

BHARAT HEAVY ELECTRICALS LTD.**(TRANSMISSION BUSINESS GROUP)****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.	Standard Terms & Conditions	Enquiry No.- 266E004 Date:- 29.04.16 Due on:- 17.05.16
1.	<p>INSTRUCTION TO BIDDERS:</p> <p>a) Quotations are invited for the items mentioned in the enquiry.</p> <p>b) The tenders are invited and evaluated online through e-Procurement System. The bidder shall submit his response through bid submission to the tender on e-Procurement platform at https://bheleps.buyjunction.in.</p> <p>Foreign and indigenous vendors participating through open tenders/limited tender (Through E-procurement system) will necessarily have to buy Class-III digital certificates (DSCs) issued by certifying agencies in India.</p> <p>Procedure of getting obtaining DCSs can be down loaded from Important Links on link http://www.bhel.com/tender/tender_home.php or may be obtain from concern executive through email request.</p> <p>Successful bidder shall be responsible for completion of the contract in all respects. Techno commercial offers shall be opened through the E-Procurement portal. However this tender may be finalized through online Reverse Auction. Bidders are request to quote their most competitive prices through the online e-procurement portal / system.</p> <p>In case of any difficulty in operating the E-Tendering System, please call up our developer's Help Desk m Junction Services Ltd. at 033-6601 1717 or BHEL representative. Please ensure the submission of your most competitive offer before the due date in the E-Tendering Portal to avoid last minute hustle.</p> <p>c) The same shall be opened at 02.30 PM on the same day. Tenders received late may be rejected. Bids shall be submitted as per E-procurement system. Any other mode of submission of offer against aforesaid enquiry will not be entertained</p> <p>d) For any technical clarification please contact :</p> <p>Shri Shyam Vihari, Dy. Manager (TBEM) 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 BUDH NAGAR, UP, INDIA</p>	

Sr. No.	Standard Terms & Conditions	Enquiry No.- 266E004 Date:- 29.04.16 Due on:- 17.05.16
	<p>Phone : 0120 – 6748544 E-mail : svihari@bhel.in</p> <p><u>For any Commercial clarification, please contact:</u></p> <p>SH. S.C. SHIVHARE, SR. MGR.(TBMM) 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 BUDH NAGAR, UP, INDIA Phone : 0120-6748473 / 0120-6748471 Email: shashirai@bhel.in / scshivhare@bhel.in / a.kumar@bhel.in</p> <p>e) Price bid should contain only rates / prices, otherwise bid shall be liable for rejection.</p> <p>f) 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. Withdrawal of quotation by the bidder, at any stage after its opening, may entail blacklisting of vendor.</p> <p>g) Enquiry condition for where the scope against this tender includes Installation and Commissioning of the equipment / material:</p> <p>There will be separate contract awarded for Supply portion and Site execution portion. For Supply portion Commercial Terms and Conditions mentioned herein shall be applicable & for Site execution portion Terms and Conditions for Installation services shall be applicable. However, any breach in either of the contracts shall be deemed as the breach of other contract also.</p>	
2.	<p>PRICES:</p> <p>A. The prices shall be on FIRM basis.</p> <p>B. The prices shall be on domestic basis.</p> <p>C. The prices are to be quoted on Ex-works basis. The break-up of prices shall be as under : -</p> <p>a) Ex-works Price: Ex-Works price including packing & forwarding Charges.</p> <p>b) Excise Duty: Extra as applicable to be quoted as percentage in both un-price bid and price bid.</p> <p>c) Sales Tax: ST / VAT / CST (against C form) as applicable to be quoted extra as percentage in un-priced and price bid. In case of inter-state sale-in-transit supplier/vendor will have to provide E1/E2 form.</p> <p>d) Entry tax / Octroi Charges: Any Entry tax / Octroi applicable at destination / destination state shall be paid extra on proof of such payment.</p> <p>e) Freight & Insurance: Freight and Transit Insurance for door delivery up to destination/site is to be quoted.</p> <p>Note: The purchase order shall be placed on Ex-works basis.</p>	

