

Enquiry



Bharat Heavy Electricals Limited
Transmission Business Group
Materials Management

Project : PGCIL BIHARSHARRIF JAMSHEDPUR GAZUWAKA RENGALI ROURKELA DURGAPUR GORAKHPUR

Enquiry No	Enquiry Dt	Rev No	Rev Dt	PI No	Enquiry Type	Inspection by	Due Dt	Commercial Comments	Technical Comments	Signing Authority
365E291	13-Jan-16	0		342240200	Package		05-Feb-16	as per tender documents	as per tender documents & further clarifications	

Document Enclosed

- Technical Specifications
- Terms & Conditions for Indigenous Enquiry
- Activity Schedule
- Schedule of Information (checklist) to be furnished
- Schedule of Commercial Deviation
- Schedule of Technical Deviation

SN	Equipment	Phy Unit	Qty	Unit Exworks	% ED	% CST	% VAT	Unit F&I	Plan Dt	Comments
1	SHIELD WIRE 7/9 SWG OVERALL DIA. 10.98MM	MTR	1550							AS PER STANDARD SPEC. TB-XXX-316-021 (SITE WISE BREAK-UP: GAZUWAKA - 550 MTR; RENGALI - 700 MTR & DURGAPUR - 300 MTR)

You are requested to submit your most competitive offer so as to reach us positively by the tender opening date & time. THE TENDERS NOT RECEIVED WITHIN SCHEDULED DATE AND TIME ARE LIKELY TO BE IGNORED. BHEL shall not be responsible for any postal delay.

IN YOUR OWN INTEREST YOU ARE ADVISED TO CAREFULLY READ "THE INSTRUCTIONS TO BIDDERS". INCOMPLETE BIDS AND/OR BIDS NOT COMPLYING WITH TENDER CONDITIONS SHALL BE TREATED AS NON RESPONSIVE AND ARE LIKELY TO BE IGNORED.

In case Tender Documents are not received within 7 days of this E-mail message, intimate BHEL accordingly. If no intimation is received, it will be considered that you have received tender enquiry and delay in submission offer due to late receipt of tender documents will not be entertained.

YOU ARE REQUESTED TO SUBMIT YOUR MOST COMPETITIVE OFFER SO AS TO REACH US POSITIVELY BY 2 PM ON THE TENDER OPENING DATE AND TENDER WILL BE OPENED AT 2:30 PM WITH EFFECT FROM 15-SEP-09.

BHEL RESERVES THE RIGHT TO OPT FOR REVERSE AUCTION FOR OBTAINING BEST PRICES.

OFFERS THROUGH E-MAIL / FAX:

WHOSOEVER DESIRES TO SEND OFFERS ON THEIR OWN RISK (COMPLETE IN ALL RESPECTS) VIA E-MAIL or FAX HAVE TO SEND THE OFFERS TO THE COMMON E-MAIL ADDRESS tenderbox@bhel.in or 0120-6748581 FAX .

THE RECEIVED EMAIL OFFERS WILL BE PRINTED BY PURCHASE COORDINATOR AND PUT THEM INTO COVERS AS PER CONVENTIONAL METHOD FOR TENDER OPENING I.E., TECHNO COMMERCIAL & PRICE OFFER SHALL BE PUT INTO TWO SEPARATE COVERS AND BOTH THE COVERS ARE KEPT IN THIRD COVER DULY SUPER SCRIBING ENQY. NO. AND DUE DATE.

OFFERS SENT TO ANY OTHER E-MAIL ID or FAX NO AND INCOMPLETE OFFERS SHALL NOT BE CONSIDERED FOR EVALUATION PURPOSE.

It is suggested that the bidders are advised to send the files with 'password protection'. procedure for giving a password to a file has been given below:

For saving Excel file with password

Steps to be followed:

1. Click on the FILE option in XP system and Start sign in Vista system then go to SAVE AS option.
2. Select the location to save and Click on the TOOLS box and go to GENERAL OPTION.
3. It will ask for the password, type the password into open or modify box or both as required.
4. Then click on the OK button it will ask for reenter of the password.
5. After reentering the password click on the save box.

For saving Word file with password

Steps to be followed:

1. Click on the FILE option in XP and Start sign in Vista then go to SAVE AS option.
2. Select the location to save and Click on the TOOLS box and go to SECURITY OPTION in XP system and GENERAL OPTION in Vista system.
3. It will ask for the password, type the password into open or modify box or both as required.
4. Then click on the OK button it will ask for reenter of the password.
5. After reentering the password click on the save box.

The vendors who has sent offers with password, the passwords are to be forwarded to another email id: supplierinfo@bhelindustry.com

MSME STATUS

"THOSE INDUSTRIES WHO HAVE FILED A MEMORANDUM WITH THE CONCERNED AUTHORITIES AND REGISTERED AS MICRO & SMALL ENTERPRISE UNDER MICRO, SMALL AND MEDIUM ENTERPRISES DEVELOPMENT ACT 2006, HAVE TO SUBMIT A COPY OF SUCH REGISTRATION CERTIFICATE / MEMORANDUM TO BHEL FOR NECESSARY COMPLIANCES OF THE ABOVE ACT".

Please acknowledge the receipt of tender enquiry and fax back this letter by ticking the appropriate item below.

for BHARAT HEAVY ELECTRICALS LTD

We acknowledge the receipt of tender.

- (a) The offer against subject enquiry shall be submitted by the scheduled date and time.
- (b) We regret to quote. The item in reference is out of our manufacturing range.
- (c) We regret because of our prior commitments.
- (d) Any other reason.

To
Dibyendu Ghosh
Sr Manager
BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
TOWER-A,5th Floor,
Advant Navis IT Business Park,
Plot No-7,Sector-142,Expressway Noida
Noida-201305
Distt. Gautam BudhNagar,U.P

Ph: 0120-6748458
Fax: 0120-6748581

Signature and Seal of Tenderer

Enquiry No : 365E291 Enquiry Dt : 13-Jan-16

(TRANSMISSION BUSINESS GROUP)
BHARAT HEAVY ELECTRICALS LTD.
TERMS AND CONDITIONS FOR INDIGENOUS TENDER ENQUIRY

This Format is to be submitted in original duly signed by bidder. Deviation, if any, is to be brought out clearly in Schedule of Commercial deviation giving clause wise deviation. Any condition / clarification / deviation mentioned elsewhere may not be accepted.

