst may be considered.
25.3	4.00.00	Stand by electrolyser to be used along with working electrolysers for shock dosing at 80 kg/hr each.	Two (2) streams shall be in continuous operation, and one (1) stream in standby. The operating streams shall accumulate the hypochlorite in the hypochlorite storage cum hydrogen degasing tank for continuous dosing and an additional pump shall be operated to meet the shock dosing requirement. Only the quantity of pumps operating will be one (1) during continuous dosing and two (2) during shock dosing, and not the electrolyzers.	NO. To meet the requirement of continuous dosing at a rate of 40 Kg/hr in stage-1 and stage-2 to, 02 electrolyser shall be in service and while doing shock dosing at 80 kg/hr the Stand by electrolyser shall operate along with 02 working electrolysers. No concept of accumulation in the tank.
25.4	PART –A Sub Sec-II A-01(iv)	The tank capacity shall be sufficient enough to accommodate for the continuous running of all Three Electrolysers during shock dosing.		
25.5	PART –A Sub Sec-II A-01(i)	The duration of shock dosing is 3 Hours per Day for both Stages	We understand that the shock dosing requirement is 3 hours for stage-1 and 3 hours fpor stage-2. Please confirm. We understand that the shock dosing will be done for 1 hour in every shift of 8 hours, hence, a total of 3 hours per day. Please confirm our understanding is correct.	Shock dosing will be done as per site requirement based on biological load. Dosing rate of 1.5 hours in morning and evening shifts in each stage mentioned is Indicative
25.6	PART –A Sub Sec-II 1.01.00(A)2	Chemical Storage Facility with neutralizing pits.	Neutralizing pit is only for spent hydrochloric acid and waste during electrolyzer cleaning, not for generated sodium hypochlorite. Please conform acceptance.	No. common Neutralising pit should take care of neutralisng hypochlorite coming from storage area dyke. Dyke wall should have valves to enable controlled draining of dyke
25.7	PART –A Sub Sec-II D-01	The scope of work shall include carrying out analysis and detailed design of various structures covered in the scope of work	Please furnish the soil analysis report.	Soil analysis report not available
28	Electro-Plant Layout	Red rectangles marked on the drawing	1.Please clarify the red markings on the drawing. 2.Please furnish the pipe rack drawing up to the Stage-2 forebay.	1. May please ignore the red marking. Only the Blue rectangle indicating the designated location for this project may be considered in the Plant layout drawing attached. 2) Reply is same as provised for Sr. No 2.2 above

29	**BOQ.xls sheet**	**GST on Mandatory spares**	As we fill the pricing document (Excel Sheet), we find too many irregularities in the columns and also lots of confusion regarding the GST	1.GST Amount quoted by bidders in the sheet of "Breakup_of_Mandatory_Spares" is not reflecting in BOQ1.xls sheet. Therefore, Bidders are requested to quote the GST rate in the sheet of "Breakup_of_Mandatory_Spares".GST Rate quoted in the sheet "Breakup_of_Mandatory_Spares" shall be considered for evaluation. 2.Also the column"Total Amount Inclusive of taxes (Column BB in BOQ1.xls sheet)" hidden in the BOQ1.xls sheet.However "The Quoted Rate in Words"(Cell No C23 of BOQ1.xls sheet)is derived Considering GST for all items excluding Mandatory spares.GST for Mandatory spares shall be loaded as per GST quoted in "Breakup_of_Mandatory_Spares" sheet. If GST is not quoted in Mandatory spares , it will be treated that GST is inclusive in the basic quoted rate.