



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:RMM-C1750:TCN-01

Date: 27-06-2016

Sub	Tender Change Notice (TCN) - 01.	
Job	Design, supply/delivery including transportation, unloading, storage at site, erection, assembly including required civil works and handing over to BHEL of removable/re-erectable type pre-engineered, pre-fabricated steel closed storage shed with supply, fitting & fixing of a single girder 5T capacity EOT crane and design, manufacturing, supply, receipt at site, construction and finishing works if any, etc. and handing over to site removable/re-erectable type pre-engineered, pre-fabricated office building with associated civil works including foundations, modular furniture etc, leveling /grading of the land, road & drain works, security kiosk, fencing & yard lighting of the entire storage yard for 3x40 MW Rammam Stage III Hydroelectric Project, Darjeeling.	
Ref	1.0	Tender no PSER:SCT:RMM-C1750:16.
	2.0	BHEL's NIT, vide reference no PSER:SCT:RMM-C1750:5078, Dated 16-06-2016.
	3.0	Other References, if any.

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting the offer.

- 1) Bidder's clarification is attached vide **Annexure-A to TCN-01**.
- 2) **QUALITY ASSURANCE PLAN** for 5T EOT Crane inside closed storage shed is attached herewith.
- 3) Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 4) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Engineer (SCT)

Encl: As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : (033) 23398234/ 23398000

ANNEXURE-A TO TCN-01

JOB: Design, supply/delivery including transportation, unloading, storage at site, erection, assembly including required civil works and handing over to BHEL of removable/ re-erectable type pre-engineered, pre-fabricated steel closed storage shed with supply, fitting & fixing of a single girder 5T capacity EOT crane and design, manufacturing, supply, receipt at site, construction and finishing works if any, etc. and handing over to site removable/re-erectable type pre-engineered, pre-fabricated office building with associated civil works including foundations, modular furniture etc, leveling /grading of the land, road & drain works, security kiosk, fencing & yard lighting of the entire storage yard for 3x40 MW Rammam Stage III Hydroelectric Project, Darjeeling.

TENDER NO : PSER:SCT:RMM-C1750:16

CLARIFICATION OF BIDDERS' QUERY

SL NO	REFERENCE CLAUSE OF TENDER DOCUMENT	EXISTING PROVISION	BIDDER'S QUERY	BHEL'S CLARIFICATION
1.0	Document: FILE-4.2-SCT-RMM-C1750-VOL-IF-TS-CLOSED STORAGE SHED & OFFICE Page: 3 Technical Specification Point No : 2.0 DESIGN CONSIDERATIONS FOR CLOSED STORAGE SHED.	15Mc/cX120Mc/cX6.0M (approximate)-1 Nos with supply and fixing of 5T capacity single girder EOT crane as per specification including an internal partition for 6mx4m for Air-conditioned store.	Kindly mention clear location of 5T Crane & Air conditioned store in drawing.	1. Kindly go through the drawings of the store and crane specification (already issued alongwith NIT) where the location for fixing of 5T capacity crane has been given. Following are the major points related to 5T single girder EOT crane :- a) Span 13.5m/ 13m (it may vary as per design drawing of the vendor). b) Height of the lift 4m from FFL. c) Bay length 120M. d) Clearance between Rail Top to Enclosure Roof:1 M (it may be vary as per design drawing of the vendor). 2. Air conditioned store/ room is a part of covered store. Necessary drawing with showing of Air conditioned store/ room shall be provided by the successful bidder only. However, it is best to fit the above store/ room in any side of gable end inside the covered store.
2.0	Document: FILE-4.1-SCT-RMM-C1750-VOL-IF-TCC-CMLREV-00 Page: 5 Point No: 3.0 Clause: 3.1 Site Visit	Contractor must visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid. The bidder must obtain confirmation of site visit from BHEL's representative at Jorethang/ Site during visit to site and submit the same in original along with bid.	Site Visit is required however we are well aware about the Site condition and will also give our acceptance / Declaration as per Annexure -. Kindly confirm, can we get waiver from this provision or it is compulsory to depute someone.	Shall be as per tender provision.

3 x 40 MW Rammam Stage 3 Hydroelectric Project
QUALITY ASSURANCE PLAN FOR 5 T EOT CRANE INSIDE CLOSED STORES SHED

Reference : Tender No. PSER:SCT:RMM-C1750:16.

[NOTE : This is a suggestive draft Quality Assurance Plan only. The Contractor has to submit the Quality Assurance Plan for approval of BHEL within 30 days from the date of LOI.]