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	<p>“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.</p> <p>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.”</p> <p>Further to above clause, please refer attached Annexure II for Terms & Conditions Of Reverse Auction Page 1 & 2)</p>	
3.	<p>TERMS OF PAYMENT:</p> <p>100% payment along with taxes, duties, Freight & Insurance within 60 days (45 days for MSE Vendor) from the date of receipt of complete invoice in TBG, BHEL with following documents in 3 sets (Original + 2 copies).</p> <ul style="list-style-type: none"> • LR duly endorsed in the name of Customer by BHEL-Site • Material Receipt certificate issued by Site as per attached format • Excise invoice (where ED re-imburement is required) • Packing List (Case-wise) • Copy of Performance Bank Guarantee • Transit insurance Certificate from insurance Comp or intimation of Transit Insurance duly endorsed by insurance Comp. • MICC issued by BHEL • Guarantee Certificate 	
4.	<p>INTEREST LIABILITY:</p> <p>In case of any delay in payment due to any reason, BHEL shall not pay any interest on delayed payment.</p>	
5.	<p>GUARANTEE:</p> <p>The equipment / material shall be guaranteed for 18 months from the date of delivery or 12 months from the date of commissioning, whichever is earlier. The defective material / component shall be replaced free of cost at site.</p>	
6.	<p>PERFORMANCE BANK GUARANTEE:</p> <p>Bidder shall furnish along with first invoice Performance BG / deposit as per one of following 2 options:</p>	

Sr. No.	Standard Terms & Conditions	Enquiry No.- 266E004 Date:- 29.04.16 Due on:- 17.05.16
	<p><u>Option A</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 B</u> Retention of 10% of the total Ex-works PO value by BHEL from the first bill in lieu of Performance Bank Guarantee, to be released after expiry of 24 months from the date of first delivery.</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 / ICICI Bank / IDBI Bank / HSBC / any other Nationalized Bank. The original BG should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL.</p>	
7.	<p>FINAL ENGINEERING DOCUMENTATION: NOT APPLICABLE.</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.</p> <p>Supplier shall send inspection call on prescribed format only, with an advance notice of 15 days. Vendor shall forward all inspection and test reports for issue of MICC by BHEL.</p> <p>Road Permit Form request should also be given along with Inspection call.</p>	
9.	<p>DESPATCH DOCUMENTS:</p> <p>Following despatch documents are to be immediately sent to purchaser on despatch:</p> <ul style="list-style-type: none"> • Copy of LR • Packing List (Case-wise) • Insurance Certificate • Guarantee Certificate 	
10.	<p>DELIVERY PERIOD: Bidder to specify the delivery period in weeks from the date of LOI / PO in the Activity Schedule Format enclosed with enquiry. Note: LR date or Invoice date whichever is later shall be considered as delivery date.</p>	
11.	<p>DELAYED DELIVERY:</p> <p>In case of delay in execution of order beyond the lot wise contractual delivery, an amount of ½ % of total Ex-Works Value of Delayed Lot per week or part there-of subject to maximum of 10% Ex-Works Value of Delayed Lot will be levied.</p>	
12.	<p>VALIDITY: The offer shall be valid for 120 days from the due date of opening.</p>	
13.	<p>QUANTITY VARIATION:</p>	