Sr. No	Terms & Conditions (GTC)
1.	<p>1. Sealed quotations are invited for the items mentioned in the enquiry. Quotations should be typed and free from over writing and erasures, corrections or additions must be clearly written both in words and figures and attested, otherwise offer may be rejected.</p> <p>2. Bidder must ensure that their quotation is received / dropped in the tender box on or before 10.00 AM of the due date of opening in Material Management Division, 5th Floor, Plot No 7 , Tower A , Advant Navis IT Business Building , Sector 142 ,Noida-Greater Noida Expressway, Noida-201305(U.P.)</p> <p>3. The same shall be opened at 10.30 AM on the same day. Tenders received late may be rejected. Bidders sending tenders by courier or post, to ensure that it is delivered one day before as same day delivery may not reach above office by due time.</p> <p>4. Bids are to be submitted in Two parts: i) Techno-commercial bid (Part I) – To be submitted in duplicate. A copy of price bid (Part II) (without prices) is also to be enclosed in Part I bid. ii) Price bid (Part II) – To be submitted only in one copy in a separate sealed envelope. This should not contain any Technical or Commercial Terms. The rates should be quoted both in figures and words. In case of any difference between figures and words, the quoted rate in words will prevail over figure.</p> <p>Both Part I and Part II bids are to be sealed in separate envelope and both envelopes to be kept in another common envelope. Each envelope should be sealed and super scribed with enquiry no., item / package name, project name and due date of opening.</p> <p>5. For any Technical clarification, please contact Mr. M. Vijay Kumar, Dy Manager (TBEM)/ Anita Sinha, Sr. DGM(TBEM) 5th Floor, Plot No 7 , Tower A , Advant Navis IT Business Building , Sector 142 ,Noida-Greater Noida Expressway, Noida-201305 , Phone No: 0120-6748537/139</p> <p>e-mail : vijaykumar@bhel.in/anita@bhel.in</p> <p>For any commercial clarification please contact person issuing enquiry.</p>

	<p>6. Price bid should not contain any information / description / terms & condition other than given in Part-I of the bid except prices, otherwise bid is liable for rejection.</p> <p>7. Price bid submitted along with the bid shall remain valid up to validity of offer. Unsolicited Supplementary / Revised price bid submitted during validity period of offer, unless asked by BHEL, shall not be considered. With-drawal of quotation by the bidder, at any stage after its opening, may entail blacklisting of vendor.</p> <p>8. Enquiry condition for where the scope against this tender includes Installation and Commissioning of the equipment / material There will be separate contract awarded for Supply portion and Site execution portion. For Supply portion General Terms and Conditions mentioned here shall be applicable for Site execution portion, Terms and conditions for Installation services shall be applicable. However, any breach in either of the contract shall be deemed as the breach of other contract also.</p>
<p>2.</p>	<p>PRICES:</p> <p><RELEVANT OPTION TO BE SELECTED BEFORE ISSUE OF ENQUIRY></p> <p>A.1. Unless specifically indicated, all prices shall be FIRM. No enhancement of rate for whatever cause unless and until asked by BHEL will be allowed.</p> <p>A.2. PVC (if indicated) The prices to be quoted are with PVC with following formula.</p> <p><i><Formula></i></p> <p>The base indices in the formula shall be of first notification of ----- of the ----- month. The date of delivery shall be PO delivery date or date of actual despatch, whichever is earlier.</p> <p>B The prices shall be quoted by the vendors considering following.</p> <p>B.1. Unless specifically indicated, the prices shall be on Domestic basis.</p> <p>B.2. Deemed export (if indicated)</p> <p>i) Prices are to be quoted considering following benefits:</p> <ol style="list-style-type: none"> 1. ----- 2. ----- 3. ----- <p>ii) For availing above benefits, BHEL shall provide following documents.</p> <ol style="list-style-type: none"> 1. ----- 2. ----- <p>iii) In case of import benefit in deemed export projects, bidder to indicate import content (CIF value) in the price bid.</p>
	<p>B.3. Physical export (if indicated)</p> <p>i) Prices are to be quoted considering following benefits</p> <ol style="list-style-type: none"> 1. ----- 2. -----
	<p>ii) For availing above benefits BHEL shall provide following documents</p> <ol style="list-style-type: none"> 1.

	<p>2.</p> <p>C. The prices are to be quoted on FOR (Destination) basis. The break-up of price shall be as under:-</p> <p>a) Ex-works Price: Ex- works price including packing & forwarding charges.</p> <p>b) Excise duty: ED as applicable is to be quoted as percentage in both un-price and price bid.</p> <p>c) Sales Tax: ST / VAT /CST (against C-form) to be quoted as percentage in un-price and price bid. In case of interstate sale-in-transit supplier have to provide E1/E2 form.</p> <p>e) Entry tax / Octroi Charges: Any Entry tax / Octroi applicable at destination / destination state shall be paid extra on proof of such payment.</p> <p>f) Freight & Insurance: Freight and Transit Insurance for door delivery up to destination/store is to be quoted.</p> <p>g) Type Test charges: If asked in the technical specification, is to be quoted separately for each Test along with taxes and duties applicable on them.</p> <p>h) Erection / Commissioning supervision charges: If asked in the technical specification, to be quoted separately along with taxes and duties applicable on them.</p> <p>Note : The purchase order shall be placed on Ex-works basis.</p>
<p>3.</p>	<p>TERMS OF PAYMENT :</p> <p><RELEVANT OPTION TO BE SELECTED BEFORE ISSUE OF ENQUIRY></p> <p><u>For BOIs (non package items)</u></p> <p>100% payment along with taxes, duties, Freight & Insurance within 60 days from the date of receipt of invoice. The invoice must contain following documents in 3 sets (Original + 2 copies).</p> <ul style="list-style-type: none">- Receipted LR- Excise invoice (where ED re-imburement is required)- Delivery Challan / Packing list (casewise)- Transit insurance certificate from under writers or Copy of Intimation of Transit Insurance duly endorsed by under writers,- Despatch Clearance given by BHEL,- Guarantee certificate,- All Test reports and inspection reports,- Performance Bank Guarantee copy. <p><u>For BOPs : Air-Conditioning & Ventilation, Fire Protection, Illumination, Oil handling system where ETC is in scope of bidder</u></p> <p>a. 90% of Ex-works value alongwith 100% taxes, duties, Freight & Insurance within 60 days from the date of receipt of invoice. The invoice must contain following documents in 3 sets (Original + 2 copies)</p> <ul style="list-style-type: none">- Receipted LR / RR- Excise invoice (where ED re-imburement is required)- Delivery Challan / Packing list (casewise)

	<p>- Transit insurance certificate from under writers or Copy of Intimation of Transit Insurance duly endorsed by under writers, - Despatch Clearance given by BHEL, - Guarantee certificate, - All Test reports and inspection reports, - Performance Bank Guarantee copy.</p> <p>b. 5% of Ex-works value on completion of supplies as per billing breakup.</p> <p>c. 5% of Ex-works value on successful completion of Erection, Testing, Commissioning (To be certified by BHEL site) and final documentation (Against proof of submission to Engineering)</p> <p>Note: When ETC is not in scope last 5% as per (c) above shall be paid alongwith (b).</p> <p><u>Terms of payment for Type test charges:</u> 100% payment with taxes and duties on acceptance of test reports by BHEL on certification by BHEL engineering within 60 days from the date of receipt of clear invoice.</p> <p><u>Terms of payment for Supervision charges:</u> 100% payment against completion with taxes and duties on certification by BHEL site within 60 days from the date of receipt of clear invoice.</p>
<p>4.</p>	<p>INTEREST LIABILITY In case of any delay in payment due to any reason, BHEL shall not pay any interest on delayed payment.</p>
<p>5.</p>	<p>GUARANTEE : The equipment / material shall be guaranteed for 18 months from the date of delivery or 12 months from the date of commissioning, which ever is earlier. The defective material / component shall be replaced free of cost at site.</p> <p><FOLLOWING TO BE DELETED IN ALL ENQUIRY OTHER THAN ILLUMINATION PACKAGE></p> <p>However for Illumination system after commissioning Lamps, Tubes, Ballast, Starters, Capacitors, Fuses will not be covered in Guarantee.</p>
<p>6.</p>	<p>PERFORMANCE BANK GUARANTEE : NOT APPLICABLE</p> <p><PBG CLAUSE TO BE REMOVED BEFORE ISSUE OF ENQUIRY FOR ITEMS FOR WHICH PBG IS NOT REQUIRED></p>
	<p>Bidder shall furnish along with first invoice Performance BG / deposit as per one of following 3 options.</p> <p><u>Option A</u> A single rolling Bank Guarantee of Rs 20 lakhs initially valid for one year for all the orders being executed for Transmission Business Group, BHEL.</p>
	<p><u>Option B</u> BG for 10% of the total Ex-works PO value, valid for 24 months from the date of first delivery. PO value at the time of first invoice for the particular order shall be considered for calculation of BG amount.</p> <p><u>Option C</u> Retention of 10% of the total Ex-works PO value by BHEL from the first bill in lieu of</p>