Sl. No.	Component & Operation	Characteristics checked	Category	Type of check	Quantum of Check	Reference Documents	Acceptance Norms	Format of Record	Inspection Agency	Remarks	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1.0.	RAW MATERIAL CONTROL										
1.1	Structural material for bridge girder, end carriage, crab frame	Chemical & Physical	Major	TC Correlation/ Check test	1 sample per size	IS 2062/1992	IS 2062/1992	TCs/ Test check report	Crane Supplier	Submission to BHEL	
		Internal Defects	Critical	UT	100% on 20 mm and above	ASTM-A435/ IS 4225	ASTM-A435/ IS 4225	UR Report	Crane Supplier	Submission to BHEL	
1.2	Rope Drum										
	a)	If fabricated from plates SAW Pipe	Chemical & Physical	Major	TC Correlation	100%	IS 2062/1992	IS 2062/1992	TCs/ Test check report	Crane Supplier	Submission to BHEL
			Radiography & Stress Relieving	Major	TC Correlation	100% for Weld Joints	ASME-Sec-VII	ASME-Sec-VII	TC	Crane Supplier	Submission to BHEL
b)	If seam less pipe used	Chemical & Physical	Major	TC Correlation	100%	ASTM A-106B	ASTM A-106B	Test check report	Crane Supplier	Submission to BHEL	
1.3	Gears, Pinions and Wheels	Chemical & Physical	Major	TC Correlation/ Check test	1 sample per size	IS 1570/ BS 970/ IS 3177	IS 1570/ BS 970/ IS 3177	TCs/ Test check report	Crane Supplier	Submission to BHEL	
1.4	Brake Drums & Pulleys	Chemical & Physical	Major	TC Correlation/ Check test	1 sample per size	IS 1570/ BS 970/ IS 3177	IS 1570/ BS 970/ IS 3177	TCs/ Test check report	Crane Supplier	Submission to BHEL	
1.5	Hooks	Chemical & Physical	Major	Test Report	100%	IS 1875/ IS 15560/ IS 3177/ IS 5749	IS 1875/ IS 15560/ IS 3177/ IS 5749	TCs	Crane Supplier	Submission to BHEL	
		Ultrasonic & Proof Load Test	Major	Test Report	100%	IS 3664/ IS 15560/ IS 5749	IS 3664/ IS 15560/ IS 5749	TCs	Crane Supplier	Submission to BHEL	
1.6	Wire Ropes	Identification & Dimensional conformity	Major	TC	100%	IS 2266/ IS 3177	IS 2266/ IS 3177	Manufacturer's TCs	Crane Supplier	Submission to BHEL	
1.7	Rails	Visual & Dimensional	Major	Measurement	100%	IS 3443/ IRS/ BS II	IS 3443/ IRS/ BS II	Inspection Report	Crane Supplier	Submission to BHEL	
1.8	Gear Couplings	Visual & Dimensional	Major	Measurement	100%	Component Drawing/ Manufacturer's Catalogue	Component Drawing/ Manufacturer's Catalogue	Manufacturer's TCs	Crane Supplier	Submission to BHEL	
1.9	Bearings	Visual & Dimensional	Major	Measurement	100%	Bearing Catalogue	Bearing Catalogue	Inspection Report	Crane Supplier	Submission to BHEL	

3 x 40 MW Rammam Stage 3 Hydroelectric Project
QUALITY ASSURANCE PLAN FOR 5 T EOT CRANE INSIDE CLOSED STORES SHED

Reference : Tender No. PSER:SCT:RMM-C1750:16.

