

**BHARAT HEAVY ELECTRICAL LIMITED**

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Telangana, India

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Enquiry
CMM
Purchase
Department

| Supplier's Copy | Enquiry No | Enquiry Date | No. of Items | Tender Due Date |
|-----------------|------------|--------------|--------------|----------------------|
| | E1A1X38656 | 12.03.2025 | 9 | 15.03.2025, 11:00 AM |

| Enq. S.No. | Specification | Material Code | Item Description | Unit | Quantity | Delivery Schedule |
|------------|----------------|---------------|--|------|-----------|---------------------------|
| 1 | AA10620 REV 09 | AA1060220270 | AS ROUND 110 DIN EN 10269 GR.21CRMV5-7 | KG | 550.000 | Two Weeks Delivery Period |
| 2 | AA10620 REV 09 | AA1060220288 | AS ROUND 125 DIN EN 10269 GR.21CRMV5-7 | KG | 2,500.000 | Two Weeks Delivery Period |
| 3 | AA10620 REV 09 | AA1060220296 | AS ROUND 140 DIN EN 10269 GR.21CRMV5-7 | KG | 700.000 | Two Weeks Delivery Period |
| 4 | AA10620 REV 09 | AA1060220318 | AS ROUND 180 DIN EN 10269 GR.21CRMV5-7 | KG | 600.000 | Two Weeks Delivery Period |
| 5 | HY10663 REV 05 | HY1060263165 | RND AS 40 HTS | KG | 300.000 | Two Weeks Delivery Period |
| 6 | HY10663 REV 05 | HY1060263181 | RND AS 50 HTS | KG | 120.000 | Two Weeks Delivery Period |
| 7 | HY10663 REV 05 | HY1060263203 | RND AS 63 HTS | KG | 900.000 | Two Weeks Delivery Period |
| 8 | HY10663 REV 05 | HY1060263220 | RND AS 71 HTS | KG | 900.000 | Two Weeks Delivery Period |
| 9 | HY10663 REV 05 | HY1060263254 | RND AS 90 HTS | KG | 800.000 | Two Weeks Delivery Period |

Special Conditions of Contract:

1. This enquiry is in two part bid system.
2. Manufacturer Inspection/Test Certificate should be submitted by Supplier along with the Material and same shall be confirmed in the Technical Offer
3. Reverse Auction is not applicable for this RFQ
4. Evaluation Criteria: Evaluation shall be done on Itemwise L1 basis.
5. Offers insisting MOQ are liable for rejection.
6. Quantity Tolerance of +/- 10% on each item is acceptable for all the items.
7. Enclosures: i) BHEL Technical Specifications AA10620 REV 09 & HY10663 REV 05 ii) Pre Qualification Criteria, iii) ITB, iv) ITB Annexures, v) Standard Quality Plans.
8. Delivery Period: Material shall be delivered within 2 weeks from the date of PO. Offers with Delivery Period beyond 2 weeks shall be rejected. BHEL may cancel the PO without any Notice if the Material is not delivered within 2 weeks after releasing the Purchase Order.
9. Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID. In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection.

For and on-behalf of
Bharat Heavy Electricals Limited
Venkatesh M
Manager / Purchase / CMM

| PR Item | Matl Code | Matl Desc | PR Qty | PR MU | Spec Nos. | Rev No | PQC Doc | QP Doc |
|---------|--------------|--|-----------|-------|-----------|--------|------------------|---------------------------|
| 10 | AA1060220270 | AS ROUND 110 DIN EN 10269 GR.21CRMV5-7 | 550.000 | KG | AA10620 | 9 | PQC_AS_VD_ROUNDS | HY/SQP/CMM/RND/23-24/10R1 |
| 20 | AA1060220288 | AS ROUND 125 DIN EN 10269 GR.21CRMV5-7 | 2,500.000 | KG | AA10620 | 9 | PQC_AS_VD_ROUNDS | HY/SQP/CMM/RND/23-24/10R1 |
| 30 | AA1060220296 | AS ROUND 140 DIN EN 10269 GR.21CRMV5-7 | 700.000 | KG | AA10620 | 9 | PQC_AS_VD_ROUNDS | HY/SQP/CMM/RND/23-24/10R1 |
| 40 | AA1060220318 | AS ROUND 180 DIN EN 10269 GR.21CRMV5-7 | 600.000 | KG | AA10620 | 9 | PQC_AS_VD_ROUNDS | HY/SQP/CMM/RND/23-24/10R1 |
| 50 | HY1060263165 | RND AS 40 HTS | 300.000 | KG | HY10663 | 5 | PQC_AS_VD_ROUNDS | HYQA/SQP/CMM/RND/23-24/09 |
| 60 | HY1060263181 | RND AS 50 HTS | 120.000 | KG | HY10663 | 5 | PQC_AS_VD_ROUNDS | HYQA/SQP/CMM/RND/23-24/09 |
| 70 | HY1060263203 | RND AS 63 HTS | 900.000 | KG | HY10663 | 5 | PQC_AS_VD_ROUNDS | HYQA/SQP/CMM/RND/23-24/09 |
| 80 | HY1060263220 | RND AS 71 HTS | 900.000 | KG | HY10663 | 5 | PQC_AS_VD_ROUNDS | HYQA/SQP/CMM/RND/23-24/09 |
| 90 | HY1060263254 | RND AS 90 HTS | 800.000 | KG | HY10663 | 5 | PQC_AS_VD_ROUNDS | HYQA/SQP/CMM/RND/23-24/09 |

