

PREBID QUERY RESPONSE LOT 1

NAME OF WORK : COOLING TOWER PACKAGE FOR POLYPROPYLENE PROJECT OF M/SNUMALIGARH REFINERY LIMITED

BIDDING DOCUMENT : LT/C050-1U68-PB-T-8010/1004

Sl. No.	REFERENCE OF ENQUIRY DOCUMENT				Queries	Clarifications
	PART/VOL.	PAGE NO.	CLAUSE NO.	SUBJECT		
TECHNICAL QUERIES						
1	Scope limit drawing	2686 of 5436	Plan drawing	Clearance between CW PH building and cooling tower	<p>Since the clearance between cooling tower air entry side and CW pump house shed is not indicated, kindly confirm that the dimensions shown for CW sump and pump bay area are only tentative and can be suitably modified by cooling tower contractor within the marked battery limit.</p> <p>Also please confirm that constructing a (CW) Pump House Building, as mentioned in the scope limit drawing / scope of work, is not mandatory. Instead cooling tower contractor can opt for constructing a CW pump shed.</p>	<p>Bidder's understanding is correct. Layout of all facilities within scope limit to be firm up by the CT Contractor meeting requirements of the bid package.</p> <p>Type of pump house envisaged for CW pumps is indicated in Scope drawing (C050-1U68-81-45-04801). Bidder to follow the same.</p>
2	Scope limit drawing	2686 of 5436	Note 5	"..THE EXACT LOCATION AND ELEVATIONS SHALL BE FINALISED DURING DETAIL ENGINEERING WHICH MAY VARY FROM THE PRESENT LOCATION. CT PACKAGE CONTRACTOR TO FOLLOW THE FINAL BATTERY LIMIT CONDITIONS, WITHOUT ANY TIME AND COST IMPLICATION."	Please provide the utility piping battery limits including CWR & CWS lines (coordinates and elevations) in the scope drawing for correct estimation during bidding stage.	Piping battery limits are shown in the scope drawing. Same shall be firm up during detail engineering.
3	Scope limit drawing	2686 of 5436	-	Space allocation and clearances	Please mention the area allocated for CWTP Block, SSF Block, Chemical Dosing block, H2SO4 Dosing Block and the Pump Station in the scope drawing, as the dimensions are not marked.	To be firm up by the CT Contractor as per requirement. Area allocated for complete CT package is shown in the Scope drawing.
4	Scope limit drawing	2686 of 5436	-	-	Please provide the AutoCAD copy of the scope drawing no. C050-1U68-81-45-04801-Rev. B.	Shall be provided to successful bidder (if required).
5	General	2688-2691 of 5436	-	Chemical Dosing	Please clarify whether the pumps and tanks used for chemical dosing, H2SO4 & ClO2 Dosing systems are to be considered as Non-API or API standard.	Bidder to refer Cl. No. 3.2.2 of Engineering Design Basis (SME) (Doc. No. C050-999-80-42-EDB-1001) for applicable codes & standard for Rotating Equipment.

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6	P&ID	-	-	Nitrogen & steam line	As shown in the P&ID, Nitrogen line(IG) and Steam line(LPS) are not required for cooling water application and not envisaged at the battery limit. Hence Nitrogen line and Steam line will not be considered in our scope. Please confirm.	Vendor to follow EIL P&ID as given in tender.
7	General	-	-	MOC - SSF	It is noted that MOC of the SSF is Boiler quality Carbon Steel with corrosion allowance 3 mm. Please note that for low pressure cooling water application, boiler quality plates are not envisaged. Please confirm if CS plate of IS: 2062 grade as MOC of the SSF shell and heads can be considered here.	Bidder to follow tender requirement
8	General	-	-	MOC - SSF	Please confirm the MOC of the internal header and laterals of the SSF.	MOC for internal header and laterals shall be 11-13% Cr steel.
9	General	-	-	Back-wash pit pumps	As per scope matrix, backwash pit pumps are not included in scope of supply of the CT contractor. Please confirm. If included, please provide the type of pump, capacity, head and quantity to be considered.	Bidder to refer P&ID C050-79-41-1U68-1113 attached with tender. Back wash pit pumps are in the scope of Contractor.
10	Scope limit drawing	2686 of 5436	Detail-3	Valve arrangement	As per Detail-3 of B/L valve arrangement shown in the scope drawing, all the battery limit isolation valves are excluded from CT vendor's scope for all the utility lines. Please confirm.	Bidder's understanding is not correct. B/L valves are clearly shown in Contractor's scope in Scope drawing.
11	P&ID	2688-2691 of 5436	-	Drinking water line	As per Note No. 1 of the CT P&ID, Drinking water(WDK) will be provided to the safety shower and eye wash facilities by Client, but no WDK line is shown at the B/L in the scope drawing/ P&ID. Please clarify the scope.	Drinking Water is shown in the scope drawing (near CWTP block).
12	General	-	-	Soil investigation	Please furnish complete soil investigation report with bore log data for the cooling tower package area. In addition also please furnish the following information for the cooling tower location: a) FGL & NGL b) Safe soil bearing capacity with founding level c) Detailed civil specifications with design codes to be followed d) Painting specification, if any, applicable for concrete surfaces e) Topographical survey report f) Under-ground scanning report	Please refer Technical Amendment-1 (to be issued)