Sl. No.	Component & Operation	Characteristics checked	Category	Type of check	Quantum of Check	Reference Documents	Acceptance Norms	Format of Record	Inspection Agency	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2.0	IN PROCESS CONTROL									
2.1	Welding of Box Girder, Crab & End Carriages etc.	WPS/ WPQ/ PQR Records	Major	Verification		ASME-SEC-IX	ASME-SEC-IX	WPS/ PQR/ WPQ record	Crane Supplier	Submission to BHEL
		Welding Size	Major	Measurement	10%	Component Drawings	Component Drawings	Inspection Report	Crane Supplier	Submission to BHEL
		D.P. Test	Major	NDT Test	100% for Butt-weld 10% for Fillet weld			Inspection Report	Crane Supplier	Submission to BHEL
		Radiography	Critical	NDT Test	100% in tension zone and 10% in other than tension zone	ASME-SEC-VIII	ASME-SEC-VIII		Crane Supplier	Submission to BHEL
2.2	Gears, Pinions & Wheels	Ultrasonic/ Hardness Test	Major	NDT Test	100%	IS 3664/ IS 3177	IS 3664/ IS 3177	Inspection Report	Crane Supplier	Submission to BHEL
		Dimensional	Major	Dimension Checking	100%	Component Drawing	Component Drawing	Inspection Report	Crane Supplier	Submission to BHEL
2.3	Gear Boxes	Sound Level	Major	Sound Check	100%	85 Db from 1 Metre	85 Db from 1 Metre	Inspection Report	Crane Supplier	Submission to BHEL
		Temperature Rise	Major	Temperature Check	100%	IPSS	IPSS	Inspection Report	Crane Supplier	Submission to BHEL
		Oil Leakage	Major	Leakage Check	100%	1-08-020-94	1-08-020-94	Inspection Report	Crane Supplier	Submission to BHEL
		Back Lash & Tooth Contact	Major	Measurement	25%	IS 4460	IS 4460	Inspection Report	Crane Supplier	Submission to BHEL
		Stress relieving	Major	SR Chart	100% for fabricated casing	ASME-SEC-VIII	ASME-SEC-VIII	SR Chart	Crane Supplier	Submission to BHEL
3.0	FINAL INSPECTION									
3.1	Motors	Verification of Type and Rating	Major	Manufacturer's Test Certificates	100%	IS 325 and Manufacturer's Catalogue	IS 325 and Manufacturer's Catalogue	Manufacturer's TC	Crane Supplier	Submission to BHEL
3.2	Thrustor Brakes	Verification of Type and Rating	Major	Manufacturer's Test Certificates	100%	IS 3177	IS 3177	Manufacturer's TC	Crane Supplier	Submission to BHEL
3.3	Limit Switches	Verification of Type and Rating	Major	Manufacturer's Test Certificates	100%	IS 3177	IS 3177	Manufacturer's TC	Crane Supplier	Submission to BHEL
3.4	Resistance Boxes	Verification of Type and Rating	Major	Manufacturer's Test Certificates	100%	IS 3177	IS 3177	Manufacturer's TC	Crane Supplier	Submission to BHEL
3.5	Control Panels	Functional Test + HV + IR	Major	Functional Test + HV + IR	100%	Component Drawings	Component Drawings	Manufacturer's TC	Crane Supplier	Submission to BHEL
		Verification of Components' make as per EBM	Major	Make Verification	100%	EBM of Crane Supplier	EBM of Crane Supplier	Verification Report	Crane Supplier	Submission to BHEL

3 x 40 MW Rammam Stage 3 Hydroelectric Project
QUALITY ASSURANCE PLAN FOR 5 T EOT CRANE INSIDE CLOSED STORES SHED

Reference : Tender No. PSER:SCT:RMM-C1750:16.

Sl. No.	Component & Operation	Characteristics checked	Category	Type of check	Quantum of Check	Reference Documents	Acceptance Norms	Format of Record	Inspection Agency	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
3.6	Complete assembled Crane at Site for No load, load and Over load test (all arrangement including arrangement of load shall be responsibility of the Contractor)	Dimensional Speed and current checks at No load, Load and Over load	Major	Measurement of dimension and speed and current checks during no load, load and over load.	100%	IS 3177/ GA Drawing Specification	IS 3177/ GA Drawing Specification	Inspection Report	Crane Supplier	Customer Hold Point
3.7	Painting	Visual, surface preparation, DFT and Paint TC	Major	Visual, Surface roughness, DFT, validity of Paint	At random location	IS 3177/ Manufacturer's Standard	IS 3177/ Manufacturer's Standard	Inspection Report	Crane Supplier	Submission to BHEL Inspection of Final Painting at Site by BHEL

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Design, supply/delivery including transportation, unloading, storage at site, erection, assembly including required civil works and handing over to BHEL of removable/re-erectable type pre-engineered, pre-fabricated steel closed storage shed with supply, fitting & fixing of a single girder 5T capacity EOT crane and design, manufacturing, supply, receipt at site, construction and finishing works if any, etc. and handing over to site removable/re-erectable type pre-engineered, pre-fabricated office building with associated civil works including foundations, modular furniture etc, leveling /grading of the land, road & drain works, security kiosk, fencing & yard lighting of the entire storage yard for 3x40 MW Rammam Stage III Hydroelectric Project, Darjeeling.	
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	2.0	BHEL's NIT, vide reference no PSER:SCT:RMM-C1750:5078, Dated 16-06-2016.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:RMM-C1750:TCN-01, Dated: 27-06-2016.
	4.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)

<p>पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 23398234/ 23398000</p>