| Pre Qualification Criteria (PQC) for Alloy Steel Rounds (With VD). | | | Doc. No. |
|--|---|----------------------|-------------------------|
| Applicable specifications: AA10620,AA10622, HY10663, HY10665, HY10666 | | | PQC_AS_ROUNDS Rev 03 |
| Sl. No. | Pre Qualification Criteria | Supplier conformance | Remarks |
| 1.0 | Offers to be submitted by the manufacturers having in-house Vacuum degassing (VD) facility or any other mutually agreed process as per Cl. 6 of specification shall be considered. The details of the forging and hot rolling facilities (in-house or sub-contract) shall also be submitted for consideration of the technical offer. (Note: The vendors who are in receipt of trial order by BHEL Hyderabad and are yet to supply the material successfully will not be eligible to participate in this tender as this requirement is pertaining to firm orders by BHEL customers). | | |
| 2.0 | Past experience data as given below shall be submitted: | | |
| 2.1 | Supplier shall submit below documents: a) Evidences of at least three purchase orders execution (with Min. Qty. 1Ton for <φ150mm & 2 Ton for >φ150mm), for the same or higher grade material in the range of ±φ30mm of required size of enquiry, that are manufactured using the same manufacturing facilities supplied by them to other customers, shall be submitted along-with the offer. b) Mill/Manufacturer test certificates of these references (MTC shall necessarily indicate/mention the manufacturer's location/ address). c) "Short Term Creep Rupture Test" (as per ASTM E 139 (Latest Version)) for the enquired material grade or any other higher grade like X22CrMoV121 etc of steels (used in earlier supplies or planned to be used for present tender) shall be submitted for review and acceptance by BHEL. Creep test reports shall be from the NABL accredited lab. Creep properties of the material shall be guaranteed as per the values given in DIN EN 10213 part II. Note: BHEL reserves the right to decide the suitability of creep test reports of the same or higher steel grades and the test parameters of creep tests considering the steam turbine design requirements. d) In case the supplier is a trader or a manufacturer who is having inhouse hot rolling / forging facilities and then the steel ingot/billet/bloom shall be purchased from a steel mill with creep certification as per Clause C) above. The source of raw material (steel mill) shall be indicated in the technical offer for review and acceptance by BHEL during technical scrutiny. | | |
| 2.2 | The date of the issue of "Test certificate" shall not be older than 10 years from the NIT date. This compliance may be met through MTCs submitted against a single customer order or multiple customer orders. | | |
| 2.3 | The mill test certificate shall include the results / reports for all the tests like Chemical, Mechanical, Heat treatment charts etc along with melting practice followed..., as required by BHEL specification applicable to the present enquiry. Also, Calibration records of Heat treatment furnaces and other instruments that are used for heat treating shall be submitted. | | |

| | | | |
|-----|---|--|--|
| 3.0 | Vendor shall inform the details of in-house facilities like Electric furnace, Vacuum degassing, secondary refining, forging, heat treatment, destructive and NDT facilities etc. required to manufacture forged bars of size range mentioned in enquiry. In case of outsourcing of any of the above activities, vendor shall inform their sources with details of their sub supplier facilities and experience for same material or higher material grade along with their tie-up agreement. | | |
| 4.0 | BHEL team may carry out the vendor evaluation or assessment in case vendor do not have past experience of supplying to BHEL. Vendor shall present all their inhouse facilities as per clause 3 above, also BHEL shall have free access to all areas where the manufacture of rounds is carried out. Vendor or Manufacturer to confirm. | | |
| 5.0 | For traders, their manufacturers assessment will be carried out by BHEL. Also, trader shall be responsible to arrange assessment at their manufacturer works and BHEL shall have free access to all areas at manufacturer works where the manufacture of rounds is carried out/systems that are followed at trader works office will also be subjected to assessment by BHEL team. The business tie up letter (MOU) in the letter head of the trader or their manufacturer shall be submitted along with the offer. Note: The tie-up letter (MOU) shall be prior to date of the issue of BHEL tender date. | | |
| 6.0 | Prior to dispatch of material to BHEL, test certificates shall be sent to BHEL for review and dispatch clearance by BHEL. | | |
| 7.0 | Vendors to conform that they will meet all the requirements of BHEL specification provided with the enquiry. Clause wise conformation to be given along with technical offer. | | |
| 8.0 | BHEL reserves the right to retest the material before dispatch clearance. | | |



CORPORATE PURCHASING SPECIFICATION

AA 106 20

Rev. No. 09

PREFACE SHEET

BOLTING STEEL BARS FOR HIGH TEMPERATURE SERVICE-H & T (Gr: 21CrMoV5-7+QT)

FOR INTERNAL USE ONLY
REMOVE THIS PREFACE SHEET BEFORE ISSUE TO SUPPLIERS

Comparable Standards:

GERMAN : DIN EN 10269-1999
Gr: 21CrMoV5-7 (1.7709)

Suggested / Probable Suppliers and Grades:

As per user plant vendor list

User Plant References:

1. HYDERABAD : HY10665
2. PIPING CENTRE, MADRAS : A 193, B7
3. TIRUCHY : A 193, B7
4. HARIDWAR : HW10673, HW10681

Revisions : As per Email Dt.16.03.2011 from
Shri Vimal Kishore, BHEL Hyderabad.

APPROVED :
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE-MRC (FCF+HTM)

Rev. No. 09

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt: 16.03.2011


Dt :

Year :

HYDERABAD

Corp. R&D

December, 1977

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|--|---|------------|---|-------------|------------------|
|  | CORPORATE PURCHASING SPECIFICATION | | | AA 106 20 | |
| | | | | Rev. No. 09 | |
| | | | | PAGE 1 OF 5 | |
| BOLTING STEEL BARS FOR HIGH TEMPERATURE SERVICE - H & T (Gr.:21CrMoV5-7+QT) | | | | | |
| <p>1.0 GENERAL:</p> <p>This specification governs the quality requirements of 21CrMoV5-7 bolting steel bars in hardened and tempered condition upto 600 mm diameter / size.</p> <p>2.0 APPLICATION:</p> <p>For the manufacture of steam turbine bolts, nuts, studs, spindles, bushes and other components operating in the temperature range of 300 - 540⁰ C.</p> <p>3.0 CONDITION OF DELIVERY:</p> <p>Hot rolled/Forged and Hardened and Tempered.</p> <p>The bars shall be supplied with ends square and true. The bars shall be supplied in straight lengths without twists and bends.</p> <p>4.0 COMPLIANCE WITH NATIONAL STANDARDS:</p> <p>The material shall comply, in general, with the requirements of the following National standard and also meets the requirements of this specification.</p> <p>DIN EN 10269-1999 Gr: 21 Cr Mo V 57 :Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties.</p> <p>5.0 DIMENSIONS AND TOLERANCES:</p> <p>5.1 Sizes:</p> <p>Bars shall be supplied to the dimensions specified in BHEL order.</p> <p>5.1.1 Length:</p> <p>Unless otherwise specified, hot rolled bars shall be supplied in 3 to 6 metres length or in multiples with maximum of 10 per cent, shorts down to 1 metre.</p> <p>Forged bars shall be supplied in lengths of 1.5 to 3 metres.</p> | | | | | |
| Revisions : As per Email Dt.16.03.2011 from Shri Vimal Kishore, BHEL Hyderabad.. | | | APPROVED : INTERPLANT MATERIAL RATIONALISATION COMMITTEE-MRC (HTM) | | |
| Rev. No. 09 | Amd.No. | Reaffirmed | Prepared | Issued | Dt. of 1st Issue |
| Dt: 16.03.2011 | Dt : | Year : | HYDERABAD | Corp. R&D | December, 1977 |

**5.2 Tolerance:****5.2.1 Hot rolled bars:**

The bars shall not vary from specified diameter or distance across flats by more than $\pm 2\frac{1}{2}\%$.