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	+/- 30 %.	
14.	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.	
15.	EVALUATION: Comparative statement shall be prepared based on total quantity basis unless otherwise indicated in the enquiry. Evaluation of offers shall be done on the basis of delivered cost to BHEL.	
16.	DEVIATION: The bids having deviation(s) w.r.t. tender are liable for rejection. However, BHEL, at its discretion, may load the prices for evaluation of offer as per Loading Criteria for identified deviations mentioned in clause No. 25.	
17.	ARBITRATION: All cases of disputes emanating from and relating to this contract shall be referred to the sole arbitration of Unit Head / GM, BHEL or any other person nominated by him(including an employee of BHEL, even though he had to deal with the matter relating to this contract in any manner) to act as sole arbitrator. The arbitration shall be in accordance with 'The Arbitration and Conciliation Act 1996' and the rules there under as amended from time to time. The arbitrator shall give a reasoned award. The decision of the arbitrator shall be final & binding upon both the parties. The venue of arbitration shall be Delhi.	
18.	LEGAL SETTLEMENT: Subject to clause 17 hereinabove this contract shall be subject to exclusive jurisdiction of courts at Delhi.	
19.	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.	
20.	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 to BHEL of the successful bidder.	
21.	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.	
22.	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	

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	responsible.	
23.	TECHNICAL SPECIFICATION : TB-STD.FBOLTS-618-002b Rev 03	
24.	QUALITY PLAN : The standard QAP of PGCIL would be applicable.	
25	<p>LOADING CRITERIA FOR DEVIATIONS TAKEN BY BIDDER ON:</p> <p><u>25.1.TERMS OF PAYMENT:</u></p> <p>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 sr. No. 3 above, loading to be done as follows:</p> <ul style="list-style-type: none"> 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. b) 60 days - No loading <p><u>25.2. DELAYED DELIVERY / PENALTY DUE TO DELAYED DELIVERY:</u></p> <p>Loading for not accepting this clause / accepting only on un delivered portion shall be the maximum amount specified in this clause.</p>	
26	<p>PRE QUALIFYING CRITERIA FOR OPEN TENDER:</p> <ul style="list-style-type: none"> i)The bidder must be a PGCIL approved supplier as on date of original Technical bid opening for 220 kV or above class under category of substation structure Lattice or Pipe Type/ Foundation Bolt as applicable. ii) Bidder should have PGCIL approved valid MQP as on date of date of original Technical bid opening as applicable. iii) Bidder should follows Technical Specification. iv) Bidder must have manufacturing capacity of Foundation Bolt up to 80 mm Dia. <p>The offers of such vendors who are not meeting above criteria shall be liable for rejection.</p>	
27	<p>EXTRA INSTRUCTION:</p> <p>GALVANIZATION SHALL BE 610 g/sqm. REQUIREMENT OF BOLT IS UP TO 80 MM DIA.</p>	
28	<p>FRAUD PREVENTION POLICY:</p> <p>"The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice."</p>	

ACTIVITY SCHEDULE FOR FOUNDATION BOLT

ENQUIRY NO.- 266E004 DATE- 29.04.16

DUE ON- 17.05.16

SL. NO.	ACTIVITY	TIME ALLOTTED [in weeks]	CUMULATIVE TIME FROM RECEIPT OF INPUTS FROM BHEL [in weeks]	SCOPE
1.	Submission of Documents necessary for getting manufacturing clearance like drawings, Data sheet	NA	NA	NA
2.	Approval of documents from BHEL/Customer	NA	NA	NA
3.	Manufacturing Time			BY SUPPLIER
4.	Inspection call			BY SUPPLIER
5.	Inspection by BHEL/Customer			BHEL SCOPE
6.	Issue of Dispatch clearance			BHEL SCOPE
7.	Dispatch			BY SUPPLIER

1. Inspection call to be issued 2 weeks in advance.
2. 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.
3. Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.
4. 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

Ref: TBMM/FB / BHUJ AND BANASKANTHA ENQUIRY NO.- 266E004 DATE- 29.04.16

This Format is to be submitted in original duly signed by bidder.

The following are the deviations/variations/exceptions from the Terms and Conditions :-

SL. NO.	CLAUSE NO. OF 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 Terms and Conditions.

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

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

Place :
Date :

Signature of the authorised representative of
Bidder's name :.....
Designation:.....
Company Seal:.....