	<p>Performance Bank Guarantee, to be released after expiry of 24 months from the date of first delivery.</p> <p><u>Note</u> : For Shield wire, Earthing material, Cable gland, Cable Trench material, GI/PVC pipe, Hardwares, Al tube, MS Rod, Lable & phase colour disc, HG Fuse, Ferrule, Lug, Marker, Stationary, Office eqpt. and any petty / sundry purchase no Performance bank guarantee is required.</p> <p>The Bank guarantee shall be from State Bank of India / State bank of Hyderabad / State Bank of Travancore / State Bank of Mysore / Canara Bank / Bank of Baroda / Punjab National Bank / Deutsche Bank / HDFC Bank / Standard Chartered Bank / CITI Bank / ICI Bank / IDBI Bank / HSBC / any other Nationalised Bank. The original BG should be sent by issuing Bank directly to AGM(Finance), TBG, BHEL.</p>
7.	<p>FINAL ENGINEERING DOCUMENTATION: Final documentation as called in the specification is to be submitted within 3 months from the date of despatch of material. In case of default, the Performance BG is liable to be en-cashed.</p>
8.	<p>INSPECTION : BHEL / customer / third party shall inspect equipment / material before despatch. Stage inspection during manufacturing may also be carried out. Material to be despatched only after getting Despatch Clearance from BHEL. Supplier shall send inspection call on prescribed format (web site) only, with an advance notice of 15 days.</p>
9.	<p>DESPATCH DOCUMENTS : Following despatch documents are to be immediately sent to purchaser on despatch. <ul style="list-style-type: none"> - Copy of LR - Copy of delivery challan / packing list - Insurance certificate - Guarantee certificate </p>
10.	<p>DELIVERY PERIOD: Bidder to specify delivery period in weeks from the date of LOI / PO. Time for conduction of type test, if required, is to be separately indicated. <u>Note:</u> LR date or Invoice date whichever is later shall be considered as delivery date.</p>
11.	<p>DELAYED DELIVERY: In case of delay in execution of order beyond the lot wise contractual delivery, an amount of ½ % of total order Value per week or part there-of subject to maximum of 10% of total order value of P.O. will be withheld.</p>
12.	<p>VALIDITY : The offer shall be valid for 120 days from the due date of opening.</p>
13.	<p>ACCEPTANCE / REJECTION OF TENDER : BHEL reserves the right to reject in full or part, any or all tender without assigning any reason thereof. BHEL also reserves right to vary the quantities mentioned in the tender.</p>
14.	<p>EVALUATION : Comparative statement shall be prepared based on overall quantity basis unless otherwise indicated in the enquiry. Evaluation of offers shall be done on the basis of delivered cost to BHEL.</p>
15.	<p>DEVIATION : The bids having deviation(s) w.r.to tender are liable for rejection. However, BHEL, at its</p>

	discretion, may load the prices for evaluation of offer with prior intimation to bidder.
16. ARBITRATION :	
	All cases of disputes emanating from and relating to this contract, the matter shall be referred to the sole arbitration of Unit Head / GM, BHEL or any other person (including an employee of BHEL, even though he had to deal with the matter relating to this contract in any manner) nominated by him to act as sole arbitrator. The arbitration shall be under 'The arbitration and contract act 1996' and the rules there under as amended from time to time. The arbitrator may from time to time with the consent of the parties enlarge the time for making and publishing the award. The venue of arbitration shall be any Indian city as decided by BHEL.
17. LEGAL SETTLEMENT :	
	All suits/claims in respect of this contract shall be in the courts having jurisdiction at New Delhi
18. SUBCONTRACTING :	
	In case further subcontracting of BHEL order or part thereof is envisaged by supplier, the same can be done after written permission is obtained from BHEL. However it shall not absolve the supplier of the responsibility of fulfilling BHEL purchase order requirements.
19. RISK PURCHASE :	
	In case the successful bidder fails to supply or fails to comply with the terms & conditions of the purchase order, BHEL reserves the right to source such material/ component / equipment/ system from any other agency at the risk and cost (i.e. cost to BHEL) of the successful bidder.
20. ADJUSTMENT OF RECOVERY:	
	Any amount payable by the supplier under any of the condition of this contract shall be liable to be adjusted against any amount payable to the supplier under any other works / contract awarded to him by any BHEL unit. This is without prejudice to any other action as may be deemed fit by BHEL.
21. FORCE MAJEURE CONDITION:	
	If by reason of war, civil commotion, act of god, Government restrictions, strike, lockout which are not in control of supplier the deliveries are delayed, supplier shall not be held responsible.
22.	Suspension of business dealings with suppliers/ contractors:- 'Guidelines for suspension of business dealings with suppliers/ contractors' are available on BHEL website www.bhel.com on "supplier registration page"
23.	Non-conformities / errors / discrepancies in quoted prices in price bids shall be dealt as follows :- <ol style="list-style-type: none"> a) If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected. c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above. <p>If there is such discrepancy in an offer as mentioned in (a), (b) & (c) above, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the BHEL, the bid is liable to be ignored.</p>

Following clauses of General Terms and Conditions (BHEL/TBG/GTC/02-07) are to be read as follows:

Clause 1:

2. Bid submission time: upto 02:00 PM of the due date of opening.
3. Bid opening time: 02:30 PM on the same day.

Clause 2: PRICES

- A.1.: **Applicable**
- A.2.: Not applicable
- B.1.: **Applicable**
- B.2. Not Applicable
- B.3. Not applicable

Clause 3: TERMS OF PAYMENT

Terms for BOP is not applicable
Terms for **BOI is applicable**

Documents for payment-

Original Endorsed LR and Material Receipt Certificate instead of Receipted LR
Dispatch clearance by BHEL means BHEL MICC

Clause 11: Delayed Delivery

a) In case of delay in execution of order beyond the lot wise contractual delivery, an amount of ½ % of total order Value per week or part there-of subject to maximum of 10% of total order value of P.O. will be withheld.

Clause 14: EVALUATION

Evaluation will be done on total package cost to BHEL for all project sites.

Clause 16: ARBITRATION

The Arbitration shall be under "The Arbitration and Conciliation Act 1996". Place of Arbitration shall be New Delhi.

All remaining terms which are not mentioned here shall remain unchanged as per General Terms and Conditions (BHEL/TBG/GTC/02-07).