5.2.2 Forged bars:

The tolerance on the forged bars shall be as follows:

| <u>Diameter, mm</u> | <u>Tolerance, mm</u> |
|---------------------|----------------------|
| 50 to 125 | + 6.0 |
| 125 to 175 | + 8.0 |
| 175 --- | + 12.5 |

Note: (FOR HOT ROLLED & FORGED BARS)

Insignificant surface defects in the form of dent and ripple marks are permissible provided their depth does not exceed half the tolerances on each size.

6.0 MANUFACTURE:

Steel shall be made by basic electric process and subsequently vacuum degaussed. If any other process is employed, it shall be to mutual agreement between the supplier and BHEL.

Note: Raw material like Ingots/Blooms/Billets required for forgings should be procured from BHEL approved sources alongwith test certificate.

7.0 HEAT TREATMENT:

7.1 The bars shall be heat treated as per EN10269 to get the mechanical properties specified as per clause 12.0.

7.2 Following heat treatment is suggested:

Harden at $900-950^{\circ}\text{C}$, cooling in the circulated air / oil depending on Cross Section.
Temper at $680 - 720^{\circ}\text{C}$, minimum 2 hours.

The duration of tempering as well as the controlled cooling rate are to be chosen to achieve minimum residual stress.

7.3 If the bars need straightening after heat treatment, the straightening operation shall be followed by stress relief annealing at 30°C below the tempering temperature with slow cooling after the total straightening process.

8.0 FREEDOM FROM DEFECTS:

The bars shall be straight, sound and free from internal and surface defects viz., cracks, piping, scabs, laps, hairline cracks, etc. The bars shall be free from twists and bends.

9.0 FINISH:

9.1 The surface of the bars shall be smooth without any laps, rolled in scales, etc. Dents roll marks and scratches are permitted provided their depth does not exceed half the tolerance limits specified in clause 5.0.

9.2 The edges of bars shall be cut square by sawing or shearing and no crop ends shall be permissible.



CORPORATE PURCHASING SPECIFICATION

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10.0 CHEMICAL COMPOSITION:

The analysis of the material and the permissible variation in the composition from the specified limits shall be as follows:

| Element | Percent for bar dia upto 160mm | | Percent for bar dia. 160-600mm | | Permissible Variation, % |
|---------------------|--------------------------------|-------|--------------------------------|-------|--------------------------|
| | min. | max. | min. | max. | |
| Carbon | 0.17 | 0.25 | 0.17 | 0.25 | ± 0.02 |
| Silicon | - | 0.40 | 0.15 | 0.35 | + 0.05 |
| Manganese | 0.40 | 0.80 | 0.35 | 0.85 | ± 0.04 |
| Chromium | 1.20 | 1.50 | 0.90 | 1.20 | ± 0.05 |
| Molybdenum | 0.55 | 0.80 | 0.65 | 0.80 | ± 0.05 |
| Vanadium | 0.20 | 0.35 | 0.25 | 0.35 | ± 0.03 |
| Sulphur | -- | 0.020 | -- | 0.020 | + 0.005 |
| Phosphorus | -- | 0.020 | -- | 0.020 | + 0.005 |
| Copper | - | 0.20 | -- | 0.20 | |
| Tin | - | 0.025 | -- | 0.025 | |
| Arsenic | - | 0.010 | -- | 0.010 | |
| Antimony | - | 0.010 | -- | 0.010 | |
| Aluminium (Total) - | | 0.03 | -- | 0.015 | |
| Nickel | - | 0.60 | 0.50 | 0.80 | |

11.0 TEST SAMPLES:

11.1 CHEMICAL ANALYSIS:

Each melt shall be analysed for chemical composition.

11.2 MECHANICAL TESTS:

A hardness test is to be carried out to verify the uniformity of the strength within the delivery lot (per melt and heat treatment batch). The test amount shall be 10% of the bars, but not less than 10 bars. In case order is of less than 10 bars, all bars shall be hardness tested. Mechanical properties shall be tested on hardest and softest bar.

The taking of specimens has to be carried out according to EN 10269 with the following exception:

Up to a diameter (d) or an edge length (a,b) > 160 mm, the transverse specimens can be taken (instead of longitudinal specimens).

**12.0 MECHANICAL PROPERTIES:****12.1 Tensile:**

When tested in accordance with IS:1608, the test pieces shall show the following properties (values for transverse specimens in brackets):

| Property | Bar < 160mm | Bar 160-600mm |
|--|-------------|---------------|
| Tensile strength, N/mm ² | 700-850 | 700-850 |
| 0.2% Proof stress, N/mm ² , min | 550 | 550 |
| Elongation (l = 5d), % min. | 16 | 16 (13) |
| Reduction in area, % min. | 60 | 60 (35) |
| Impact energy (J) * | 63 | 63 (20) |
| Hardness (HB 30) | 210-250 | 215-260 |

* **Charpy Impact (ISO - V) Value :**

When tested in accordance with IS : 1757, the piece shall show a minimum average Charpy impact value over three test values as specified above. Only one test value out of the three can be below the specified value but in no case shall be less than two-thirds the minimum specified value. All the 3 test values shall, however, be reported.

The test is applicable for bars of sizes above 16 mm only.

13.0 NON-DESTRUCTIVE TEST:**13.1** Verification inspection of all bars.

13.2 100% Ultrasonic inspection of all bars above 40mm size according to EN 10308 type 1a and 1c table 1). Acceptance criteria are as follows.

- d or (a,b) = 200mm quality class 4
- d or (a,b) = 200mm quality class 3

In general, the decision limit for loss of back wall echo is 3 dB and for the real reflector length max. 10mm.

14.0 RETESTS:

As per EN10021.

15.0 TEST CERTIFICATE:

Three copies of test certificates shall be supplied unless otherwise stated on the order.

In addition the supplier shall ensure to enclose one copy of test certificate alongwith their dispatch documents to facilitate quick clearance of material.

The test certificate shall bear the following information:

BHEL references:

BHEL order No.

AA 106 20 , Rev.No. 08: Bolting Steel bars for HTS - H & T (Gr.:21CrMoV5-7- QT)

Supplier References:

Supplier's Name

Heat or Cast No.

