

# MS ROD FOR BELOW GROUND EARTHING

GeM Tender Enquiry for MS ROD FOR BELOW GROUND EARTHING for 4X270 MW BHADRADRI TPS -  
FGD

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**Project: - 4X270 MW BHADRADRI TPS -FGD**  
**Package: - MS ROD FOR BELOW GROUND EARTHING**  
**GeM BID No....., Dtd. ....**

**ANNEXURE –I**

**Additional clauses of NIT**

**1. Liquidated Damages: -**

- a) **Main Supply:-** Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half ( $\frac{1}{2}$ ) percent and applicable GST thereon, of the total main supply & commissioning spares contract price excluding GST per week or part thereof, subject to a maximum of ten(10) percent of the total main supply & commissioning Spares contract price excluding GST, if the Seller/ Contractor fails to deliver any part of the ordered goods/stores within the period stipulated in the Order/ Contract.

**NOTE:**

- i. LR/RR date for indigenous supplies (Bill of Lading/AWB for Foreign supplies) shall be treated as the date of dispatch for levying LD. However, if receipted LR date for indigenous supply is beyond 30 days for FTL/ 45 days for PTL from the date of LR (PTL to be clearly mentioned in LR), such excess period shall be considered for LD purpose irrespective of dispatch date. Import General Manifest (IGM)/Bill of entry date (whichever is earlier), for foreign supplies, is beyond 90 days from the date of Bill of Lading/AWB, such excess period shall be considered for LD purpose irrespective of dispatch date.
- ii. In case of any amendment/ revision, LD shall be linked to the amended/ revised contract value and delivery date(s).
- iii. If Order/ Contract involves two or more Units/ Sets/ Lots/ Stages, then Liquidated Damages shall be levied on order/ contract value excluding GST of the delayed Unit/ Set/ Lot/ Stage, provided delivery stipulated in the Order/ Contract is Unit/ Set/ Lot/Stage wise, however total LD amount shall be limited to 10% of total order/ amended order value excluding GST of delayed Unit/ Set/ Lot/Stage. Any subsequent lot released (not envisaged in original contract) due to increase in quantity within permissible quantity variation shall be treated as separate lot for the purpose of LD.
- iv. The sum specified above is not a penalty but a genuine pre-estimate of the loss/ damage which will be suffered by purchaser on account of delay on the part of the Contractor/Seller and the said amount will be deductible without proof of actual loss or damage caused by such delay.

**2. Risk & Cost Purchase**

BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' by BHEL in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-à-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;

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- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

**2.1 Risk & Cost Amount against Balance Work:**

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (\*) as per rates of new contract

B= Value of Balance scope of Work (\*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

**2.2 Balance scope of work (in case of termination of contract):**

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

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Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract

quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

### **2.3 LD against delay in executed work in case of Termination of Contract:**

LD against delay in executed work shall be calculated in line with above LD clause, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract” is given below.

i. Let the time period from scheduled date of start of work till termination of contract excluding the period of

Hold (if any) not attributable to contractor = T1

ii. Let the value of executed work till the time of termination of contract = X

iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y

iv. Delay in executed work attributable to contractor i.e.  $T2 = [1 - (X/Y)] \times T1$

v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking “X” as Contract Value and “T2” as period of delay attributable to contractor

### **2.4 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor**

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk & cost has been invoked shall be made from the following:

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- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.

- 3. For recognition of dispatch, vendor to submit following documents to BHEL by e-mail/ fax immediately on dispatch: - GST compliant invoice, LR for Indian Vendors (indicating Invoice No., no. of boxes, PTL (if applicable) etc.) / Bill of Lading or AWB for foreign vendor, Packing List (Must be indicating No. of boxes, Packing size, Gross weight and net weight of each package, Contents of the package with cross reference to BoM item code no. or item serial no. and Quantity of each item separately), Insurance Intimation to underwriter through email/fax, Dispatch Clearance.

**B. Following ATC available in GEM shall also be part of NIT: -**

- i. Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.
- ii. Bidders are advised to check applicable GST on their own before quoting. Buyer will not take any responsibility in this regards. GST reimbursement will be as per actuals or as per applicable rates (whichever is lower), subject to the maximum of quoted GST %.
- iii. The bidder is required to upload, along with the bid, all relevant certificates such as BIS license, type test certificate, approval certificates and other certificates as prescribed in the Product Specification given in the bid document.
- iv. While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.