Note:

1. Supplier has to specifically indicate/ tick mark their preference for PBG out of the three options mentioned in clause no. 6 above.
2. In case VAT is applicable, then Vendor has to give VAT invoice (irrespective of VAT benefit available or not).
3. **Delivery requirement: Immediate**, vendor has to quote their best possible delivery plan in activity schedule.
4. The bidder should have valid MQP number approved by PGCIL. Bidder to submit their necessary credentials for PGCIL approval. Final acceptance of offer shall be subject to vendor approval from PGCIL.
5. **LOADING CRITERIA:**

Permissible commercial deviation & Loading Criteria:

TERMS OF PAYMENT:

If a bidder asks for payment within specified no. of days from the date of receipt of invoice with complete documents as per "Terms of Payment" at Clause. No. 3 of Terms & Conditions for Indigenous Tender Enquiry, loading to be done as follows:

- a) Base rate of SBI (as applicable on the date of techno commercial bid opening) + 6 % shall be considered for loading for the period of relaxation sought by the bidder. **Loading shall be done on total cost to BHEL.**
- b) 60 days - No loading

Note- In case, techno commercial bid opening date gets extended due to any reason, then extended bid opening date will be considered for base rate of SBI.

DELAYED DELIVERY:

loading on this clause shall be to the extent to which it is not agreed by the bidder.

Permissible Technical Deviations: No permissible Technical Deviation envisaged.

INTENDED BENEFITS FOR MSE SUPPLIERS: MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed as per Annexure I) applicable for the year, certifying quantum of investment in plant & machinery within the permissible limit as per the act for relevant status (Micro or Small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

REVERSE AUCTION:

BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit online sealed bid in the Reverse Auction. Non-submission of online sealed bid by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.

If RA is done, then it will start around 12:00 Noon (IST).

Pls refer Annexure-1 for Terms & Conditions of Reverse Auction.

OFFER EVALUATION:

Evaluation will be done on total package cost to BHEL for all project sites.

PRE-QUALIFYING REQUIREMENTS:

"Pre-Qualifying Requirement" are as follows:

- 01) Bidder shall be manufacturer of shield wire.
- 02) Bidder must have supplied the shield wire for substation/switchyard/power transmission projects in last five years.

SCHEDULE OF PRICE (INDIAN VENDOR)

(BIDDERS TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

NOTE: THIS FORMAT IS TO BE SUBMITTED IN ORIGINAL ONLY, DULY FILLED IN. REPRODUCTION OF THIS FORMAT ON BIDDER'S LETTER HEAD OR ON OTHER PAPER IS NOT ACCEPTABLE.

Project: PGCIL BJGRRDG

Enquiry No : 365E291 dated 13/01/2016 due on 05/02/2016

Site	Sr. No.	Equipment	PHY UNIT	Total Qty	Unit Exworks	Total Exworks%ED	Unit F&I	Total F&I% CST/VAT	Total(INR)
Gazuwaka (Andhra Pradesh)	1	SHIELD WIRE 7/9 SWG OVERALL DIA. 10.98MM	METER	550							
Rengali (Odisha)	2	SHIELD WIRE 7/9 SWG OVERALL DIA. 10.98MM	METER	700							
Durgapur (West Bengal)	3	SHIELD WIRE 7/9 SWG OVERALL DIA. 10.98MM	METER	300							

Note 1: Kindly mention the rate of all applicable taxes and duties (ED & CST/VAT) in both price and un-priced bid.

Note 2: Kindly refer technical specification for details.

Note 3: F&I Charges quoted by bidders shall be inclusive of taxes and duties (if applicable).

Tenderer

ACTIVITY SCHEDULE
(To be filled – up by the supplier)

SL. NO.	ACTIVITY		ACTIVITY TIME IN WEEKS	CUMULATIVE TIME IN WEEKS FROM LOI/PO DATE	REMARKS IF ANY
1.	Receipt of P.O				
2.	Submission of P.O Acceptance	Max 1 week (7 days)			
3.	Submission of documents necessary for getting manufacturing clearance like Drawings, date sheet etc.				
4.	Review and Approval of documents and issue of manufacturing clearance	‘BY BHEL (3 weeks)’			
5.	Manufacturing Time	A			
6.	Inspection	‘BY BHEL (2 weeks)’			
7.	Issue of MICC and other documents like Road Permits etc.	‘BY BHEL (1 week)’			
8.	Dispatch				
9.	Transit time upto Site.				

- Note :
- 1) For item at Sl. No. 4) Vendor to reply to all queries within 3 days.
 - 2) For Sl. No. 5) Inspection call for entire lot to be issued 2 weeks in advance. Date given in call for inspection should be within the period indicated in "A" for completion of activity at Sl. No. 6.
 - 3) Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete / inadequate information shall be the responsibility of supplier.
 - 4) Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.
 - 5) Qty to be offered for inspection should be in accordance within Delivery-schedule – lot. BHEL reserves the right not to entertain multiple inspection calls for a Delivery – lot and delay on this account shall be the responsibility of Supplier.

Signature & Seal of Supplier

Date:

SCHEDULE OF COMMERCIAL DEVIATION

Enquiry No : 365E291 dated 13/01/2016 due on 05/02/2016

The following are the deviations/ variations exception from the General Terms and Conditions:

SL.NO.	CLAUSE NO. OF GENERAL TERMS AND CONDITIONS	STATEMENT OF DEVIATION

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the General Terms and Conditions.

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : 1. Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

2 Deviation mentioned in this schedule shall only be considered.

**This Format is to be submitted in original duly signed by bidder.
Reproduction of the same in any sort is not acceptable.**

Place:
Date :

Signature of the authorised representative of

Bidder's name :.....
Designation:.....
Company Seal:.....

SCHEDULE OF TECHNICAL DEVIATION

Enquiry No : 365E291 dated 13/01/2016 due on 05/02/2016

The following are the deviations/ variations exception from the Technical Specifications:

SL.NO.	CLAUSE NO. OF GENERAL TERMS AND CONDITIONS	STATEMENT OF DEVIATION
1		

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the Technical Specifications,

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : 1. Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

2 Devition mentioned in this schedule shall only be considered.

**This Format is to be submitted in original duly signed by bidder.
Reproduction of the same in any sort is not acceptable.**

Place:
Date :

Signature of the authorised representative of

Bidder's name :.....
Designation:.....
Company Seal:.....

CHECKLIST**SCHEDULE OF INFORMATION TO BE FURNISHED WITH THE OFFER**

NOTE: This format is to be submitted in original only, duly filled in. Reproduction of this format on bidder's letter head or on other paper is not acceptable.

Put a tick mark on "YES" if the information is enclosed with the offer or put a tick mark on "NO" if the information is not enclosed or write "NOT APPLICABLE" if the information is not applicable.

1.	Technical offer with detailed schedule of equipment / material and spares enclosed.	YES / NO
2.	Guaranteed Technical Particulars as per Section – 4 enclosed.	YES / NO
3.	Schedule of deviation, if any, clause wise with respect to Technical Specification enclosed.	YES / NO
4.	Standard Manufacturing Quality Plan enclosed.	YES / NO
5.	GA Drawings with dimensions and weights & foundation / fixing details enclosed.	YES / NO
6.	Drawing and Data submission schedule enclosed.	YES / NO
7.	Type Test Reports enclosed.	YES / NO
8.	Bar Chart showing the schedule indicating time required for design, manufacture, test and inspection, transport, erection, site testing and commissioning enclosed.	YES / NO
9.	Makes of all components as per technical Specification enclosed.	YES / NO

The above checklist is verified for:-

Offer Ref. :

Equipment :

Submitted by :

Project Reference. :

Signed with Seal

Date

Terms & Conditions of Reverse Auction

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit ‘online sealed bid’ in the Reverse Auction. Non-submission of ‘online sealed bid’ by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.