SCHEDULE OF TECHNICAL DEVIATION

Ref: TBMM/FB/BHUJ_BANASKANTHA

ENQUIRY NO.- 266E004 DATE- 29.04.16

This Format is to be submitted in original duly signed by bidder.

The following are the deviations/variations/exceptions from the Terms and Conditions :-

SL. NO.	CLAUSE NO. OF 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 Terms and Conditions.

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

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

Place :
Date :

Signature of the authorised representative of
Bidder's name :.....
Designation:.....
Company Seal:.....

SCHEDULE OF PRICE

Enquiry No:- 266 E004

Date:- 29.04.16

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

PROJECT: PGCIL BHUJ AND BANASKANTHA

SL. NO.	DESCRIPTION OF ITEM (As per Tech Spec. TB-STD.FBOLTS-618-002b REV. 03)	UNIT	QUANTITY	UNIT PRICE EX. WORKS (Rs.)	TOTAL EX. WORKS (Rs.)	UNIT FREIGHT & INSURANCE UP TO SITE (Rs.)	TOTAL FREIGHT & INSURANCE UP TO SITE (Rs.)	ED @ % OF TOTAL EX- WORKS (Rs.)	CST/VAT/ST @.....% OF (TOTAL EX-WORKS+ TOTAL ED) (Rs.) AGAINST FORM "C"	DESTINATION PRICE (TOTAL EX- WORKS+TOTAL ED+TOTAL CST+ TOTAL F & I) (Rs.)
1	FOUNDATION BOLTS- FOR BHUJ POOL S/S	MT	124							
2	FOUNDATION BOLTS - FOR BANASKANTHA S/S EXTN.	MT	52							
TOTAL DELIVERED COST TO BHEL										

NOTE:

1. PLEASE NOTE THAT UNPRICED COPY OF PRICE BID (i.e. WITH ALL PRICES BLANKED) SHALL BE FURNISHED ALONG WITH TECHNO-COMMERCIAL BID.
2. REQUIRED COPIES OF FORMAT BE MADE & DETAILS MAY BE ANNEXED.
3. THE PRICES MUST BE QUOTED IN THE PRESCRIBED UNIT ONLY.
4. SALES TAX RATE AS APPLICABLE FOR SPECIFIED DESTINATION SHALL BE QUOTED. IN CASE OF CST, RATE AGAINST "C" FORM SHALL BE QUOTED.
5. IN CASE OF VARIED ED SLAB RATES, CONFIRM YOUR OPTION FOR "X" OR "Y". (STRIKE OFF WHICH IS NOT APPLICABLE)
IF NO OPTION IS MENTIONED "X" SHALL BE TAKEN.

6. THE VENDORS MUST INDICATE THE APPLICABLE TARIFF NOS. UNDER WHICH ED AND / OR CST WOULD BE PAID BY THEM TO THE TAX AUTHORITIES.
7. IF A VENDOR SUBMITS AN OFFER WITH REDUCED ED AND OR CST APPLICABLE THAN NORMALLY PAID ON SUCH ITEMS, THEY SHOULD SUBMIT NECESSARY DOCUMENTARY PROOF FOR THE SAME.
"X" THE MAXIMUM ED SLAB RATE BE CONSIDERED FOR PRICE COMPARISON.
IN THE EVENT OF ORDER ED AT ACTUAL BE PAID.

"Y" THE QUOTED ED RATE BE CONSIDERED FOR PRICE COMPARISON.
IN THE EVENT OF ORDER ED AT ACTUAL RATE LIMITED TO QUOTED RATE BE PAID.