Process of manufacture

Identification No.

Particulars of heat treatment & Batch No.



CORPORATE PURCHASING SPECIFICATION

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Rev. No. 09

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Results of Tests:

Chemical analysis

Mechanical properties

Ultrasonic test

Results of dimensional inspection

Mill test certificate

The certificate must be signed by the Chief, Inspection Department / Chief Metallurgist of the supplier's plant.

16.0 PACKING AND MARKING:

Bars shall be suitably packed to prevent corrosion and damage during transportation.

Bars over 63 mm diameter shall be individually stamped / painted on one end face with cast number and AA 106 20. Bars of 63 mm diameter and less shall be bundled together and identified by means of a metal label stating the cast number and specification No. AA 106 20 attached to the bundle.

Each package shall, in addition bear the following information:

AA 106 20 : Bolting Steel bars for HTS - H & T (Gr.:21CrMoV57)

BHEL Order No.

Supplier's name and trade mark, if any.

Cast / Batch No.

Identification No.

Size and quantity supplied.

17.0 REFERRED STANDARDS (Latest Publications Including Amendments):

1) DIN 10269

2) IS: 3739


3) IS:1608


4) IS:1757

5) EN 10228-3

6) EN10021

Note: Alternative equivalent standards are acceptable with prior agreement.

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|--|------------------|--|--|-------------|-----------------------------|--|--|
|  | TD219 Rev. 00 | PLANT PURCHASING SPECIFICATION HYDERABAD | HY 106 63 | | | | |
| | | | REV. NO. 05 | | | | |
| | | | PAGE 1 OF 5 | | | | |
| <div>ALLOY STEEL BARS FOR HIGH TEMPERATURE SERVICE – H & T (GR: 25 Cr Mo 4)</div> <div><div>1.0 GENERAL:</div><div>This specification governs the quality requirements of alloy steel bars of grade 25 Cr Mo 4 in hardened and tempered condition.</div><div>2.0 APPLICATION :</div><div>For the manufacture of high temperature fasteners for steam turbines.</div><div>3.0 CONDITION OF DELIVERY :</div><div>The bars shall be supplied in hot rolled/forged and hardened and tempered condition.</div><div>4.0 COMPLIANCE WITH STANDARDS:</div><div>The material shall comply with DIN: 10269-1999 GR: 25 Cr Mo 4 : Heat resisting and highly heat resisting materials for bolts and nuts with the following additional / specific requirements.</div><div>5.0 DIMENSIONS AND TOLERANCES:</div><div><div>5.1 Dimensions: The sizes shall be as specified in the order. Unless otherwise specified, the bars shall be supplied in random lengths of 3 to 6 metres or in multiples with maximum of 10% shorts down to 1 metre.</div><div>Forged bars shall be supplied in lengths of 1.5 to 3.0 metres.</div><div>5.2 Tolerance:</div><div><div>5.2.1 Hot rolled bars: The bars shall not vary from specified diameter or distance across flats by more than ± 2½ %.</div><div>5.2.2 Forged bars: The tolerance on the forged bars shall be as follows:</div></div></div></div> | | | | | | | |
| Revisions: Modified Cl. 5.0, 6.0, 10.0. | | | Issued : STANDARDS ENGINEERING & IPR COORDINATION DEPARTMENT | | | | |
| Rev.No. 05 | Amd. No. | Reaffirmed | Prepared: STDS.ENGG., MATLS.ENGG. | Approved: | Dt.of 1 st Issue | | |
| Dt. FEB. 2006 | Dt. | Year: 2021 | | AGM (ENGG.) | JUL. 1982 | | |

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|-------------|--|------------------|---|
| HY 106 63 | PLANT PURCHASING SPECIFICATION HYDERABAD | TD219 Rev. 00 |  |
| REV. NO. 05 | | | |
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| <u>Diameter, mm</u> | <u>Tolerance, mm</u> |
|---------------------|----------------------|
| > 50 to 125 | + 6.0 |
| >125 to 175 | + 8.0 |
| >175 --- | + 12.5 |

Note: (FOR HOT ROLLED & FORGED BARS)
Insignificant surface defects in the form of dent and ripple marks are permissible provided their depth does not exceed half the tolerances on each size.

6.0 MANUFACTURE:

Steel shall be made by basic electric process and subsequently vacuum degassed. If any other process is employed, it shall be to mutual agreement between the supplier and BHEL.

Note: Raw material like ingots/blooms/billets required for forgings should be procured from BHEL approved sources alongwith test certificate.

7.0 HEAT TREATMENT:

7.1 The heat treatment cycle shall be as follows:

 Hardening at 840-880°C Cool in oil or water.

 Tempering at 540°C-680°C for min. 2 hrs and cool in air slowly to minimize residual stresses.

7.2 If the bars need be straightened after heat treatment, the bars shall be stress relieved, after straightening operation, at 30°C below the actual tempering temperature.

 The actual heat treatment cycle followed shall be reported in test certificate.

8.0 FREEDOM FROM DEFECTS:

 The bars shall be straight, sound and free from internal and surface defects viz., cracks, piping, scabs, laps, hairline cracks etc. The bars shall be free from twists and bends.

9.0 FINISH:

9.1 The surface of the bars shall be smooth without any laps, rolled in scales etc. Dents, roll marks and scratches are permitted provided their depth does not exceed half the tolerance limits specified in Cl.5.0.

9.2 The edges of bars shall be cut square by sawing or shearing and no crop ends shall be permissible.



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Rev. 00

PLANT PURCHASING SPECIFICATION HYDERABAD

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10.0 SELECTION OF TEST SAMPLES:

10.1 Chemical Analysis: Each melt shall be analysed for chemical composition.

10.2 Mechanical Tests:

One sample per lot, comprising of bars of same size, melt and heat treatment batch shall be taken for mechanical testing. For bars of diameter more than 160 mm the supplier has the option of reducing the diameter to 160 mm by forging or machining and then test it as per Cl. 12.0 of this specification to achieve the required properties of 160 mm dia. ruling section.