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**Additional Terms and Conditions for subject Tender Enquiry to be complied by Bidders for Consideration in this tender:**

- A.** Bidders to ensure that Third party/Customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and E-mail Id. In case the same is found not available, BHEL has the right to reject such document from evaluation.
- B.** “This item /package/system falls under the list of items defined in para 3 of ministry of finance guideline date 20.09.16 (procurement of items related to public safety, health, critical security operations and Equipment's etc.) & hence criteria of prior experience /turnover shall be same for all bidders including start up /MSME”.
- C.** **Guarantee & Warrantee** shall be as per Cl. No. 10 of GTC on GeM for the bid. However, Guarantee & Warrantee time period shall be 18 months from the date of last supply in the contract for Main Supply.
- D.** Evaluation shall be on the basis of total all inclusive, landed price at consignee destination (Refer cl. No. 6 of GTC on GEM).
- E.** **Terms of Delivery:** - Terms of delivery shall be F.O.R. dispatch station. All dispatches shall be through Road Carriers on Freight Pre-Paid basis. Road Permit/E-way Bill if required will be arranged by Supplier. However, loading & Transit insurance shall be in the scope of Seller and unloading of items at delivery point shall be in the scope of BHEL. Bidder to quote prices accordingly.
- F.** Further, w.r.t. Transit Insurance supplier has to inform the details of dispatches (such as Policy No., Consignee Name, Consignment Packing details, Project Name, Purchase Order No., LR No. & date, Invoice No. & date, Dispatch Origin & destination details etc.) to policy underwriter.
- G.** Bidder has to provide the details as per TECHNICAL PQR (attached with Specifications of product catalogue) in its offer and has to note that bids of only those bidders shall be evaluated who meet the Technical Pre-Qualifying requirements'. The terms of technical PQR shall prevail in conflict (if any).
- H.** PQR criteria uploaded with Buyer uploaded Bid Specific document shall prevail Value of Experience criteria and Past performance parameter mentioned in GeM bid.
- I.** Purchaser will issue MDCC to the Seller/ Contractor within 7 days based on inspection report/ test certificates/Certificate of Conformance as applicable. In case of delay in issuance of MDCC beyond 7 days stipulated time (i.e. from the date of successful inspection report), by BHEL arising due to reasons not attributable to vendor, BHEL will extend the delivery period for such delay in issuing MDCC. If BHEL is not able to issue MDCC up to 15 days then in addition to delay beyond stipulated period, 7 days' additional time shall be given to vendor to facilitate the vendor for arranging logistics arrangements.
- J.** All Bidders shall be required to submit applicable Freight % & GST % included in their prices during clarification stage of Tender.
- K.** Performance Bank Guarantee: shall be as per Cl. No. 7 of GTC of GeM. Performance Security amount shall be @5% of the value of contract value.
- L.** **Payment Terms:** For Supply Portion: - As per clause no. 12 (i) of GTC on GeM. Supplier has to provide original+1 copy of Tax invoice, Packing List, LR/RR or AWB, CRAC, Insurance intimation, Guarantee Certificate, E-way bill (as applicable) for payment.  
Offline payment mode shall be selected. Payment will be released within 90 days for Non MSME after submission of complete documents (45 days for Micro & Small Enterprises (MSEs), 60 days for Medium Enterprises.
- M.** **Bid reserved for Make in India products:** - Procurement under this bid is reserved for purchase from Class 1 local suppliers as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to

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time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a class 1 local supplier is denoted in the bid document as **SIXTY (60)%**. All bidders must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which the bid is liable to be rejected.

Regarding verification of local content, the local supplier at the time of tender, bidding or solicitation shall be required to provide certification (as per enclosed annexure-IV) as per para 9 of PP-MII order revision dated 16.09.2020.