10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the 'Business Rules of Reverse Auction', which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....,
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on
date..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost
excluding land and building and the items specified by the Ministry of Small Scale Industries vide its
notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.....Lacs

The above investment of Rs.....Lacs is within permissible limit of
Rs.....Lacs forMicro / Small (~~Strike off which is not applicable~~)
Category under MSMED Act 2006.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant





BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
MATERIAL RECEIPT CERTIFICATE

- a) Site:
- b) LR No. with date:
- c) Vehicle no.:
- d) Date of receipt of material at site:
- e) Material details (as mentioned below):

S.no.	Item Description	Type of Packages	Unit (MT/KM/NO.)	Qty as per packing list	Qty Received	Remarks

Other Remarks:

Signature with date: _____

Name & Designation: _____
(With Seal)

Important Remarks:

1. LR endorsement Format-

“LR no./ Date: _____ Endorsed in favour of (Customer Name) and the transporter is instructed to deliver the goods to (Site name)”.

For Example-

LR no./ Date: 22126/ dt. 30/04/15

Endorsed in favour of TANTRANSCO and the transporter is instructed to deliver the goods to TANTRANSCO, Anikadavu substation.

(sign and stamp with name & designation)

2. LR will only be endorsed as per the given Format and strictly not be receipted.

3. Material receiving will only be given through the MRC (Format attached).



**BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
ENGINEERING MANAGEMENT, NEW DELHI**

BHEL Document No. TB-xxx-316-021	Rev 00	Name	Prepared by PR	Checked by MK	Approved by RS
Type of Document Design Document	Sign	<i>Prashant</i>	<i>Manoj</i>	<i>Rakesh</i>	
Title Shield Wire	Date	07.03.14	07.03.14	07.03.14	
	Group	TBEM			

Project: BHEL Rate Contract.

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Rev No.	Date	Altered	Checked	Approved	REVISION DETAILS		
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SECTION – I

SCOPE, SPECIFIC TECHNICAL REQUIREMENT AND QUANTITIES

1.0 SCOPE

This technical specification covers the requirements of design, manufacture, testing at works, packing and dispatch of GI SHIELD WIRE.

The equipment is required for the following project.

Name of the customer :

Name of the Project :

1.1 SPECIFIC TECHNICAL REQUIREMENT

Refer Section II.

1.2 BILL OF QUANTITY

Sl. No.	Shield Wire Type	Qty
01.	7/8 SWG (7/4.00 mm steel)	
02.	7/9 SWG (7/3.66 mm steel)	

1.3 TESTS

Acceptance and routine test shall be performed by the vendor for each order.

1.4 MANDATORY TYPE TESTS

Bidder shall also indicate the test charges for conducting the following Type test:

- a) UTS test) As per Clause 2.10.1
- b) DC resistance test) As per Clause 2.10.2

SECTION II

STANDARD SPECIFICATION

2.0 GENERAL

This section covers the standard technical specification for GI Shield Wire.

TECHNICAL REQUIREMENTS:

Sl.No	Parameter	7/8 SWG	7/9 SWG
1	Stranding and wire diameter	7/4.0 mm steel	7/3.66 mm steel
2	Strand Arrangement		
	Steel core	1	1
	Outer Steel Layer	6	6
3	Total sectional area	90.62 mm ²	73.65 mm ²
4	Overall diameter	12.0 mm	10.98 mm
5	Approximate weight	687 kg/km	583 kg/km
6	Calculated d.c. resistance at 200	2.09 ohms/km	2.5 ohms/km
7	Minimum ultimate tensile strength	77.7 kN	68.4 kN
8	Direction of lay of outer layer	Right hand	Right hand
9	Standard Drum Length	250/500/1000/2000/4000 meter	
10	Protective coating for storage	Boiled linseed oil to avoid wet storage stains.	

2.1 EQUIPMENT SPECIFICATION

This section covers the general technical requirements of the Galvanised Steel Wire. In case of any discrepancies between the requirements mentioned in this section and those specified in other sections of this specification, this shall prevail after Section 1 and shall be treated as binding requirements.

2.2 APPLICABLE STANDARDS

The Galvanised Steel Wire shall strictly conform to the following Indian and International standards, as appropriate:

IS: 521(1991)	Method for tensile testing of steel wire
ISO/R89-1959	
IS: 1778-1980	Reels and drums for bare conductors
IS: 2629(1990)	Recommended practice for hot dip galvanizing on iron and steel.
IS: 2633(1992)	Method for testing uniformity of coating of zinc-coated articles
IS: 4826(1992)	Hot dip galvanized coatings on round steel wires
ASTMA-475-72a	
IS: 6745 (1990)	Methods for determination of mass of Zinc coating on zinc-coated iron and steel articles

IS: 209(1992) Zinc ingot
IS 398 (Parts-I to Aluminium conductors for Overhead transmission purposes
V): 1992

2.3 TECHNICAL REQUIREMENT AND CONSTRUCTIONAL DETAILS

2.3.1 The galvanized steel stranded wire shall generally conform to the specification of ACSR core wire as mentioned in IS 398 (Part- II):1976 except where otherwise Specified herein.

2.4 WORKMANSHIP

2.4.1 All steel strands shall be smooth, uniform and free from all imperfections, such as spills and splits, die marks, scratches, abrasions and kinks after drawing and also after stranding.

2.4.2 The finished material shall have minimum brittleness as it will be subjected to appreciable vibration while in use.

2.4.3 The steel strands shall be hot dip galvanized (and shall have a minimum zinc coating of 275 g/m^2) after stranding of the uncoated wire surface. The zinc coating shall be smooth, continuous, of uniform thickness, free from imperfections and shall withstand three and a half dips after stranding in standard Preece test. The steel wire rod shall be of such quality and purity that, when drawn to the size of the strands specified and coated with zinc, the finished strands shall be of uniform quality and have the same properties and characteristics in ASTM designation B498-74.

2.4.4 The steel strands shall be preformed and post-formed in order to prevent spreading of strands while cutting of composite stranded wire. Care shall be taken to avoid damage to galvanization during pre-forming and post-forming operation.

2.4.5 To avoid susceptibility towards wet storage stains (white rust), the finished material shall be provided with a protective coating of boiled linseed oil.

2.5 JOINTS IN WIRES

There shall be no joint of any kind in the finished steel wire strand entering into the manufacture of the stranded wire. There shall be no strand joints or strand splices in any length of the completed stranded wire.

2.6 TOLERANCE

The manufacturing tolerances to the extent of the following limits only shall be permitted in the diameter of the individual steel strands and lay length of the stranded wire:

	Standard	Maximum	Minimum
Diameter	3.66mm	3.75mm	3.57mm
Lay length	181mm	198mm	165mm

2.7 MATERIALS

2.7.1 Steel

The steel wire strands shall be drawn from high carbon steel rods and shall conform to the following requirements as to the chemical composition:

Element	% Composition
Carbon	Not more than 0.55
Manganese	0.4 to 0.9
Phosphorous	Not more than 0.04
Sulphur	Not more than 0.04
Silicon	0.15 to 0.35

2.7.2 Zinc

The zinc used for galvanizing shall be electrolytic High Grade Zinc of 99.95% purity. It shall conform to and satisfy all the requirements of IS: 209-1979

2.8 STANDARD LENGTH

2.8.1 The stranded wire shall be supplied in standard drum lengths generally in the range of 250/500/1000/2000/4000 m. However, drum lengths where required to be supplied in lengths different from standard lengths specified above shall be provided.