SIGNATURE & SEAL OF TENDERER



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) Supplier:
- f) 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)

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 ENGINEERING MANAGEMENT
NOIDA

DOCUMENT No.	TB-STD.FBOLTS-618-002b	Rev 03	Prepared	Checked	Appd
TYPE OF DOC.	TECHNICAL SPECIFICATION	NAME	BVG	PLK	RMS
TITLE	STANDARD TECHNICAL SPECIFICATION FOR GI FOUNDATION BOLTS	SIGN	-SD-	-SD-	-SD-
		DATE			
		GROUP	TBEM		
		W.O. No			
CUSTOMER/CONSULTANT					

PROJECT

Contents:

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 This must not be used directly or indirectly in anyway detrimental to the interest of the company.

03	16.12.15	<i>GP</i>	<i>BVG</i>	<i>NSR</i>	DETAILS FOR 80MM DIA FDN BOLTS MENTIONED <i>in cl 2.2.8</i>
Rev	Date	Altered	Checked	Approved	
Distribution				To	
				Copies	

SECTION - 1

SCOPE, SPECIFIC TECHNICAL REQUIREMENTS & QUANTITIES

1.1 SCOPE

The scope of this specification is to specify all details required by a supplier for supply of galvanized foundation bolts for projects being executed by BHEL on turnkey basis for NTPC, PGCIL, SEBs and other Customers.

1.2 SPECIFIC TECHNICAL REQUIREMENTS

The specific technical requirements shall be as per Standard Technical Specification (Refer Section 2).

1.3 QUANTITIES

The quantities shall be as per Purchase Indent.

SECTION – 2

STANDARD TECHNICAL SPECIFICATION

2.0 FOUNDATION BOLTS (including nuts and washer):

This section covers the standard technical specification for GI Foundation Bolts.

2.1 Following standard drawing is attached for reference based on which supplies shall be made as per BHEL's requirement.

1- BHEL Dwg No.: TB-3-STD. FBOLTS-618-501 Details of Standard GI foundation bolts

However, there may be certain cases where supplies may be required to be made as per Customer's specific technical requirements. Drawings for such non-standard cases shall be provided separately.

2.2 All foundation bolts including nuts and washers shall be supplied based on the following specifications.

2.2.1 All foundation bolts shall conform to IS: 5624 but the material including anchor plate shall be MS conforming to IS: 2062 (Grade A).

2.2.2 All foundation bolts shall be of property class 4.6 conforming to IS: 1367.

2.2.3 All foundation bolts shall be fully galvanized so as to achieve 0.61kg/sqm of zinc coating as per relevant IS. However, if different coating is required or partial galvanizing is required, it shall be indicated separately.