**N. This is conditional tender enquiry. Financial bid opening (Part-II) of a bidder shall be subjected to following: -**

- (i) Techno-Commercial evaluation/recommendation by BHEL.
- (ii) Qualification of Technical PQR
- (iii) Offered item should mandatorily conform to PP-MII order provisions.
- (iv) Approval of vendor from end Customer (TSGENCO). shall be taken up by BHEL-PEM with customer. Bidders who are not approved from TSGENCO (end customer) should furnish the credentials as per TSGENCO (end customer) format - (Annexure -A) along with their bid.

**O. Consignee Details** (for PRC - Provisional Receipt Certificate & CRAC - Consignee's Receipt cum Acceptance Certificate, as applicable) shall be as per Project Site official details.

**P. The Bidder has to declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/guidelines.**

**Q. Bidders to ensure the following: -**

- Ensure compliance to Ministry of Power (MoP) Order No. 11/05/2018 Coord. dt. 28/07/2020, if applicable.
- Ensure compliance of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.
- to submit "Model Certificate for Tenders" as per Annexure-III of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020. Bidder to submit the following undertaking on their letter head duly signed from the highest competent authority at your end (i.e Owner, partner, CMD, Director etc.)

**"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered"**

Note: - This bidder is to be replaced with bidders' organizational name.

**R. Delivery Period:** Delivery period for sake of GeM bid shall be chosen as 365 days from PO date. This is Indicative only. However, this period shall not be considered for Delivery and Delay analysis purpose.

For Delivery and delay analysis purpose, delivery schedule mentioned below shall be considered for this tender:  
**Delivery Period: 60 days from the date of PO.** Other terms of delivery mentioned in Annexure - II.

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- S.** For registration in BHEL PEM- Online registration portal is operational, Non-registered Vendors who wish to apply for registration in BHEL-PEM can apply through Online Registration Portal available at [www.pem.bhel.com](http://www.pem.bhel.com) - vendor section - Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration can be uploaded on the website and submit the application for registration. However, registration of suppliers is not mandatory in case of open tender
- T.** Instructions to Packing List (annexure –III) and Certification reg. Local content (annexure –IV) to be complied by bidders.
- U. Quantity Variation:** - Qty Variation shall be 0%.
- V.** Material shall be dispatched by vendor after issuance of MDCC by BHEL only.
- W.** All the Buyer Added Bid Specific Additional Terms and Conditions shall supersede relevant terms & conditions of GeM GTC and shall prevail in case of conflict with any other terms & conditions of tender (if any).
- X.** All other terms & conditions shall be as per selected Additional Terms & Conditions for subject bid from GeM library and GTC version 4.0 (Version 1.6) available on GeM Portal on enquiry floating date shall be applicable.



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**An undertaking regarding Model Clauses (To be provided alongwith bid)**

Refer,

PROJECT	:- 4X270 MW BHADRADRI TPS -FGD
PACKAGE	:- MS ROD FOR BELOW GROUND EARTHING
Primary product category on GeM	:-.....
BID No. (Through GeM)	:- ..... , Dtd. ....

M/s .....

Reference:

**TO WHOM SO IT MAY CONCERN**

This is with reference to Ministry of Finance circular dated 23.07.20 reg. restriction under rule 144 (xi) of GFR.

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I hereby certify that M/s ..... is not from such a country and is eligible to be considered against GeM enquiry no: ....., **Dtd. ....**”

Sign & Signature

Date:

**Project: - 4X270 MW BHADRADRI TPS -FGD**  
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**ANNEXURE -III TO INSTRUCTIONS TO PACKING LIST**

For faster verification of bills, successful bidder to submit detailed Bill of Material (BOM) at the time of drawings/ documents submission after placement of PO. Each item of the BOM to be uniquely identified with item code no. or item Sl. No. Supplier to ensure that all items which will find separate mention in the packing list are covered in this detailed BOM.

Supplier to also give the following undertaking in the BOM:

“The BOM provided herewith completes the scope (in content and intent) of material supply under PO No. .... Dated ..... Any additional material which may become necessary for the intended application of the supplied items/package will be supplied free of cost in most reasonable time.

Packing List must indicate:

- a) Packing size
- b) Gross weight and net weight of each package
- c) Contents of the package with cross reference to BOM item code no. / Sl. No.
- d) Quantity of each items separately.

The packing list must cover all the BOM items.

