



**OWNER:
INDUSTRIAL ENERGY LIMITED (IEL)**

**PROJECT MANAGER:
THE TATA POWER COMPANY LIMITED**

**TITLE OF WORK TO BE AWARDED:
SUPPLY AND SUPERVISION OF ERECTION, TESTING & COMMISSIONING OF EOT
CRANES
FOR**

**PROPOSED POWER HOUSE #7 (PH#7) PROJECT LOCATED INSIDE
TATA STEEL JAMSHEDPUR**

ENQUIRY REFERENCE NO.: CC23PP012

NOTICE INVITING EXPRESSION OF INTEREST (EOI)

Enquiry reference no.: CC23PP012
Title of Work: Supply and supervision of erection, testing & commissioning of EOT Cranes for PH#7 Project
Type of Bidding: E-tendering (through Ariba online portal) / Two Part (Technical and Price bids under separate envelopes)
EOI Submission Due Date: 29th October 2022, COB
Contact Details: All communication including EOI submission shall be addressed to following officer/s: Ms. Pritha Patra Email: pritha.patra@tatapower.com Copy of all communications shall be marked to (Cc): Ms. Yogita Waman Email: yogita.waman@tatapower.com

The Tata Power Company Limited Invites Expression of Interest (EOI) from interested parties for the Two-Part e-Tendering Process of following Relevant Work Package:

Table1 – Tender Summary

Package Details	Tender Fee	Bid Security	Estimated Package Value
Supply and supervision of erection, testing & commissioning of EOT Cranes for PH#7 Project - CAPTIVE POWER PLANT located inside Tata Steel Jamshedpur, Jharkhand	INR 1000/- (INR One Thousand Only). <i>To be submitted along with EOI.</i>	INR 5,00,000/- (INR Five Lakhs only). <i>Bid Security to be submitted as a Bank Guarantee at the BID stage (and not with EOI)</i>	Rs.2.5 crores (Rupees Two Crores and Fifty Lakhs only)

1. INTRODUCTION:

Tata Power Company limited is hereby inviting Expression of Interest (EOI) from interested and eligible parties for "**Supply and supervision of erection, testing and commissioning of EOT Cranes for PH#7 Project**"

Industrial Energy Limited (IEL) is setting up a green field Captive Power Plant (CPP) of 1x120 MW inside Tata Steel Jamshedpur premises.

The tendering/ procurement activities for this Project are being managed from Tata Power's following Office:

Smart Center of Procurement Excellence (SCOPE),

Corporate Contracts,
The Tata Power Company Limited,
2nd Floor, Sahar Receiving Station, Near Hotel Leela,
Sahar Airport Road, Andheri East, Mumbai – 400 059.
Maharashtra, India.

2. SCOPE OF WORK:

The Scope of Work under this tender includes design, manufacture, assembly, inspection and shop testing at vendor's and/or his sub-vendor's works, suitable painting, packing requirements for transportation, supervision for erection and construction, commissioning and testing at site of all materials and equipment for cranes with all accessories.

Detailed Scope of Work for this Contract shall be provided in the Tender / RFQ document to all potential buyers submitting the valid EOI with due tender fees.

3. TENDER FEE & TIMELINES:

a) Interested parties meeting the "Bidder Pre-Qualification Requirements" specified under point no. 4 in this document can request tender document and participate in the bidding process by submitting the Expression of Interest (EOI) Letter along with the Tender Fee Payment Details to the contact details mentioned below not later than deadline specified below. Request for Bid Document / EOI will not be entertained beyond this deadline.

b) Interested bidders should submit the Expression of Interest (EOI) letter and tender fee payment details to below mentioned email addresses:

- Mails shall be addressed to (To): pritha.patra@tatapower.com
- Must Mark a copy to (Cc): yogita.waman@tatapower.com

EOI/ requests without complete information and communication as above within deadline shall be liable to be rejected and will not be considered further.

c) Tender Fee, as indicated in the Table1 above may be paid through **NEFT** as per details for payment of Tender Fee given in Table 2 below:

Table 2

Details for payment of Tender Fee:	
Bank details for submitting Tender fees through bank transfer / NEFT:	Beneficiary Name: The Tata Power Company Limited Bank Name: HDFC Bank A/c no: 00600110000763 IFS Code: HDFC0000060 A/c type: CC Branch Name & Address: HDFC Bank, Maneckji Wadia Building, Nanik Motwani Marg, Fort, Mumbai 400023
Deadline for tender fee payment and submission of EOI:	29th October 2022, COB

d) Expression of Interest letter to be submitted along with tender fee payment details should include the following details:

- A covering letter duly stamped and signed by an authorized signatory clearly indicating the Tender Reference number and your EOI to participate in the tendering process.
- Tender fee payment details / reference no (ensure that tender fee is received by us within specified deadline)
- Bidder to indicate authorized person name, contact number and e-mail id (mandatory) of the person to whom RFQ / tender and all other communications to be addressed for this tender.

e) Detailed Bid Document (also referred as RFQ) shall be issued through Tata Power e-tender portal (Ariba System) only to the parties submitting a valid EOI as per terms mentioned in this document.

4. BIDDER PRE-QUALIFICATION REQUIREMENTS:

Interested parties to note that Bidder shall be required to fulfill the following bidder pre-qualification requirement / criteria in order to qualify for the subject work. Bidder will be required to submit relevant supporting documents to demonstrate their qualification during the bid submission stage against Tender document / RFQ and bidders not found meeting the pre-qualification requirements given below will be disqualified from the tender.

4.1 TECHNICAL REQUIREMENT:

1. Bidder must have supplied minimum 5 number of EOT crane of 75 ton main hook & 18Ton Auxiliary hook or above capacity in last 7 years.
2. Bidder must have executed 2 nos of similar scope of project with contract value minimum 1 Cr and above in last 7 years.

4.2 FINANCIAL REQUIREMENT:

Bidder shall have an Average Annual Turn Over of not less than INR 10 Crores during the last three financial years.

5. BID SECURITY / EMD:

Interested parties to note that Bidder will be required to furnish a Bid Security **along with their Bid**, in the format prescribed in Bid Document **in the form of Bank Guarantee/ DD/ RTGS**, for an amount as defined in the covering page of this notice document. Bids not accompanied by an acceptable Bid Security shall be rejected by the Owner as being non-responsive and returned to the bidder without being opened.

Interested parties to note that Bid Security is not required with the EOI and it is required to be submitted with the Bid only during Bid Submission stage, once RFQ is released to the interested parties that have submitted a valid EOI.

6. BIDDING PROCESS:

Detailed Bid Document (also referred as RFQ) shall be issued through Tata Power e-tender portal (Ariba System) only to the parties that submitted a valid EOI as per terms mentioned in this document.

Bidder to note that commercials for subject tender may be conducted through e-auction. Detailed bidding and auction process shall be detailed in the RFQ / tender document.

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	TECHNICAL SPECIFICATION FOR EOT CRANES	Title : General Technical Specification Page : 3 of 27

SECTION – A**GENERAL TECHNICAL SPECIFICATION****1.0 INTRODUCTION**

TATA STEEL JAMSHEDPUR (TSJ) is putting up a green field Captive Power Plant (CPP) of 1x120 MW in Jamshedpur. This plant will be located in the existing integrated steel plant as PH#7 and it will utilize the exhaust waste gases such as Blast Furnace Gas (**BFG**), Coke Oven Gas (**COG**) and LD gas from the steel plant as the fuels for power generation.

2.0 INTENT OF SPECIFICATION

This specification covers the design, manufacture and assembly, inspection and shop testing at the vendor's and/or his sub-vendor's works, suitable painting, packing requirements for transportation, supervision of erection and construction, commissioning and testing at site of all materials and equipment for Cranes with all accessories as specified hereinafter.

3.0 SCOPE OF WORKS

Refer **Annexure A-1.1** Scope matrix for the entire scope for Cranes package.

4.0 DESCRIPTION

In this power plant, double girder Electric overhead crane is provided in the following areas.

- STG Building
- Cooling Water pump house

**5.0 TERMINAL POINTS****5.1 Mechanical**

- a) STG crane and CW pump house crane

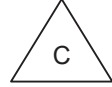
Double girder EOT cranes top running run way rail (LT rail) which is located above the runway beam along the building columns. Supply of crane rails, laying, alignment and fixing of rails on the girder is in the scope of this Bidder.