2.2.4 The pitch of threads shall be 5.5mm as per IS 4218 Part-II for 56mm dia bolt.

2.2.5 The threads of bolts shall be undercut to suit standard matching nut.

2.2.6 All corresponding hexagonal nuts shall be of property class 4 conforming to IS:1367/IS:1363/IS:6639.

2.2.7 All plain washers shall conform to IS: 2016.

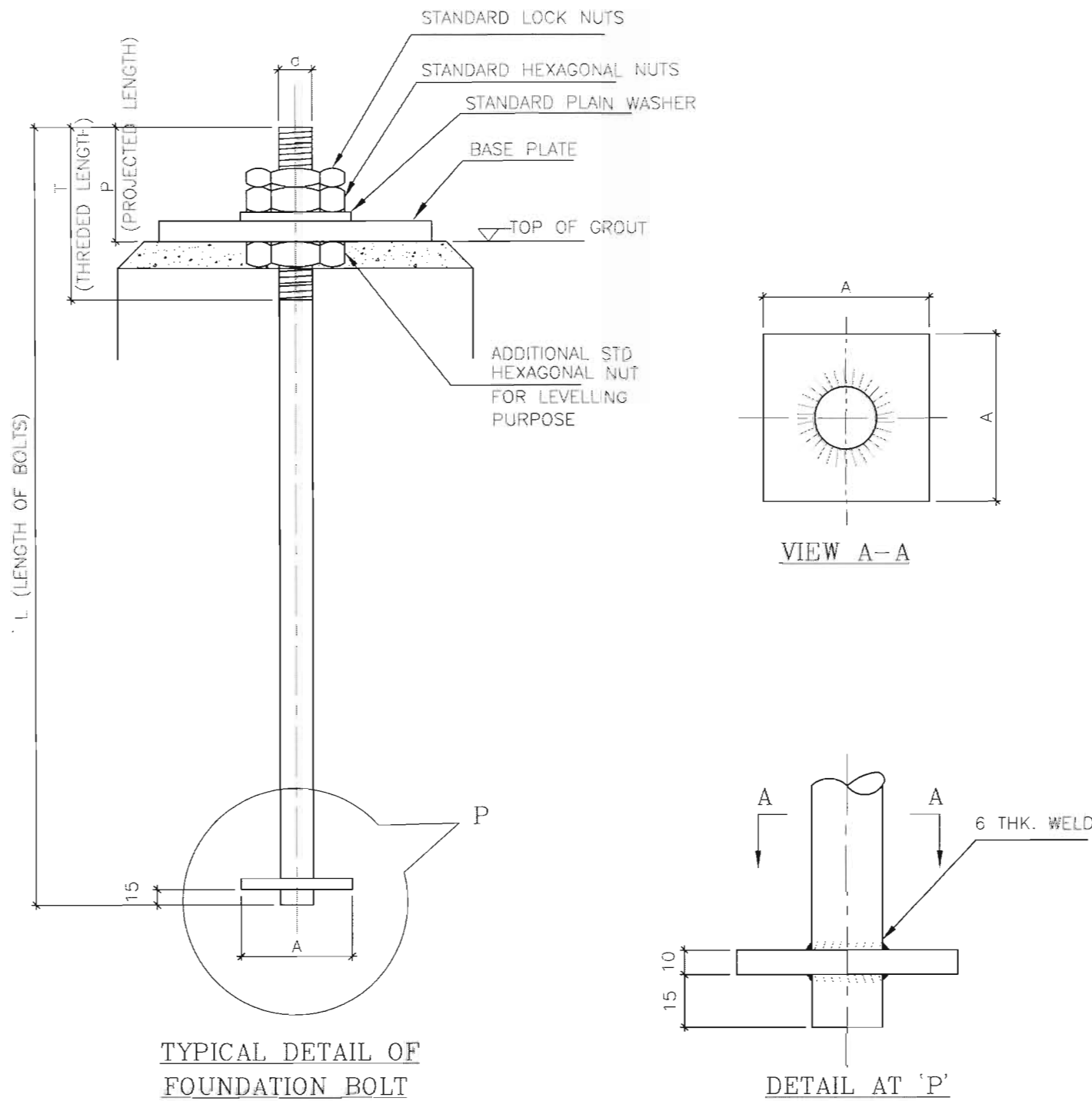
2.2.8 For purpose of payment, the unit weight of standard bolts including nuts & washers as indicated in table below shall be considered. Where supply is for non-standard bolts, payment shall be made based on unit weights worked out considering theoretical dimensions & density of steel as 7850kg/cum.

Diameter of non-standard foundation bolts can go up to 80mm and length can go up to 2500mm with matching nuts and washers as per drawing.