Supplier to give following undertaking in the packing list:

The Packing list provided herewith is as per BOM approved under PO No. ----

Project: - 4X270 MW BHADRADRI TPS -FGD  
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**ANNEXURE IV**

**Letter head of Company**

Ref.....

Date.....

To,  
Bharat Heavy Electricals Limited  
PEM, PPEI Building, Plot No 25,  
Sector 16A, Noida (U.P.) 201301

**Subject: Certification regarding local content**

Reference: Tender Enquiry No....., Dtd. ....

Name of Package: **MS ROD FOR BELOW GROUND EARTHING.**

Dear Sir,

We hereby certify that items offered by us of **MS ROD FOR BELOW GROUND EARTHING** for **4X270 MW BHADRADRI TPS -FGD**, M/s ..... meets the requirement of minimum local content as a class – I local supplier in line with clause of NIT (GeM NIT) and the Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017, 28.05.2018 & 29.05.2019, 04.06.20 & 16.09.20

We further confirm that details of location at which the local value addition is made will be our registered works at

.....  
...(address of the works)

Yours very truly

..... (authorized signatory of company)

..... (firm name)

authorized signatory  
of company

**Project:- 4X270 MW BHADRADRI TPS -FGD**  
**Pacakge:- MS ROD FOR BELOW GROUND EARTHING**  
**Annexure II to NIT- Delivery Schedule**

Sl. No.	Package Code	Package name	BHEL Drawing No	Drawing Title	Primary/ Secondary	BHEL Inputs	Drg Sch for Vendors	Standard Delivery Terms for Supply Portion	Scope of Services, (if any, as per Indent) and corresponding schedule for rendering the services
1	509-12000-A	MS ROD FOR BELOW GROUND EARTHING	NA	NA			NA	Within 02 months from PO	

**Notes:-**

(i)	The end period specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
(ii)	The delivery conditions specified are for contractual LD purposes, however BHEL may ask for early deliveries without any compensation thereof.
(iii)	Vendor to start manufacturing activities only after obtaining specific manufacturing clearance from BHEL Purchase group.
(iv)	Material shall be dispatched by vendor after issuance of MDCC by BHEL.

<b>CUSTOMER/ BHEL LOGO</b>	<b>VENDOR CREDENTIALS SUMMARY SHEET (TO BE FILLED BY BIDDER AND SUBMITTED WITH BID)</b>
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i.	Item/Scope					
ii.	Address of the registered office	Details of Contact Person (Name, Designation, Mobile, Email)				
iii.	Name and Address of the proposed vendor's works where item is being manufactured	Details of Contact Person: (Name, Designation, Mobile, Email)				
iv.	Annual Production Capacity for proposed item					
v.	Annual production for last 3 years for proposed item					
vi.	Details of proposed works					
1.	Year of establishment					
2.	Factory Registration Certificate	Details attached at Annexure – F2.1 (Page No....)				
3.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc.)	Details attached at Annexure – F2.2 (Page No....)				
4.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.)	Applicable / Not applicable  Details attached at Annexure – F2.3 (Page No....)				
5.	Sources of Raw Material/Major Bought Out Item	Details attached at Annexure – F2.4 (Page No....)				
6.	Quality Control exercised during receipt of raw material/BOI, in-process, Final Testing, packing	Details attached at Annexure – F2.5 (Page No....)				
7.	Manufacturing facilities (List of machines, special process facilities, material handling etc.)	Details attached at Annexure – F2.6 (Page No....)				
8.	Testing facilities (List of testing equipment)	Details attached at Annexure – F2.7 (Page No....)				
9.	Supply reference list including recent supplies (Preferably of reputed, well known clients to whom the vendor has supplied the material and are of quantum of item/scope at point (i) above)	Reputed client name (s)..... Details attached at Annexure – F2.8 (as per format given below) (Page No....)				
Project/ package	Customer Name	Supplied Item (Type/Rating/Model /Capacity/Size etc)	PO ref no/date	Supplied Quantity	Date of Supply	



**ANNEXURE - I**  
**4X270MW TSGENCO MANUGURU TPS (FGD)**  
**(BOQ-CUM-PRICE SCHEDULE FOR 40MM DIA MS ROD)**

SR. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	UNIT PRICE	TOTAL PRICE
a)	509-12004-A	MS ROD 40MM DIA	MT	32		