**5.2 Electrical**

Power Supply : One number of 415V, 3ph, 3 wire, 50Hz Power supply for each crane assembly at incoming terminals of MCCB box / Load break Isolator switch (supplied by the crane vendor) located at about 1.5 m above the ground floor level, near maintenance bay area, inside the building shall be provided by Owner.

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ANNEXURE – B-1.1
SPECIFIED DESIGN DATA – EOT CRANES



A) DATA SHEET FOR EOT CRANE - TG HALL

SL. NO.	DESCRIPTION	DATA
1.0	MATERIALS AND CODES OF CONSTRUCTION OF MAJOR ITEMS	
1.1	Design of crane	IS 807 & IS 3177: 1999 (latest revision)
1.2	Rope drums & sheaves	IS 3177 Duty Class-M5 (latest revision)
1.3	Wire rope	
i	Design code	1770 / 1960 confirm to IS 2266.
ii	Construction	6x36 construction fiber core / Steel core Same will be finalized DDE.
iii	Factor of safety of wire rope	As per IS: 3177
1.4	Lifting hooks	
i	Main Hoist	Ramshorn type as per IS-5749
ii	Auxiliary hoist	Plain shank hook as per IS 15560 / IS 8610
iii	Swiveling arrangement with locking facility required for	Main Hoist & Auxiliary hoist
iv	Material	Forged steel as per IS: 1875 Grade 2.
1.5	Crane rails	Full gantry length
1.6	Design code	IS 3443
1.7	Crane bridge, girder, end carriage	IS 2062
1.8	Type of girder construction	Double girder (box)
1.9	LT wheels / CT wheels	Forged or cast steel with Minimum hardness of the wheel rim between 300 to 350 BHN with minimum depth of 10 mm
i		Steel used for wheel shall not contain more than 0.06% of Sulphur or Phosphorous.
ii		Material of LT / CT Wheels shall be C55Mn75 as per IS: 1570.
1.10	Rope drums	Fabricated from Carbon Steel as per IS: 2062, Gr. B and stress relieved or of seamless steel pipe as per ASTM A-106 grade A or B

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SL. NO.	DESCRIPTION	DATA
2.0	TECHNICAL PARAMETERS	
2.1	Type of service	Indoor
2.2	Location	TG building
2.3	Design ambient temperature	50° C
2.4	Crane Classification	M5 for Mechanical , Electrical and structural
2.5	Crane capacity (main / auxiliary)	75 / 18 T (Based on BHEL mail dated 03.09.2018)
2.6	Span	Refer Crane Clearance Drawing-TG Hall (GE00351-V002-00-M21-M2-001). LED display on the main girder indicating the load lifted by the hook and the same shall be clearly visible from operating floor.
2.7	Lift	
i	Main hoist	
ii	Aux. hoist	
2.8	Operating Speeds with full load	
i	Main Hoisting speed	1.5 m/min.
ii	Auxiliary Hoisting speed	3.0 m/min
iii	Cross travel speed	10.0 m/min
iv	Long travel	10.0 m/min
v	Creep speed	
	Main hoist	10% of main speed achieved through VVVF type
	Aux. Hoist	10% of main speed achieved through VVVF type
	Cross traverse	10% of main speed achieved through VVVF type
	Long travel	10% of main speed achieved through VVVF type
2.9	Brakes	
i	Main hoist	1No.DC Electromagnetic & 1No. Electro hydraulic thruster operated shoe type brake.
ii	Auxiliary hoist	1 No. DC Electromagnetic & 1 No. Electro hydraulic thruster operated shoe type brake.
iii	Long travel	1 No. DC Electromagnetic & 1 No. Electro hydraulic thruster operated shoe type brake.
iv	Cross travel	1 No. DC Electromagnetic & 1 No. Electro hydraulic thruster operated shoe type brake.
v	Emergency/Parking brake	Electro hydraulic Thruster type operated from cabin