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13	General	-	-	Hazardous zone classification	Please confirm the hazardous zone classification level to be considered in electrical and instrumentation design for cooling tower package. Please specify gas group / temperature class / enclosure categories, as applicable.	Zone shall be considered for Cooling tower as per Figure No. 19 of OISD-113. Gas group shall be IIA/IIB and Temp. class shall be T3. Regarding enclosure type/Ex-grades, refer Bidding document.
14	General	-	-	Construction power and water supply	Please confirm that Customer shall arrange for construction power and construction water (including water required for drinking and testing purposes) free of cost at a suitable location near proposed cooling tower site.	Bidder to follow the provisions of the tender.
15	General	-	-	Existing underground services	We understand that graded site shall be handed over to us. No underground utility need to be removed / re-routed by cooling tower bidder at any stage whatsoever. Any such work, if applicable, will have to be taken up by Purchaser only, before handling over of cooling tower site to the cooling tower contractor.	Bidder to follow the provisions of the tender.
16	SCOPE OF WORK INSTRUMENTATION COOLING TOWER PACKAGE Document No. C050-1U68-16-51 -SOW- 801 0 Rev A	8 of 11	Sl. No. 11	HAZOP	Please confirm that only participation in HAZOP is required from cooling tower bidder's end, as per scope of work.	Refer "HSE SCOPE OF WORK & SUPPLY FOR COOLING TOWER PACKAGE POLYPROPYLENE (PP) UNIT PROJECT" where the responsibility of contractor has been mentioned in regard to various safety studies.

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17	General	-	-	Scope of supply of Gas detectors - Instrumentation	Please confirm whether gas detectors such as HC/H2S Gas detectors shall be in Owner's scope (free issue) or have to be considered by Cooling Tower Bidder, as mentioned differently in different places of the Tender.	Contractor to refer Sno.11 of Scope of Works (Instrumentation), Doc No. C050-1U68-16-51-SOW-8010 attached with tender. "Supply of HC/H2 Gas Detectors shall be in Owner's scope. Same shall be free issued to the Contractor for installation, loop checking and commissioning. All the installation materials for HC/H2 gas detectors shall be supplied by the contractor".
18	General	-	-	Mandatory spares list	Provide the mandatory spare list for Control & Instrumentation and Electrical scope of work.	a) Contractor to refer Mandatory spare parts list (Instrumentation), Doc No. C050-1U68-16-51-SL-8010 attached with tender for details. b) Bidder to refer " MANDATORY SPARE LIST (ELECTRICAL) FOR COOLINGTOWER PACKAGE, C050-1U68-16-50-SL-8010" for the details of mandatory spare to be supplied for electrical items.
19	JOB SPECIFICATIONS INSTRUMENTATION COOLING TOWER PACKAGE DOCUMENT No. C050-1U68-16-51 - SP-8010 Rev. A	Page 23 of 36	Clause no 2 sub clauses no ix) / Clause no 6.1, 6.5	Cable route and length	Please confirm the direct cable routing distance between CLO2 - Dosing system PLC and Owner's MCC, based on the subject clauses. Please confirm that E&I Cable routing shall be through perforated cable trays , hence no cable duct shall be applicable.	a) Instrumentation Cable distance between cooling tower package battery limits/ CLO2 dosing system PLC and Polypropylene Control Room (PCR) is 1200 meters(Approx). b) Electrical power & control cable routing shall be through trays & trenches with the package battery limits and on trays outside the package limits. Considering the location of PLC for CLO2 Dosing system within the package battery limit, distance to Owner's MCC shall be considered as approx. 800m for cabling.
20	SCOPE OF WORK INSTRUMENTATION COOLING TOWER PACKAGE Document No. C050-1U68-16-51 -SOW-8010 Rev A	Page 3 of 11	clause no 2.4.5	MCC for Chemical Dosing System	We understand that MCC for the Dosing system shall not be considered by cooling tower bidder, and shall be considered at Owner's MCC end. Please confirm.	Power Distribution Boards for feeding single phase motors provided as part of package i.e. motor rated up to 0.18kW, shall be provided by the bidder. For all other ratings, feeders shall be provided bu Owner.
21	General	-	-	Process data sheet	Kindly Provide the Instrument Process datasheet for the C&I items under cooling tower bidder's scope.	PDS of all instruments to be developed by Contractor. Bidder to refer P&IDs attached with the tender.