2.9 TESTS

2.9.1 The G.S. Wire should have been type tested as per IEC/IS and shall be subjected to routine and acceptance tests in accordance with applicable IS specifications/ ISO/ ASTMA recommendations. Type test reports of the tests conducted earlier (not more than five years earlier) on similar material shall be submitted. If the valid type test reports are not available with the bidder then the tests shall be conducted by the bidder free of cost.

2.9.2 If the purchaser insists to carry out the type test(s) afresh, the same shall be conducted on chargeable basis, for that the bidder shall submit the test charges in the price bid.

2.9.3 TYPE TESTS

In accordance with the stipulation of the specification the following type tests shall be conducted on the stranded wire.

- a) UTS test) As per Clause 2.10.1
- b) DC resistance test) As per Clause 2.10.2

2.9.4 ACCEPTANCE TESTS

- a) Visual check for joints, scratches etc. and length of stranded wire (As per Clause 2.10.3)
- b) Dimensional check(As per Clause 2.10.5)
- c) Galvanizing test (As per Clause 2.10.7)
- d) Lay length check (As per Clause 2.10.6)

- e) Torsion test (As per Clause 2.10.4)
- f) Elongation test (As per Clause 2.10.4)
- g) Wrap test
- h) DC resistance test (IS 398(Part-III))1976
- i) Breaking load test (IS 398(Part-III))1976
- j) Chemical Analysis of steel (IS 398(Part-III))1976)

2.9.5 ROUTINE TESTS

- a) Check that there are no cuts, fins etc. on the strands.
- b) Check for correctness of stranding.

2.9.6 TESTS DURING MANUFACTURE

- a) Chemical analysis of zinc used for galvanizing (As per Clause 2.10.8)
- b) Chemical analysis of steel (As per Clause 2.10.9)

2.9.7 SAMPLE BATCH FOR TYPE TESTING

The Contractor shall offer material for sample selection for type testing, only after getting quality assurance program approved by the Owner. The samples for type testing shall be manufactured strictly in accordance with the quality Assurance Program approved by the Owner.

2.10 TESTING PROCEDURE FOR STRANDED GALVANISED STEEL WIRE

2.10.1 UTS Test

Circles perpendicular to the axis of the stranded wire shall be marked at two places on a sample of stranded wire of minimum 5 m length suitably compressed with dead end clamps at either end. The load shall be increased at a steady rate up to 34 kN and held for one minute. The circles drawn shall not be distorted due to relative movement of strands. Thereafter, the load shall be increased at a steady rate of 68.4 kN and held for one minute. The stranded wire sample shall not fail during this period. The applied load shall then be increased until the failing load is reached and the value recorded.

2.10.2 D.C Resistance Test

On a stranded wire sample of minimum five metres length, two contact clamps shall be fixed with a pre-determined Bolt torque. The resistance shall be measured by a Kelvin double-bridge by placing the clamps initially zero meter and subsequently one meter apart. The test shall be repeated at least five times and the average value recorded. The value obtained shall be corrected to the value at 20⁰C shall conform to the requirements of this specification.

2.10.3 Visual Check for Joints, Scratches etc. and length of Stranded wire

Stranded wire drums shall be rewound in the presence of the inspector. The inspector shall visually check for scratches, joints, etc. and see that the stranded wire generally conforms to the requirements of this specification. The length of stranded wire wound on the drum shall be measured with the help of counter meter during rewinding.

2.10.4 Torsion and Elongation Tests

The test procedures shall be as per relevant clause of IS 398 (Part V). The minimum number of twists which a single steel strand shall withstand during torsion test shall be eighteen for a length equal to 100 times the standard diameter of the strand. In case the test sample length is less or more than 100 times the standard diameter of the strand, the minimum number of twists will be proportionate to the length and if number comes in the fraction then it will be rounded off to next higher whole number. In elongation test, the elongation of the strand shall not be less than 64% for a gauge length of 200 mm.

2.10.5 Dimensional Check

The individual strands shall be dimensionally checked to ensure that they conform to the requirements of this specification.

2.10.6 Lay Length Check

The lay length shall be checked to ensure that they conform to the requirements of this specification.

2.10.7 Galvanizing Test

The test procedure shall be as specified in IS: 4826-1968. The material shall conform to the requirements of this specification.

2.10.8 Chemical Analysis of Zinc used for Galvanizing

Samples taken from the zinc ingots shall be chemically/spectrographically analyzed. The same shall be in conformity to the requirements stated in this specification.

2.10.9 Chemical Analysis of Steel

Samples taken from the steel ingots/coils/strands shall be chemically/ spectrographically analyzed. The same shall be in conformity to the requirements stated in this specification.

2.11 Following drawings/ documents shall be submitted for approval/ information for each project:

- i) Guaranteed and other technical particulars
- ii) Drum Drawing
- iii) Type, Acceptance, sample and routine test reports

--XX--

SECTION – 3

PROJECT DETAILS AND GENERAL SPECIFICATIONS

3.0 GENERAL

This section stipulates the General Technical Requirements under the contract and will form an integral part of the Technical Specification.

The provisions under this section are intended to supplement general requirements for the materials, equipment and services covered under other sections and are not exclusive. However in case of conflict between the requirements specified in this section and requirements specified under other sections, the requirements specified under respective sections shall hold good.

3.1 SITE INFORMATION

SL.NO.	DESCRIPTION	
3.1	PROJECT INFORMATION	
	a) Customer	
	b) Project	
	c) Project location	
	d) Transport facilities Nearest Railway Station/Gauge Distance from Railway Station	
	e) Access roads	
3.2	SITE CONDITIONS	
3.2.1	Ambient Temp.	
	a) Maximum Design Ambient air temp. (max.) °C	
	b) Minimum Design Ambient air temp. (max.) °C	
3.2.2	Relative humidity	
3.2.3	Height above mean sea level	
3.2.4	Pollution Severity	
3.2.5	Earth quake data	
	a) Seismic zone as per IS 1893:84	
	b) Seismic acceleration	
3.2.6	Wind data	
	a) Wind velocity m/sec.	
3.2.7	Average annual rainfall	

3.2 INSTRUCTION TO BIDDERS

The bidders shall submit the technical requirements, data and information as per the technical data sheets, provided in Section-4.

The bidders shall furnish catalogues, engineering data, technical information, design documents, drawings etc fully in conformity with the technical specification.

It is recognised that the Manufacturer may have standardised on the use of certain components, materials, processes or procedures different than those specified herein. Alternate proposals offering similar equipment based on the manufacturer's standard practice will also be considered provided such proposals meet the specified designs, standard and performance requirements and are acceptable to the Purchaser. Unless brought out clearly, the Bidder shall be deemed to conform to this specification scrupulously.

3.3 STANDARDS

The works covered by the specification shall be designed, engineered, manufactured, built, tested and commissioned in accordance with the Acts, Rules, Laws and Regulations of India.

The equipment to be furnished under this specification shall conform to latest issue (with all amendments) of specified standards.

In addition to meeting the specific requirement called for in Sections 1 and 2 of the Technical Specification, the equipment shall also conform to the general requirement of the applicable standards, which shall form an integral part of the specification.

The Bidder shall note that standards mentioned in the specification are not mutually exclusive or complete in themselves, but intended to complement each other.