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SL. NO.	DESCRIPTION	DATA
2.10	Buffer	
i	Number buffer for Cross travel	4 nos.
ii	Number buffer for Long travel	4 nos.
iii	Type	Rubber / spring loaded type.
2.11	Motors	Motor ratings shall be calculated keeping a margin of atleast 15% over the maximum power requirement.
i	Enclosure	Totally enclosed fan cooled (TEFC), class F insulation (Temperature limited to Class-B), and degree of protection IP--55
ii	Main motors for main hoist, Aux hoist, CT and LT motion	Squirrel cage type induction motor suitable for VFD operation, 40% CDF, 300 Starts/ hour
2.12	Runway conductors	
i	Long travel	PVC shrouded Copper bus bar type
ii	Cross traverse	Flexible trailing cable arrangement
2.13	Limit switches	
i	Main Hoist	1 no. rotary geared type + 1 no gravity Type
ii	Auxiliary hoist:	1 no. rotary geared type + 1 no gravity type.
iii	Cross travel	1 nos. Two way Lever type
iv	Long Travel	1nos. Two way Lever type
2.14	Bearings	Antifriction type with minimum Life of 10000 working hours
2.15	Control /Protection panel	The following panels in CRCA sheet steel enclosure of IP54 protection shall be provided. <ul style="list-style-type: none"> • Main Protection panel, • Main hoist Control panel • Auxiliary hoist Control panel • Cross Travel Control panel • Long Travel Control panel
2.16	Lighting	LED lighting shall be provided for cabin, Crab, crane bridge platform and Undercarriage lighting.
2.17	Main Isolator	Main isolator shall be provided in the hall for DSL and on the Crane bridge.
2.18	Control	Crane control shall be provided from Cabin Pendant push button station and remote.
2.19	Control device	Emergency stop pushbutton shall be provided at Cabin, Crane bridge and pendant push button station

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SL. NO.	DESCRIPTION	DATA
2.20	Cabin	Cabin is retained and the same will be suitably mentioned in specification.
3.0	Testing	<p>The particulars of the proposed tests and the procedures for the test shall be submitted to the Owner/Consultant for approval before conducting the tests.</p> <p>Inspection and testing of cranes is furnished in detail.</p>
3.1	At Manufacturer's Works	<p>All materials, castings and forging shall be of tested quality & certificates made available for approval. If mill certificates are not available, the Crane Vendor shall arrange for physical & chemical testing at his own cost.</p> <p>The crane shall be subjected to full load, overload tests as per IS: 3177.</p> <p>Reports of all shop test shall be submitted to the Owner/Consultant prior to despatch for review and approval.</p> <p>Necessary loads for testing shall be arranged by crane vendor.</p>
3.2	At site	<p>After assembly at site the cranes shall be subjected to the tests as laid down in IS: 3177.</p> <p>In addition, deflection tests and overload tests shall be carried out as per IS: 3177. Necessary loads for testing shall be arranged by crane vendor.</p> <p>The reports on the tests shall be submitted to Owner by the crane vendor's authorised representative at site.</p> <p>The complete responsibility of co-ordinating with any of the statutory authority prior to and during the load test at site shall be in the scope of crane vendor.</p>

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B) DATA SHEET FOR EOT CRANE – CW PUMP HOUSE

SL. NO.	DESCRIPTION	DATA
1.0	MATERIALS AND CODES OF CONSTRUCTION OF MAJOR ITEMS	
1.1	Design of crane	IS 807 & IS 3177: 1999
1.2	Rope drums & sheaves	IS 3177 Duty Class-M5
1.3	Wire rope	
i	Design code	1770 / 1960 confirm to IS 2266.
ii	Construction	6x36 construction fiber core / Steel core Same will be finalized DDE.
iii	Factor of safety of wire rope	As per IS: 3177
1.4	Lifting hooks	
i	Hoist	Plain shank hook as per IS 15560 / IS 8610
ii	Swiveling arrangement with locking facility required for	Hoist
iii	Material	Forged steel as per IS: 1875 Grade 2.
1.5	Crane rails	Full gantry length
1.6	Design code	IS 3443 / Sq. bar (Hardened)
1.7	Crane bridge, girder, end carriage	IS 2062
1.8	Type of girder construction	Double girder (box)
1.9	LT wheels / CT wheels	Forged or cast steel with Minimum hardness of the wheel rim between 300 to 350 BHN with minimum depth of 10 mm
i		Steel used for wheel shall not contain more than 0.06% of Sulphur or Phosphorous.
ii		Material of LT / CT Wheels shall be C55Mn75 as per IS: 1570.
1.10	Rope drums	Fabricated from Carbon Steel as per IS: 2062, Gr. B and stress relieved or of seamless steel pipe as per ASTM A-106 grade A or B.
2.0	TECHNICAL PARAMETERS	
2.1	Type of service	Indoor
2.2	Location	CW pump House