UNIT WEIGHT OF STANDARD GI FOUNDATION BOLTS I/C NUTS & WASHERS:
BHEL DWG NO. – TB-3-STD.FBOLTS-618-501

S. NO.	TYPE	SIZE OF BOLTS	TOTAL WT (KG)
1	56A	56 ϕ X 2000 LG	43.33
2	56B	56 ϕ X 1800 LG	39.46
3	56C	56 ϕ X 1600 LG	35.60
4	56D	56 ϕ X 1400 LG	31.73
5	56E	56 ϕ X 1250 LG	28.83
6	48C	48 ϕ X 1600 LG	26.17
7	48D	48 ϕ X 1400 LG	23.33
8	48E	48 ϕ X 1250 LG	21.20
9	48F	48 ϕ X 1000 LG	17.65
10	40E	40 ϕ X 1250 LG	14.51
11	40F	40 ϕ X 1000 LG	12.05
12	40G	40 ϕ X 800 LG	10.08
13	32E	32 ϕ X 1250 LG	9.21
14	32F	32 ϕ X 1000 LG	7.63
15	32G	32 ϕ X 800 LG	6.37
16	28E	28 ϕ X 1250 LG	6.93
17	28F	28 ϕ X 1000 LG	5.72
18	28G	28 ϕ X 800 LG	4.76
19	24F	24 ϕ X 1000 LG	4.32
20	24G	24 ϕ X 800 LG	3.61
21	24H	24 ϕ X 600 LG	2.90
22	20G	20 ϕ X 800 LG	2.60
23	20H	20 ϕ X 600 LG	2.11
24	20I	20 ϕ X 400 LG	1.62

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it must not be used directly or indirectly in anyway detrimental to the interest of the company.



S.No.	BOLT TYPE	DIA OF BOLTS (d) MM	TOTAL LENGTH OF BOLT (L) MM	THREADED LENGTH OF BOLT (T) MM	PROJECTED LENGTH OF BOLT (P) MM	(A) MM
1	56A	56	2000	220	160	100
2	56B	56	1800	220	160	100
3	56C	56	1600	220	160	100
4	56D	56	1400	220	160	100
5	56E	56	1250	220	160	100
6	48C	48	1600	200	150	100
7	48D	48	1400	200	150	100
8	48E	48	1250	200	150	100
9	48F	48	1000	200	150	100
10	40E	40	1250	160	110	100
11	40F	40	1000	160	110	100
12	40G	40	800	160	110	100
13	32E	32	1250	150	110	75
14	32F	32	1000	150	110	75
15	32G	32	800	150	110	75
16	28E	28	1250	140	100	75
17	28F	28	1000	140	100	75
18	28G	28	800	140	100	75
19	24F	24	1000	120	90	75
20	24G	24	800	120	90	75
21	24H	24	600	120	90	75
22	20G	20	800	110	75	75
23	20H	20	600	110	75	75
24	20I	20	400	110	75	75

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. ALL BOLTS, NUTS, WASHERS & ANCHOR PLATES SHALL CONFORM TO STANDARD TECHNICAL SPECIFICATION NO. TB-STD.FBOLTS-618-002b (REV03).

NAME OF CUSTOMER: _____

NAME OF PROJECT: _____

BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION PROJECTS DIVISION

TITLE:-- **DETAILS OF STANDARD GI FOUNDATION BOLTS**

SCALE 1:60 W.O. No. _____ DRG. No. **TB-3-STD.FBOLTS-618-501**

CARD CODE _____

NEXT SHEET _____

SHEET No. **01**

REV. **00**

COMPUTER DRG. PATH NAME :

SIGN & DATE

INVENTORY NO.

REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.	NAME	SIGN.	DATE
										DRAWN	GP	16.12.15
										CHECKED	BVG	16.12.15
										APPROVED	NSR	16.12.15
										DISTRIBUTION OF PRINTS		
										DEPT.	CODE	
										TBEM	422	



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.

3.1 SITE INFORMATION

SL.NO.	DESCRIPTION	
3.1.1	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 STANDARDS

All materials shall comply in all respect with the requirement of the latest edition of the relevant codes as listed in Section 2.

SECTION-6

**CHECK LIST FOR INFORMATION TO BE FURNISHED WITH OFFER
RETURN THIS CHECKLIST AS PART OF THE OFFER DULY SIGNED**

The offer may not be considered if the following information and this Checklist are not enclosed with the Offer.

BHEL ENQUIRY. NO:

BIDDER:OFFER REFERENCE:

6.1 Deviations

Tick

YES

NO

If yes,

S.No.	Deviation	Clause No.
1		
2		
3		
4		

(Signature & Seal of Bidder)