When the specific requirements stipulated in the specifications exceed or differ from those required by the applicable standards, the stipulation of the specification shall take precedence.

Other internationally accepted standards, which ensure equivalent or better performance than that specified in the standards referred, shall also be accepted. The bidder shall submit copies of such standards.

In case governing standard for the equipment is different from IS or IEC, the salient points of difference shall be clearly brought out in the offer along with English language version of standard or relevant extract of the same. The equipment conforming to standards other than IS/IEC shall be subject to Purchaser's / owner's approval.

The bidder shall clearly indicate in his bid the specific standards in accordance with which the works will be carried out.

3.4 SERVICES TO BE PERFORMED BY THE EQUIPMENT BEING FURNISHED

All equipment shall also perform satisfactorily under various other electrical, electro mechanical and meteorological conditions of the site of installation All equipment shall be able to withstand all external and internal mechanical, thermal and electro mechanical forces due to various factors like wind load, temperature variation, ice & snow, (wherever applicable) short circuit etc for the equipment.

3.5 ENGINEERING DATA

3.5.1 Drawings

The contactor shall necessarily submit all the drawings/ documents unless anything is waived. The contactor shall submit 6 (six) sets of drawings/ design documents/ data/ test reports as may be required for the approval of the purchaser. All drawings submitted by the Manufacturer including those submitted at the time of bid shall be in sufficient detail to indicate the type, size, arrangement, material description, Bill of Materials, weight of each component, break-up for packing and shipment, the external connections, fixing arrangement required. the dimensions required for installation and interconnections with other equipment and materials, clearances and spaces required for installation and interconnections between various portions of equipment and any other information specifically requested in the specifications.

Each drawing submitted by the Manufacturer shall be clearly marked with the name of the Purchaser, the unit designation, the specifications title, the specification number and the name of the Project. If standard catalogue pages are submitted, the applicable items shall be indicated therein. All titles, noting, markings and writings on the drawing shall be in English. All the dimensions should be in metric units.

Further work by the Manufacturer shall be in strict accordance with these drawings and no deviation shall be permitted without the written approval of the Purchaser, if so required.

The review of these data by the Owner will cover only general conformance of the data to the specifications and documents, interfaces with the equipment provided under the specifications, external connections and of the dimensions which might affect substation layout. Owner may not indicate a thorough review of all dimensions, quantities and details of the equipment, material, any devices or items indicated or the accuracy of the information submitted. This review and /or approval by the Owner shall not be considered by the Manufacturer, as limiting any of his responsibilities and liabilities for mistakes and deviations from the requirements, specified under these specifications and documents.

All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawings shall be at the Manufacturer's risk. The Manufacturer may make any changes in the design which are necessary to make the equipment conform to the provisions and intent of the Contract and such changes will again be subject to

approval by the Purchaser. Approval of Manufacturer's drawing or work by the Purchaser shall not relieve the manufacturer of any of his responsibilities and liabilities under the Contract.

All engineering data submitted by the Manufacturer after final process including review and approval by the Owner shall form part of the Contract Document and the entire works performed under these specifications shall be performed in strict conformity, unless otherwise expressly requested by the Owner in Writing.

The title block of drawings shall contain the following information incorporated in all contract drawings

Title block for _____ project:

1. Customer :
2. Consultant :
3. Project :
4. Contract No./LOA No. :
5. Main Contractor : Bharat Heavy Electricals Limited
6. BHEL Order No. & Date :

3.5.2 Approval Procedure

The scheduled dates for the submission of these as well as for, any data/information to be furnished by the Purchaser would be discussed and finalised at the time of award. The following schedule shall be followed generally for approval.

Stage	No. of copies	Submission Schedule /Remarks	
i)	Initial Submission Drawings, Data sheets, Type test Reports	6	As per agreed schedule
ii)	Resubmission, if required	6	Within 3 (three) weeks from date of comments including both ways postal time
iii)	Approval or comments		Within 3(three) weeks of receipt of resubmission.
iv)	Furnishing of distribution copies of drawings in bound volume	8	2 Weeks from the date of final approval Five (6) copies for each substation plus two (2) copies for corporate centre.

v)	Furnishing of distribution copies of type test reports in bound volumes	3	2 Weeks from the date of final approval One (1) copies for each substation plus two (2) copies for corporate centre
vi)	Furnishing of distribution copies of Routine test reports	2	2 Weeks from the date of final approval One (2) copies for each substation
vii)	CD-ROM/ Optical Disc of all documents	3	One (1) set for each substation plus two (2) set for corporate centre.

NOTES:

- a) The manufacturer may note that all re-submissions must incorporate all comments given in the prior submission by the Purchaser. Adequate justification for not incorporating the same must be submitted, failing which the submitted documents may be returned.

3.6 QUALITY ASSURANCE PROGRAMME

To ensure that the equipment and services under the scope of this Contract, whether manufactured or performed within the Manufacturer's Works or at his Sub-manufacturer's premises or at the Purchaser's site or at any other place of Work, are in accordance with the specifications, the Manufacturer shall adopt a suitable quality assurance programme to control such activities at all points, as necessary. Such programme shall be outlined by the Manufacturer and shall be finally accepted by the Purchaser after discussions before the award of Contract. A quality assurance programme of the manufacturer shall generally cover the following:

- (a) Manufacturer's organisation structure for the management and implementation of the proposed quality assurance programme;
- (b) Documentation control system;
- (c) Qualification data of bidder's key personnel;
- (d) The procedure for purchases of materials, parts components and selection of sub-Manufacturer's services including vendor analysis, source inspection, incoming raw material inspection, verification of material purchases etc.
- (e) System for shop manufacturing and site erection controls including process controls and fabrication and assembly control;
- (f) Control of non-conforming items and system for corrective actions;
- (g) Inspection and test procedure both for manufacture and field activities;
- (h) Control of calibration and testing of measuring instruments and field activities;
- (i) System for indication and appraisal of inspection status;
- (j) System for quality audits;
- (k) System for authorising release of manufactured product to the Purchaser
- (l) System for maintenance of records;

- (m) System for handling storage and delivery; and
- (n) A quality plan detailing out the specific quality control measures and Procedures adopted for controlling the quality characteristics relevant to each item of equipment furnished and/or services rendered. The Purchaser or his duly authorised representative reserves the right to carry out quality audit and quality surveillance of the system and Procedure of the Manufacturer/his vendors quality management and control activities.

3.7 Quality Assurance Documents

The Manufacturer shall be required to submit the following all Quality Assurance Documents as stipulated in the quality plan at the time of purchasers inspection of equipment/ material.

3.8 TYPE TESTING, INSPECTION, TESTING & INSPECTION CERTIFICATE

All equipment being supplied shall conform to type tests and shall be subject to routine and acceptance tests in accordance with requirements stipulated under respective sections. Purchaser reserves the right to witness any or all the tests. The Manufacturer shall intimate the Purchaser the detailed programme about the tests at least three (3) weeks in advance in case of domestic supplies & six (6) weeks in advance in case of foreign supplies. Purchaser reserves the option for getting any or all the type tests repeated on the equipment. The Manufacturer shall also submit type test procedure for approval of the Purchaser.

In the event of any discrepancy in the test reports i.e. any test report not acceptable due to any design/manufacturing changes (including substitution of components) or due to non-compliance with the requirement stipulated in the technical specification or any/all additional type tests not carried out without any additional cost implication to the Purchaser.