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SL. NO.	DESCRIPTION	DATA
2.3	Design ambient temperature	50° C
2.4	Crane Classification	M5 for Mechanical , Electrical and structural
2.5	Crane capacity (main)	15 T
2.6	Span	Refer Crane Clearance Drawing for CW Pump House (GE00351-V002-00-M21-M2-002)
2.7	Lift	LED display on the main girder indicating the load lifted by the hook and the same shall be clearly visible from operating floor. This includes LED type indicators for availability of all three phases
2.8	Operating Speeds with full load	
i	Hoisting speed	2.0 m/min.
iii	Cross travel speed	10.0 m/min
iv	Long travel	10.0 m/min
v	Creep speed	
	Hoisting	10% of main speed achieved through VVVF type
	Cross traverse	10% of main speed achieved through VVVF type
	Long travel	10% of main speed achieved through VVVF type
2.9	Brakes	
i	Hoist	1No.DC Electromagnetic & 1No. Electro hydraulic thruster operated shoe type brake.
ii	Long travel	1 No. DC Electromagnetic & 1 No. Electro hydraulic thruster operated shoe type brake.
iii	Cross travel	1 No. DC Electromagnetic & 1 No. Electro hydraulic thruster operated shoe type brake.
2.10	Buffer	
i	Number buffer for Cross travel	4 nos.
ii	Number buffer for Long travel	4 nos.
iii	Type	Rubber / spring loaded type.
2.11	Motors	Motor ratings shall be calculated keeping a margin of atleast 15% over the maximum power requirement.
i	Enclosure	Totally enclosed fan cooled (TEFC), class F insulation (Temperature limited to Class-B), and degree of protection IP-54

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SL. NO.	DESCRIPTION	DATA
ii	Main motors for hoist, CT and LT motion	Squirrel cage type induction motor suitable for VFD operation, 40% CDF, 300 Starts/hour
2.12	Runway conductors	
i	Long travel	PVC shrouded Copper bus bar type
ii	Cross traverse	Flexible trailing cable arrangement (trailing cable shall be festoon type on rollers, travel rail etc.
2.13	Limit switches	
i	Hoisting	1 no. rotary geared type + 1 no gravity Type
ii	Cross travel	1 nos. Two way Lever type
iii	Long Travel	1nos. Two way Lever type
2.14	Bearings	Antifriction type with minimum Life of 10000 working hours
2.15	Control /Protection panel	The following panels in CRCA sheet steel enclosure of IP54 protection shall be provided. <ul style="list-style-type: none"> • Main Protection panel, • Main hoist Control panel • Auxiliary hoist Control panel • Cross Travel Control panel • Long Travel Control panel
2.16	Lighting	LED lighting shall be provided for Crab, crane bridge platform and Undercarriage lighting.
2.17	Main Isolator	Main isolator shall be provided in the hall for DSL and on the Crane bridge.
2.18	Control	Crane control shall be provided from Pendant push button station
2.19	Control device	Emergency stop pushbutton shall be provided at Crane bridge and pendant push button station
2.20	Type of control	Pendant push button
3.0	Testing	The particulars of the proposed tests and the procedures for the test shall be submitted to the Owner/Consultant for approval before conducting the tests. Inspection and testing of cranes is furnished in detail.
3.1	At Manufacturer's Works	All materials, castings and forging shall be of tested quality & certificates made available for approval. If mill certificates are not available, the Crane Vendor shall arrange for physical & chemical testing at his own cost.

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SL. NO.	DESCRIPTION	DATA
		<p>The crane shall be subjected to full load, overload tests as per IS: 3177.</p> <p>Reports of all shop test shall be submitted to the Owner/Consultant prior to despatch for review and approval.</p> <p>Necessary loads for testing shall be arranged by crane vendor.</p>
3.2	At site	<p>After assembly at site the cranes shall be subjected to the tests as laid down in IS: 3177.</p> <p>In addition, deflection tests and overload tests shall be carried out as per IS: 3177. Necessary loads for testing shall be arranged by BMI.</p> <p>The reports on the tests shall be submitted to Owner by the crane vendor's authorised representative at site.</p> <p>The complete responsibility of co-ordinating with any of the statutory authority prior to and during the load test at site shall be in the scope of crane vendor.</p>