**TELANGANA STATE POWER GENERATION  
CORPORATION LIMITED**

**4X270MW BHADRADRI TPS (FGD)**

**VOLUME -II**


***TECHNICAL SPECIFICATION  
FOR  
MS ROD FOR BELOW GROUND  
EARTHING***

**SPECIFICATION NO: PE-TS-440-509-E001  
REVISION: 00**




**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR  
PROJECT ENGINEERING MANAGEMENT  
NOIDA, UP (INDIA) – 201301**

1235958/2023/PS-PEM-EL

	DOCUMENT TITLE  TECHNICAL SPECIFICATION FOR MS ROD FOR BELOW GROUND EARTHING	SPECIFICATION NO. PE-TS- 440-509-E001	
		VOLUME II	
		REVISION - 0	DATE: 07.01.2022
		SHEET 2	

## STANDARD TECHNICAL REQUIREMENTS

	DOCUMENT TITLE		SPECIFICATION NO. PE-TS- 440-509-E001
	TECHNICAL SPECIFICATION FOR MS ROD FOR BELOW GROUND EARTHING		VOLUME II
			REVISION - 0      DATE: 07.01.2022
			SHEET 3

## 1.0 INTENT OF THE SPECIFICATION

- 1.1 This specification covers the design, manufacture, inspection & testing, packing at manufacturer's works and delivery to site of MS ROD FOR BELOW GROUND EARTHING.
- 1.2 The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

## 2.0 CODES & STANDARDS

- 2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.
- 2.2 Applicable Standards (Latest amendment to be referred): -
- IS 2062, Grade E250 Sub-Quality A: Hot Rolled Low, Medium and High Tensile Structural Steel.
  - ASTM A 510M Grade No. 1010 (SAE No. 1010) /1018 (SAE No. 1018) /1020 (SAE No.1020): Standard Specification for general requirements of wire rods and coarse round wire, carbon steel.
  - IS 1875, Designation 15C8: Carbon Steel Billets, Blooms, Slabs and bars for forging – Specification.

## 3.0 TECHNICAL REQUIREMENTS

- 3.1 Straight lengths of MS rods of standard diameter of 40 mm in minimum length of 9 m shall be supplied.
- 3.2 All finished MS rods for Below Ground Earthing shall be free from sharp edges, corners, burs & unevenness.
- 3.3 Bidder to supply order quantity indicated in the Technical Specification. Overall tolerance on total dispatched quantity shall be restricted to +/- 3% in line with IS 2062.

## 4.0 QUALITY / INSPECTION

- 4.1 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of this specification.
- 4.2 The tests shall be in accordance with relevant Indian/American standards. The extent of the tests to be performed by the supplier shall include but not be limited to the following: -

- Routine Tests:
  - Tests for Chemical Composition
  - Test for Mechanical Properties.

Necessary Test Certificates shall be submitted to BHEL for review before actual dispatch of material.

## 5.0 PACKING

The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

## 6.0 BOQ FOR BELOW GROUND EARTHING (MS ROD)

40MM DIA MS ROD – 32 MT

Note- Vendor shall submit the dates for drawing/document submission/BHEL comments/resubmission/approval after approval of documents.

1235958/2023/PS-PEM-EL



TECHNICAL SPECIFICATION FOR  
MS ROD FOR BELOW GROUND EARTHING

SPECIFICATION NO.  
PE-TS-440-509-E001  
REV NO.: 00 DATE: 18.01.2022  
SHEET :

**SCOPE MATRIX FOR MS ROD**

Sr. No.	Activities	Manufacturer	Bidder/ Associate	Remarks
1.	Source of Supply	Material is to be dispatched directly from the place of manufacturer (works / storage yard) of MS Rod to the project sites without any transshipment.	-----	Consignors Name & address on dispatch documents shall be of Manufacturer (works / storage yard) from where the material is dispatched.
2.	Testing/ Inspection			
3.	Guarantee/ Warrantee			
4.	Transportation			

Bidder to furnished duly filled in signed & stamped copy of scope matrix for broad activities