



Technical Specification for  
Below Ground Earthing Materials-40mm Dia MS Rod  
Customer : Telangana State Power Generation Corporation Ltd.  
(TSGENCO)

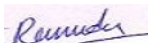
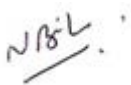

Document No:  
IS-1-15-2001/057  
Rev-00

**TECHNICAL SPECIFICATION FOR**  
**BELOW GROUND EARTHING MATERIALS LOT-1 for 5X800MW YADADRI THERMAL**  
**POWER PLANT**

**Important instructions to be followed by bidder:**

- No technical submittal such as copies of type test certificates, technical literature, etc. is required during tender stage. Any such submission, even if made, **shall not be considered as part of offer.**
- Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification. Any Specific deviation (any such which is contradicting with the specification, relevant IS) shall be mentioned in the deviation format only.

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BIDDER'S STAMP & SIGNATURE

Prepared By	Checked by	Approved by
 Dasaratha Ramudu V Engineer/Engg.-Electrical	 Nitinkumar Shrinivas Bihani (Dy. Manager/Engg-Electrical)	 R K Majhi Sr. Manager/Engg.-Electrical



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### **1.0 INTENT OF THE SPECIFICATION**

1. This specification covers the design, manufacture, inspection & testing, packing at manufacturer's works and delivery to site of 40mm dia MS ROD FOR BELOW GROUND EARTHING.
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**

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. Applicable Standards (Latest amendment to be referred): -

(a)	IS 2062	Grade E250 Sub-Quality A: Hot Rolled Low, Medium and High Tensile Structural Steel.
(b)	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.
(c)	IS 1875, Designation 15C8	Carbon Steel Billets, Blooms, Slabs and bars for forging – Specification.
(d)	IS:513	Cold rolled low carbon steel sheets and strips.
(e)	IS:1079	Hot Rolled carbon steel sheet & strips
(f)	IS:3043	Code of practice for Earthing
(g)	IEEE:80	IEEE guide for safety in AC substation grounding
(h)	IEEE:142	Grounding of Industrial & commercial power systems

### **3.0 TECHNICAL REQUIREMENTS**

1. Straight lengths of MS rods of standard diameter of 40 mm in minimum length of 6 m shall be supplied.
2. All finished MS rods for Below Ground Earthing shall be free from sharp edges, corners, burs & unevenness.
3. Bidder to supply order quantity indicated in the Technical Specification. Overall tolerance on total dispatched quantity shall be restricted to +/- 3%.
4. Bidder has to procure the MS Rods from M/s Steel Authority of India Limited, M/s Jindal Steel and Power Limited and M/s Rashtriya Ispat Nigam Limited.
5. Bidder has to submit all Necessary Test Certificates, other documents as required by BHEL/TSGENCO in proof of procurement of raw material as above before actual dispatch of material.



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#### **4.0 QUALITY / INSPECTION**

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.
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: -
  - a. Routine Tests:
    - i. Tests for Chemical Composition
    - ii. Test for Mechanical Properties.

Material consumption during testing shall be in bidders account.

#### **5.0 BOQ FOR BELOW GROUND EARTHING (MS ROD).**

S. No	Item Description	Indent Qty(Mtrs)
1	40mm Dia MS Rod	21000

#### **6.0 PACKING**

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

Bidder to submit the following documents duly signed and stamped in every page along with the offer.

S. No.	Name of the document	No. of sheets
1	Technical Specification	3
2	Annexure A BOQ cum Unprice Schedule	1
3	Annexure B Compliance Certificate	1
4	Annexure C Pre-Qualification Requirement	1

## ANNEXURE - A

**BHEL - ISG - BANGALORE**  
**ENGINEERING - ELECTRICAL**

**BOQ CUM UNPRICE SCHEDULE**

PROJECT: 5X800 MW YADADRI THERMAL POWER STATION

INDENT NO : IS-1-15-2001/057

ITEM DESCRIPTION : BELOW GROUND EARTHING MATERIALS (LOT-1)

Sl No	Description	Quantity	UOM	Unit Rate inclusive frieght (INR)	Total Price (INR) Ex-Works
1	40mm dia MS Rod	21000	Mtr		

Total in words Rupees \_\_\_\_\_

**signature and seal of the bidder**

**NOTE:**

Bidder to mention "QUOTED" against each item with signature and stamp of the bidder. Price information should not be filled in this sheet.

**ANNEXURE-B**  
**COMPLIANCE CERTIFICATE**

REFERENCE: 	BHEL-ISG BANGALORE Enquiry Technical Specification For Below Ground Earthing Materials-40mm Dia MS Rod	Specification No. IS-1-15-2001/057
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The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same.
2. There is no deviation with respect to specification.
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in Price Bid/Unpriced Bid of the specification shall not be considered (i.e., technical description & quantities as per the specification shall prevail).
6. Bidder has to procure the material from M/s Steel Authority of India Limited, M/s Jindal Steel and Power Limited and M/s Rashtriya Ispat Nigam Limited.  
Other make MS Rod's are not acceptable.

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BIDDER'S STAMP & SIGNATURE

DATE: 12.07.2022

Annexure-CPRE-QUALIFICATION REQUIREMENT

Indents reference	IS-1-15-2001/057
Projects	5X800 MW Yadadri TPS
Scope of Supply	Below Ground Earthing materials LOT-01

**A. TECHNICAL PQ CRITERIA:**

1. Bidder should have supplied at least 200 MT of MS rods in one or more orders and at least 70 MT of MS rods in a single order.
2. Minimum two (2) nos. purchase orders for MS rods be submitted which should not be more than five (5) years old from the date of techno-commercial bid opening for establishing continuity in business.

**B. Document List Format:**

Sl. No	Name of the Project	Customer/ Consultant	Brief Scope of the Supply	PO Ref. No & Date	Packing List or Invoice Ref No. & Date	MT supplied(Material supplied in any form/length etc should be converted into MT by bidder)	File name (mention the name of the PDF file submitted)

**C. Important Notes to the Bidder:**

1	Bidder should submit all the necessary documents to comply with aforesaid criteria.
2	BHEL reserves the right to reject offer of any bidder based on their poor/ non-performance in past/ present projects/ orders.
3	Bidder has to submit credentials along with all required documents such as Purchase Orders, LR copies or MDCC to comply with aforesaid criteria, properly indexed, along with offer, and further necessary documents required for approval. Bidder's offer is subject to approval from Customer/BHEL.
4	Quotations received from bidders who do not fulfill the PQR shall be summarily rejected without any further evaluation and information to bidders.
5	Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.

**PROJECT ENGINEERING -ELECTRICAL**

6	<p>BHEL reserves the right to:</p> <ul style="list-style-type: none"><li>a) Accept or reject any bid received at its discretion without assigning any reasons whatsoever.</li><li>b) May ask for further qualification during techno commercial scrutiny of bids received and bidder will comply.</li><li>c) If any bidder is black listed or put on hold by any of the BHEL units, such bidder will not be eligible for this tender and their bids shall not be accepted.</li></ul>
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