11.0 CHEMICAL COMPOSITION:

The chemical analysis of the material shall be as follows:

| Element (%) | | C | Si | Mn | Cr | Mo | P | S |
|---|-------|--------|-------|-------|-------|-------|--------|--------|
| Melt Analysis | min . | 0.22 | -- | 0.60 | 0.90 | 0.15 | - | - |
| | max. | 0.29 | 0.40 | 0.90 | 1.20 | 0.30 | 0.035 | 0.035 |
| Permissible variation in product Analysis | | ± 0.02 | ±0.03 | ±0.04 | ±0.05 | ±0.04 | +0.005 | +0.005 |


12.0 MECHANICAL PROPERTIES

The Mechanical properties of the material shall be as follows:

| Specimen | Limiting ruling Section (mm) | Tensile Strength N/mm ² | 0.2% Proof stress, min N/mm ² | Elongation % min (l=5d) | Reduction in area % min | Impact strength, min (ISO-V Specimen) J |
|--------------|------------------------------|------------------------------------|--|-------------------------|-------------------------|---|
| Longitudinal | ≤ 100 | 600-750 | 440 | 18 | 60 | 60 |
| | > 100 | | 420 | | | 45 |
| | ≤ 160 | | | | | |

NOTE: 1) The tensile test shall be carried out according to IS:1608 or any reputed National Standard.

2) The charpy impact test shall be carried out according to IS:1757, or any reputed National Standard. The test shall be performed on ISO - V Specimen of size 10x10x55mm with a 2 mm V-Notch.

| | | | |
|------------------|---|------------------|---|
| HY 106 63 | PLANT PURCHASING SPECIFICATION HYDERABAD | TD219 Rev. 00 |  |
| REV. NO. 05 | | | |
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The minimum impact value specified above is the average of 3 specimens from a single location. Only one value of the three can be below the specified minimum, but in no case below 2/3rd of the same. All the three values shall be reported.

13.0 RETESTS:

- 13.1** If any of the test specimen fails to meet the requirements specified in cl 12, the sample bar from which the test specimen was cut shall be rejected and two further sample bars from the same lot shall be taken for retest.
- 13.2** If the retests also fail, manufacturer is at liberty to heat-treat the bars in question. However, not more than two re-heat treatments are allowed. Re-tempering is not considered as reheat treatment.
- 13.3** If after re-heat treatment, the mechanical properties are not complied with, the entire lot shall be rejected.

14.0 ULTRASONIC TEST:


All bars above 50mm dia shall be ultrasonically tested according to the latest ASTM:A388 (BHEL Standard AA0850118), to ensure freedom from defects.



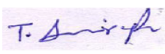
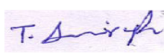
The following defects (Category 2 of AA0850118) shall be unacceptable.

- i) Cracks, flacks, seams and laps.
- ii) Defects giving indications larger than that from a 4mm diameter equivalent flaw.
- iii) Groups of defects with maximum indication less than that from a 4mm diameter equivalent flaw which can not be separated at testing sensitivity if the back echo is reduced to less than 50%.
- iv) Defects giving indications of 2 to 4mm diameter equivalent flaw separated by a distance less than four times the size of the larger of the adjacent flaws.

15.0 INSPECTION AT SUPPLIER'S WORKS:

The representative of BHEL shall have free access to the supplier's works at all times during the execution of the order, to satisfy himself that the material is produced as per the quality requirements of this specification. All reasonable facilities shall be extended to him, free of charge. He may also witness the sampling, testing and marking called for in this specification.

| | | | |
|---|------------------|---|------------------|
|  | TD219 Rev. 00 | PLANT PURCHASING SPECIFICATION HYDERABAD | HY 106 63 |
| | | | REV. NO. 05 |
| | | | PAGE 5 OF 5 |
| <p>16.0 <u>TEST CERTIFICATES:</u></p> <p>16.1 Five copies of the test certificate shall be furnished giving the following details.</p> <ul style="list-style-type: none"> a) Specification No: HY 10663 / Rev. 05 b) BHEL order No c) Size d) Name of the Supplier e) Process of steel manufacture & bars. f) Melt No. g) Heat Treatment details and batch No. h) Results of chemical analysis and mechanical tests. i) Results of ultrasonic tests. <p>16.2 The test certificate shall be signed by the chief of Quality/Chief Metallurgist of the supplier and BHEL representative.</p> <p>17.0 <u>PACKING AND MARKING:</u></p> <p>17.1 Marking: All bars with cross-sectional dimension greater than 50mm shall be stamped with the melt number, specification number and supplier's trade mark on both the end faces of the bars.</p> <p>Bars of sectional dimension 50mm and below shall be bundled as per each size and metal lable bearing the following information shall be securely attached to each bundle.</p> <ul style="list-style-type: none"> a) BHEL Specification No. HY 10663 b) BHEL Order No. c) Melt No. & Heat Treatment batch No. d) Size & Weight e) Supplier's trade mark. <p>17.2 Packing: The bars shall be suitably packed to prevent corrosion and damage during transit.</p> <p>18.0 <u>REJECTION:</u></p> <p>In the event of any material proving defective during the course of further processing or testing, such material shall be rejected and the supplier shall make immediate arrangements to replace the same free of cost.</p> | | | |

|  | | BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD | | STANDARD QUALITY PLAN FOR VENDOR ITEMS | | | | QP. NO: HYQA/SQP/CMM/RND/23-24/10 Rev. No. : 01 DATE: 12.06.2024 VALID UPTO: 11.06.2027 PAGE 1 OF 4 | | | | | |
|---|---|---|----------|---|------------------|---|---------------------|--|-----|---|---|---|---|
| | | | | ITEM: BOLTING STEEL BARS FOR HIGH TEMP SERVICE (GR: 21CrMoV5-7) (HARDENED & TEMPERED) BHEL SPEC: HY10665, R03, AA10620 R09 | | | | | | | | | |
| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | * D | Agency | | | Remarks |
| | | | | | | | | | | P | W | V | |
| 1.0 RAW MATERIAL INSPECTION | | | | | | | | | | | | | |
| 1.1 | Raw Material (Billet, Bloom, Ingot) | Melting process – Chemical composition | Major | Chemical analysis/ Ladle or heat analysis | Each Melt | BHEL Spec, PO / STD | BHEL Spec, PO / STD | MTC | ✓ | 2 | - | 1 | Melting Process shall be as per BHEL Spec. Refer Note-3 & 4 |
| 2.0 IN PROCESS INSPECTION | | | | | | | | | | | | | |
| 2.1 | Manufacturing | Hot Rolled / Forged | Major | Process Control | Each Lot | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Log Sheet | - | 2 | - | 1 | Reduction ratio to be specified TC. |
| 2.2 | Heat Treatment | Time, Temperature | Major | HT Chart | Each HT Batch | BHEL Spec, PO / STD | BHEL Spec, PO / STD | HT Chart/ TC | ✓ | 2 | - | 1 | Actual HT cycle followed shall be reported in test certificate. |
| 3.0 FINAL INSPECTION | | | | | | | | | | | | | |
| 3.1 | Visual Examination & Dimensional Inspection | Workmanship, Visual & Dimension Check, Surface Finish, Freedom from defects | Major | Physical verification & Measurement | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | 1 | - | 100% by Supplier. 10% witness by TPIA. The following shall be ensure & certified: 1. Size & Length of each bar as per order. 2. Straightness of all bars. 3. Defect free surfaces. 4. Marking & Punching on all bars. |
| 3.2 | Identification of Test Sample | Test piece location & size | Critical | Visual | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | 1 | - | Test sample location and orientation shall be mentioned in TC. |
| LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | | | | | | PREPARED BY  Sandeep B Bokde Sr. Manager / QA | | REVIEWED BY  T. Muniraghavulu AGM / QA | | APPROVED BY  T. Muniraghavulu AGM / QA | | | |
| Format no. : HYQA/QP/VSQP Rev.02 | | | | | | | | | | | | | |

| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | * D | Agency | | | Remarks |
|-------|---------------------------------------|---|----------|-------------------|----------------------------------|---------------------|---------------------|-------------------|--------|--------|---|---|---|
| | | | | | | | | | | P | W | V | |
| 3.3 | Product Analysis | Chemical Composition | Major | Chemical analysis | Each Melt | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.4 | Mechanical Properties on test samples | Tensile, Proof Stress, % Elongation & % Reduction | Critical | Mech. Properties | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| | | Impact Test | Major | Mech. Properties | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.5 | Hardness Test on bars (on both ends) | Hardness Test | Critical | Hardness Test | 10% from each lot (Min. 10 bars) | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.6 | PMI | Material Identification | Major | PMI | Each Lot | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.7 | NDT (UT) (above 40mm dia) | Soundness of the material | Critical | UT | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | NDT Report | ✓ | 2 | 1 | - | 10% witness by TPIA. |
| 4.0 | PRESERVATION, PACKING & MARKING | | | | | | | | | | | | |
| 4.1 | Marking of the bars | Visual | Major | Visual | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | - | 1 | Marking on the bars shall be correlated with the TCs. |
| 4.2 | Preservation and Packing | Visual | Major | Visual | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | - | - | 2 | - | 1 | To prevent corrosion & damage during transportation |
| 4.3 | Completeness of all documentations | Verification | Major | Verification | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC/ IR | ✓ | 2 | - | 1 | All TC's, IR shall be endorsed by TPIA. |

LEGEND:
P: - PERFORM, W: - WITNESS, V: - VERIFICATION,
INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS
APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V.
* D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA
DOCUMENTATION.

PREPARED BY


Sandeep B Bokde
Sr. Manager / QA

REVIEWED BY

T. Muniraghavulu
AGM / QA

APPROVED BY


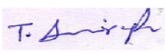
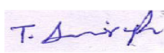
T. Muniraghavulu
AGM / QA


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|---|------------------------|--|-------|---|------------------|--------------|------------------|--|---|--------|---|---|---------|
|  | | BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD | | STANDARD QUALITY PLAN FOR VENDOR ITEMS | | | | QP. NO: HYQA/SQP/CMM/RND/23-24/10 | | | | | |
| | | | | ITEM: BOLTING STEEL BARS FOR HIGH TEMP SERVICE (GR: 21CrMoV5-7) (HARDENED & TEMPERED) BHEL SPEC: HY10665, R03, AA10620 R09 | | | | Rev. No. : 01 DATE: 12.06.2024 VALID UPTO: 11.06.2027 PAGE 3 OF 4 | | | | | |
| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | * | Agency | | | Remarks |
| | | | | | | | | | D | P | W | V | |

Annexure – I


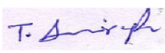
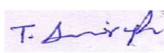
Notes:





1. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
2. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
3. **RAW MATERIAL LIKE INGOTS/ BLOOMS/ BILLETS SHOULD BE PROCURED FROM BHEL APPROVED SOURCES ALONGWITH TEST CERTIFICATES AND SAME SHALL BE VERIFIED BY TPIA DURING INSPECTION.**
4. TPIA SHALL REVIEW THE SOURCE OF RAW MATERIAL, IF MENTIONED IN P.O. BHEL TPIA SHALL CHECK RANDOM SAMPLES WITH TCs FROM EACH LOT FOR CORELATION.
5. THE BARS SHALL BE SUPPLIED IN HOT ROLLED / FORGED AND HARDENED AND TEMPERED CONDITION.
6. THE BARS SHALL BE SUPPLIED WITH ENDS SQUARE AND TRUE. THE BARS SHALL BE SUPPLIED IN STRAIGHT LENGTHS WITHOUT TWISTS AND BENDS.
7. THE BARS SHALL BE SUPPLIED TO THE DIMENSIONS SPECIFIED IN BHEL ORDER. UNLESS OTHERWISE SPECIFIED, HOT ROLLED BARS SHALL BE SUPPLIED IN LENGTHS OF 3 TO 6 MTR OR IN MULTIPLES WITH MAXIMUM OF 10% SHORTS DOWN TO 1 MTR. FORGED BARS SHALL BE SUPPLIED IN LENGTHS OF 1.5 TO 3.0 MTR.
8. THE BARS SHALL BE STRAIGHT, SOUND AND FREE FROM INSTERNAL & SURFACE DEFECTS VIZ., CRACKS, PIPING, SCABS, LAPS, HAIRLINE CRACKS, ETC.
9. THE EDGES OF THE BARS SHALL BE CUT SQUARE BY SAWING OR SHEARING AND NO CROP ENDS SHALL BE PERMISSIBLE.
10. BARS SHALL BE SUITABLY PACKED TO PREVENT CORROSION & DAMAGE DURING TRANSPORTATION.
11. BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
12. INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.
13. ANY OTHER TESTS/ CHECKS INDICATED IN SPECIFICATION, PO OR DRAWING & ANY ADDITIONAL CHECKS ENVISAGED BY TPI TO ENSURE WORKMANSHIP, FINISH, AESTHETICS, ETC. SHALL ALSO BE CONDUCTED AND WITNESSED/ VERIFIED BY TPI / CUSTOMER AS REQUIRED.
14. REQUIREMENT OF CARRYING OUT THE TYPE TESTS AND OTHER TESTS SHALL BE AS PER BHEL SPEC/ APPROVED DRAWING.
15. ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY
16. VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFTCAE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
17. VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
18. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.
19. ALL TEST CERTIFICATES/ REPORTS REVIEWED AND CERTIFIED BY TPI SHALL BE SUBMITTED TO BHEL AS DOCUMENTATION PACKAGE.