The price of conducting all tests and additional type tests is deemed to be included in Bid price. In case any bidder indicates that he shall not carry out a particular test, his offer shall be considered incomplete and shall be liable to be rejected.

The purchaser intends to repeat the type tests and additional type tests on cables for which test charges shall be payable as per provision of contract.

The Purchaser, his duly authorised representative and/or outside inspection agency acting on behalf of the Purchaser shall have at all reasonable times free access to the Contractors premises or Works and shall have the power, at all reasonable times to inspect and examine the materials and workmanship of the Works during its manufacture or erection if part of the Works is being manufactured or assembled at other premises or works, the Manufacturer shall obtain for the Engineer and for his duly authorised representative permission to inspect as if the works were manufactured or assembled on the Manufacturer's own premises or works. Inspection

may be made at any stage of manufacture, dispatch or at site at the option of the Purchaser and the equipment if found unsatisfactory due to bad workmanship or quality, material is liable to be rejected.

The Manufacturer shall give the Purchaser/inspector thirty (30) days written notice of any material being ready for testing. Such tests shall be to the Manufacturer's account except for the expenses of the inspector. Unless witnessing of the tests is virtually waived, the Purchaser/ inspector will attend such tests within thirty (30) days of the date of which the equipment is notified as being ready for test/ inspection, failing which the Manufacturer may proceed with the test which shall be deemed to have been made in the Inspector's presence and the Manufacturer shall forthwith forward duly certified copies of test reports in triplicate to the Inspector.

The Purchaser or Inspector shall, within fifteen (15) days from the date of inspection as defined herein, give notice in writing to the Manufacturer, of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Manufacturer shall give due consideration to such objections and shall either make the modifications that may be necessary to meet the said objections or shall confirm in writing to the Purchaser/ inspector giving reasons therein, that no modifications are necessary to comply with the Contract.

When the factory tests have been completed at the Manufacturer's works, the Purchaser/inspector shall issue a certificate to this effect within fifteen (15) days after completion of tests but if the tests are not witnessed by the Purchaser/inspector, the certificate shall be issued within fifteen (15) days of receipt of the Manufacturer's Test certificate by the Engineer/ Inspector. Failure of the Purchaser/inspector to issue such a certificate shall not prevent the Manufacturer from proceeding with the Works. The completion of these tests or the issue of the certificate shall not bind the Purchaser to accept the equipment should it, on further tests/ after erection, be found not to comply with the Contract. The equipment shall be dispatched to site only after approval of test reports and issuance of MICC by the Purchaser.

In all cases where the Contract provides for tests whether at the premises or at the works of the Manufacturer or of any Sub-Contractor, the Manufacturer except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the Purchaser /Inspector or his authorised representative to carry out effectively such tests of the equipment in accordance with the Contract and shall give facilities to the Purchaser Inspector or to his authorised representative to accomplish testing.

The inspection by Purchaser and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the Manufacturer in respect of the agreed quality assurance programme forming a part of the Contract.

The Purchaser will have the right of having at his own expenses any other test(s) of reasonable nature carded out at Manufacturer's premises or at site or in any other place in addition of aforesaid type and routine tests, to satisfy that the material comply with the specification.

The Purchaser reserves the right for getting any field tests not specified in respective sections of the technical specification conducted on the completely assembled equipment at site. The testing equipment for these tests shall be provided by the Purchaser.

3.9 MATERIALS AND WORKMANSHIP

Equipment materials and components shall be new, of high grade and good quality and be to the latest engineering practice. The material and workmanship throughout shall be in accordance with the purpose for which they are intended. Each component shall be designed to be consistent with its duty.

All the information concerning materials or components to be used in manufacturing, machinery, equipment, materials and components supplied, installed or used shall be submitted for approval. Without such approval the supplier shall run risk of subsequent rejection. The cost as well as time delay associated with such rejection shall be borne by the supplier.

3.10 PACKING AND STORAGE

All the equipments shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at site till the time of erection. On request of the purchaser, the manufacturer shall also submit packing details/associated drawing for any equipment/ material at a later date, in case the need arises. While packing all the materials, the limitation from the point of view of availability of Railway wagon sizes in India should be taken into account. The manufacturer shall be responsible for any loss or damage during transportation, handling and storage due to improper packing. Any demurrage, wharf age and other such charges claimed by the transporters, railways etc shall be to the account of the manufacturer. Purchaser takes no responsibility of the availability of the wagons.

All coated surfaces shall be protected against abrasions, impact, discolouration and any other damages. All exposed threaded portions shall be suitably protected with either a metallic or a non-metallic protecting device.

Supplier shall ensure that equipment shall be properly packed, blocked, padded, coated and protected so that it is not damaged due to possible mishandling. Storage requirements shall be clearly defined by the supplier. Packing shall be such that if required, long time storage at site should not deteriorate the performance of the equipment.

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SECTION – IV

GUARANTEED AND TECHNICAL PARTICULARS OF STRANDED G. S.WIRE

S. No.	Description	Unit	Particulars
1.	Name & Address of manufacturer		
2.	Particulars of raw materials		
2.1	Aluminium		
	a) Minimum Purity of Aluminium	%	
	b) Maximum Copper Content	%	
2.2	Steel wires/Rods		
	a) Carbon	%	
	b) Manganese	%	
	c) Phosphorous	%	
	d) Sulphur	%	
	e) Silicon	%	
2.3	Zinc		
	a) Minimum purity of Zinc	%	
3.	STEEL STRANDS BEFORE STRANDING		
3.1	Diameter		
	a) Nominal	mm	
	b) Maximum	mm	
	c) Minimum	mm	
3.2	Minimum breaking load of strand	kN	
3.3	Maximum Resistance of 1 M Length of strand of 20°C	Ohm	
4.0	STEEL STRANDS AFTER STRANDING		
4.1	a) Nominal Diameter	mm	
	b) Maximum Diameter	mm	
	c) Minimum Diameter	mm	
4.2	Minimum breaking load of strand	kN	
4.3	Galvanising		
	a) Min. weight of zinc coating of uncoated wire surface	g/ m ²	
	b) Min. number of one minute dips that the galvanised strand can withstand in the standard Preece test	Nos.	
	c) Min. No. of twists in gauge length equal to 100 times the dia of wire which the strand can withstand in the torsion test	Nos.	
5.	COMPLETED STRANDED WIRE		
5.1	UTS of stranded wire	kN	
5.2	Lay length of outer steel layer	mm	
5.3	DC resistance of stranded wire at 20°C	Ω/km	
5.4	Direction of lay of outer layer	-	
5.5	Linear mass of earth wire		
	a) Nominal	Kg/km	
	b) Maximum	Kg/km	
	c) Minimum	Kg/km	
6.0	Is drum as per I.S	Yes/No	
5.6	Standard length of stranded wire in the drum	m	

ANNEXURE – A

NO DEVIATION CERTIFICATE

It is confirmed that there is no deviation and the offer is in full compliance with the specification. It is also confirmed that there are no deviations in any other form such as comments, variations and or exceptions. Further it is confirmed that at all drawings/ data sheets/ QP/ type tests reports shall be submitted to BHEL for organizing approval of ultimate customer. Also, furnishing of all relevant information/ repetition of type tests (if required for meeting the specification requirement) shall be carried out by us at no extra cost to BHEL and without affecting delivery requirements.

Signature of the authorized representative of Bidder

Name _____

Designation _____

Place _____

Date _____

Company Seal