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22	General	-	-	Instrumentation for CW pump motor	<p>For each CW Pump motor, we shall have to consider 5 nos of dual input dual compartment type field mounted temperature transmitters (for WTD, RTD temperature monitoring and tripping) and 3 nos of Loop powered vibration transmitter (tripping on high high vibration). Please confirm.</p> <p>Vibration transmitters shall be SIL2, CCOE/PESO certified Non- HART type without display unit (Proposed makes : Hansford Sensors Limited / Metrix Instrument / or equal). Please confirm.</p>	<p>a) The vibration and temperature monitoring signals for cooling water pumps shall be connected to purchaser's DCS / PLC (located in PCR) as per the P&IDs. Suitable transmitters for vibration and temperature monitoring signals shall be provided by the contractor and wired upto the junction boxes by the contractor. All remote mounted temperature transmitters (not head mounted type) shall be provided with dual compartment housing</p> <p>b) Vibration Monitoring (For Cooling Tower Fans) : Vibration transmitters (with 4-20 mA output) shall be connected directly to PLC for tripping of fans. 2oo2/ 2oo3 shall be considered for voting configuration for vibration transmitters in case of tripping. All transmitters shall be PESO certified. The datasheets with make / model of vibration transmitters will be reviewed during detailed engineering stage after ward of order meeting the proven track record (PTR) requirements.</p> <p>b) Bidder to note that as per clause 6.2.13 of "JOB SPECIFICATION (ELECTRICAL) FOR COOLING TOWER PACKAGE, C050-1U68-16-50-SP-8010", RTD/BTD shall be provided for HV motors as per Cl. 7.1 and Cl. 7.2 respectively of EIL specification 6-51-0031. Bidder to ensure compliance for same</p>
23	General	-	-	Gear box lube oil level transmitter	<p>3 nos of Guided wave radar type level transmitter per cell, for gear box low oil level indication, shall be considered by cooling tower bidder. Please confirm.</p>	<p>Bidder to follow tender requirement.</p>

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24	SCOPE OF WORK INSTRUMENTATION COOLING TOWER PACKAGE Document No. C050-1U68-16-51 -SOW- 801 0 Rev A	-	CL. 2.11	Cable tray routing distance	Kindly provide the cable tray routing distance between Owner's Cable duct & Cooling Tower cable tray riser drop-down location as per tender specification.	As per Job Specification (Instrumentation), Supply of all Instrumentation cables including cable trays within the specified cooling tower package battery limits shall be in contractor's scope. Instrumentation Cable trays including its structural supports shall be provided by the Contractor within the package battery limits and interfacing of cable trays upto Owner's Instrumentation cable duct shall be provided by the contractor as per tender. Also, Refer Note-15 of Scope Drawing of general civil works - PPU Cooling Tower (C050-1U68-81-45-04801) attached with Tender. "The co-ordinate and tie-in point at package battery limit (for interfacing owner's cable duct and contractor's cable trays) shall be finalized during detail engineering stage" and the same will be provided to the successful bidder after award of Order.
25	JOB SPECIFICATIONS INSTRUMENTATION COOLING TOWER PACKAGE DOCUMENT No. C050-1U68-16-51 - SP-8010 Rev. A	Page 16 of 26	-	Anodized aluminium cable tray specifications	Reference of anodized aluminum perforated cable trays is found. Please share the job specification for the same.	Contractor to refer EIL drawing No. 7-52-0107 for Perforated tray supports & cables clamping details attached with the tender as part of Instrumentation List of drawings (Doc No. C050-1U68-16-51-SP-1003).
26	JOB SPECIFICATIONS INSTRUMENTATION COOLING TOWER PACKAGE DOCUMENT No. C050-1U68-16-51 - SP-8010 Rev. A	Page 17 of 26	clause no 12	Local control panel requirement	Requirement of local control panel is mentioned in the clause, which we perceive is not relevant to Cooling Tower package. We understand that the entire system is being operated through Owner's DCS/PLC system for the CT unit and SIL3 PLC System for the CLO2 - CDS Units. Hence, please confirm that the said LCP is not applicable for cooling tower bidder's scope.	Bidder to follow the tender requirements. Local control panel (as applicable) for cooling tower package shall be in Contractor's scope.
27	SCC Annexure	644 of 5436	Annexure A- XII	Loading criteria for cooling tower package / BOQ5 Cl. 1.01	Regarding loading criteria for the subject tender, please confirm the following : (I) Guaranteed electrical power shall be quoted and evaluated for only cooling tower fans in 2 nos. working cells of subject cooling tower, as per Loading Criteria in SCC Annexure. Please confirm. (II) Measurement of electrical power consumption shall be made at the motor terminals for cooling tower fans. Kindly confirm.	Bidder to follow the bid requirement.