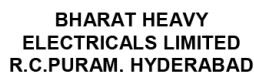
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| LEGEND: P: - PERFORM, W: - WITNESS , V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | PREPARED BY  Sandeep B Bokde Sr. Manager / QA | REVIEWED BY  T. Muniraghavulu AGM / QA | APPROVED BY  T. Muniraghavulu AGM / QA |
| | Format no. : HYQA/QP/VSQP Rev.02 | | |

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|---|---------------------------|---|-------|---|---------------------|-----------------|---------------------|--|---|--------|---|---|---------|
|  | | BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD | | STANDARD QUALITY PLAN FOR VENDOR ITEMS | | | | QP. NO: HYQA/SQP/CMM/RND/23-24/10 Rev. No. : 01 DATE: 12.06.2024 VALID UPTO: 11.06.2027 PAGE 4 OF 4 | | | | | |
| | | | | ITEM: BOLTING STEEL BARS FOR HIGH TEMP SERVICE (GR: 21CrMoV5-7) (HARDENED & TEMPERED) BHEL SPEC: HY10665, R03, AA10620 R09 | | | | | | | | | |
| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | * | Agency | | | Remarks |
| | | | | | | | | | D | P | W | V | |

20. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
21. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
22. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
23. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
24. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QULAITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
25. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
26. ALL VENDOR PERSONNEL PERFORMING NDE SHALL BE QUALIFIED IN ACCORDANCE TO ASME SEC V ARTICLE 1, MANDATORY APPENDIX 3 ALONG WITH SNT-TC-1A.
27. FOR NTPC PROJECTS, MATERIAL SHALL BE PROCURED FROM APPROVED NTPC VENDOR LIST AND SAME SHALL BE VERIFIED BY TPIA DURING INSPECTION.

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| LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | PREPARED BY  Sandeep B Bokde Sr. Manager / QA | REVIEWED BY  T. Muniraghavulu AGM / QA | APPROVED BY  T. Muniraghavulu AGM / QA |
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|  | | BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD | | STANDARD QUALITY PLAN FOR VENDOR ITEMS | | | | QP. NO: HYQA/SQP/CMM/RND/23-24/09 Rev. No. : 00 DATE: 22.02.2024 VALID UPTO: 21.02.2026 PAGE 1 OF 4 | | | | | |
|---|---|---|----------|--|------------------|---|---------------------|---|----|---|---|---|---|
| | | | | ITEM: ALLOY STEEL BARS FOR HIGH TEMP. SERVICE (GR: 25 Cr Mo 4) (HARDENED & TEMPERED) BHEL SPEC: HY10663, Rev.05 | | | | | | | | | |
| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | *D | Agency | | | Remarks |
| | | | | | | | | | | P | W | V | |
| 1.0 RAW MATERIAL INSPECTION | | | | | | | | | | | | | |
| 1.1 | Raw Material (Billet, Bloom, Ingot) | Melting process – Chemical composition | Major | Chemical analysis/ Ladle or heat analysis | Each Melt | BHEL Spec, PO / STD | BHEL Spec, PO / STD | MTC | ✓ | 2 | - | 1 | Melting Process shall be as per BHEL Spec. Refer Note-3 & 4 |
| 2.0 IN PROCESS INSPECTION | | | | | | | | | | | | | |
| 2.1 | Manufacturing | Hot Rolled / Forged | Major | Process Control | Each Lot | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Log Sheet | - | 2 | - | 1 | Reduction ratio to be specified TC. |
| 2.2 | Heat Treatment | Time, Temperature | Major | HT Chart | Each HT Batch | BHEL Spec, PO / STD | BHEL Spec, PO / STD | HT Chart/ TC | ✓ | 2 | - | 1 | Actual HT cycle followed shall be reported in test certificate. |
| 3.0 FINAL INSPECTION | | | | | | | | | | | | | |
| 3.1 | Visual Examination & Dimensional Inspection | Workmanship, Visual & Dimension Check, Surface Finish, Freedom from defects | Major | Physical verification & Measurement | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | 1 | - | 100% by Supplier. 10% witness by TPIA. The following shall be ensure & certified: 1. Size & Length of each bar as per order. 2. Straightness of all bars. 3. Defect free surfaces. 4. Marking & Punching on all bars. |
| 3.2 | Identification of Test Sample | Test piece location & size | Critical | Visual | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | 1 | - | Test sample location and orientation shall be mentioned in TC. |
| LEGEND: P:- PERFORM, W:- WITNESS, V:- VERIFICATION, INDICATING 1:- BHEL / BHEL NOMINATED INSPECTION AGENCY, 2:- VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | | | | | | PREPARED BY  Sandeep B Bokde Sr. Manager/ QA&BE | | REVIEWED BY  B. Ashok Kumar AGM/Head-QA&BE | | APPROVED BY  B. Ashok Kumar AGM/Head-QA&BE | | | |
| Format no. : HYQA/QP/VSQP Rev.02 | | | | | | | | | | | | | |



STANDARD QUALITY PLAN FOR VENDOR ITEMS
ITEM: ALLOY STEEL BARS FOR HIGH TEMP. SERVICE
(GR: 25 Cr Mo 4) (HARDENED & TEMPERED)
BHEL SPEC: HY10663. Rev.05

QP. NO: HYQA/SQP/CMM/RND/23-24/09

Rev. No. : 00

DATE: 22.02.2024

VALID UPTO: 21.02.2026

PAGE 2 OF 4

| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | *D | Agency | | | Remarks |
|-------|--|---|----------|-------------------|----------------------------------|---------------------|---------------------|-------------------|----|--------|---|---|---|
| | | | | | | | | | | P | W | V | |
| 3.3 | Product Analysis | Chemical Composition | Major | Chemical analysis | Each Melt | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.4 | Mechanical Properties on test samples | Tensile, Proof Stress, % Elongation & % Reduction | Critical | Mech. Properties | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| | | Impact Test | Major | Mech. Properties | As per BHEL Spec | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.5 | Hardness Test (on both ends) | Hardness Test | Critical | Hardness Test | 10% from each lot (Min. 10 bars) | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.6 | PMI | Material Identification | Major | PMI | Each Lot | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC | ✓ | 2 | 1 | - | |
| 3.7 | NDT (UT) (above 50 mm dia) | Soundness of the material | Critical | UT | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | NDT Report | ✓ | 2 | 1 | - | 10% witness by TPIA. |
| 4.0 | PRESERVATION, PACKING & MARKING | | | | | | | | | | | | |
| 4.1 | Marking of the bars | Visual | Major | Visual | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | Inspection Report | ✓ | 2 | - | 1 | Marking on the bars shall be correlated with the TCs. |
| 4.2 | Preservation and Packing | Visual | Major | Visual | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | - | - | 2 | - | 1 | To prevent corrosion & damage during transportation |
| 4.3 | Completeness of all documentations | Verification | Major | Verification | 100% | BHEL Spec, PO / STD | BHEL Spec, PO / STD | TC/ IR | ✓ | 2 | - | 1 | All TC's, IR shall be endorsed by TPIA. |


LEGEND:

P: - PERFORM. **W:** - WITNESS. **V:** - VERIFICATION.

INDICATING 1: - BHFL / BHFL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V.

* **D:** RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.

PREPARED BY


Sandeep B Bokde
Sr. Manager/ QA&BE


REVIEWED BY

B. Ashok Kumar
AGM/Head-QA&BE

APPROVED BY _____

B. Ashok Kumar
AGM/Head-QA&BE




Format no. : HYQA/QP/VSQP Rev.02


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|--|------------------------|--|-------|--|------------------|--------------|------------------|--|----|--------|---|---|---------|
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| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | *D | Agency | | | Remarks |
| | | | | | | | | | | P | W | V | |

Annexure – I




Notes:

- LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
- DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
- RAW MATERIAL LIKE INGOTS/ BLOOMS/ BILLETS SHOULD BE PROCURED FROM BHEL APPROVED SOURCES ALONGWITH TEST CERTIFICATES AND SAME SHALL BE VERIFIED BY TPIA DURING INSPECTION.**
- TPIA SHALL REVIEW THE SOURCE OF RAW MATERIAL, IF MENTIONED IN P.O. BHEL TPIA SHALL CHECK RANDOM SAMPLES WITH TCs FROM EACH LOT FOR CORELATION.
- THE BARS SHALL BE SUPPLIED IN HOT ROLLED / FORGED AND HARDENED AND TEMPERED CONDITION.
- THE SIZES SHALL BE SPECIFIED IN THE ORDER. UNLESS OTHERWISE SPECIFIED, THE BARS SHALL BE SUPPLIED IN RANDOM LENGTHS OF 3 TO 6 MTR OR IN MULTIPLES WITH MAXIMUM OF 10% SHORTS DOWN TO 1 MTR. FORGED BARS SHALL BE SUPPLIED IN LENGTHS OF 1.5 TO 3.0 MTR.
- THE BARS SHALL BE STRAIGHT, SOUND AND FREE FROM INSTERNAL & SURFACE DEFECTS VIZ., CRACKS, PIPING, SCABS, LAPS, HAIRLINE CRACKS, ETC. THE BARS SHALL BE FREE FROM TWISTS AND BENDS.
- THE EDGES OF THE BARS SHALL BE CUT SQUARE BY SAWING OR SHEARING AND NO CROP ENDS SHALL BE PERMISSIBLE.
- BARS SHALL BE SUITABLY PACKED TO PREVENT CORROSION & DAMAGE DURING TRANSPORTATION.
- BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
- INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.
- ANY OTHER TESTS/ CHECKS INDICATED IN SPECIFICATION, PO OR DRAWING & ANY ADDITIONAL CHECKS ENVISAGED BY TPI TO ENSURE WORKMANSHIP, FINISH, AESTHETICS, ETC. SHALL ALSO BE CONDUCTED AND WITNESSED/ VERIFIED BY TPI / CUSTOMER AS REQUIRED.
- REQUIREMENT OF CARRYING OUT THE TYPE TESTS AND OTHER TESTS SHALL BE AS PER BHEL SPEC/ APPROVED DRAWING.
- ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY
- VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFTCAE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
- VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
- VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

| | | | |
|---|---|---|---|
| LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | PREPARED BY  Sandeep B Bokde Sr. Manager/ QA&BE | REVIEWED BY  B. Ashok Kumar AGM/Head-QA&BE | APPROVED BY  B. Ashok Kumar AGM/Head-QA&BE |
| | Format no. : HYQA/QP/VSQP Rev.02 | | |

|  | | BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD | | STANDARD QUALITY PLAN FOR VENDOR ITEMS | | | | QP. NO: HYQA/SQP/CMM/RND/23-24/09 Rev. No. : 00 DATE: 22.02.2024 VALID UPTO: 21.02.2026 PAGE 4 OF 4 | | | | | |
|--|---------------------------|---|-------|--|---------------------|-----------------|---------------------|--|----|--------|---|---|---------|
| | | | | ITEM: ALLOY STEEL BARS FOR HIGH TEMP. SERVICE (GR: 25 Cr Mo 4) (HARDENED & TEMPERED) BHEL SPEC: HY10663, Rev.05 | | | | | | | | | |
| Sl No | Component & Operations | Characteristics | Class | Type of Check | Quantum of Check | Ref Document | Acceptance Norms | Format of Record | *D | Agency | | | Remarks |
| | | | | | | | | | | P | W | V | |

18. ALL TEST CERTIFICATES/ REPORTS REVIEWED AND CERTIFIED BY TPI SHALL BE SUBMITTED TO BHEL AS DOCUMENTATION PACKAGE.
19. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
20. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
21. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
22. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
23. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QULAITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
24. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
25. ALL VENDOR PERSONNEL PERFORMING NDE SHALL BE QUALIFIED IN ACCORDANCE TO ASME SEC V ARTICLE 1, MANDATORY APPENDIX 3 ALONG WITH SNT-TC-1A.
26. FOR NTPC PROJECTS, MATERIAL SHALL BE PROCURED FROM APPROVED NTPC VENDOR LIST AND SAME SHALL BE VERIFIED BY TPIA DURING INSPECTION.

| | | | |
|---|---|---|---|
| LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION. | PREPARED BY  Sandeep B Bokde Sr. Manager/ QA&BE | REVIEWED BY  B. Ashok Kumar AGM/Head-QA&BE | APPROVED BY  B. Ashok Kumar AGM/Head-QA&BE |
| | Format no. : HYQA/QP/VSQP Rev.02 | | |



(Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX for submission by 11.00 hrs to open from 14.00 hrs.)

INSTRUCTIONS TO BIDDER (ITB)**NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".**

| Sl. No. | DETAILED TERMS & CONDITIONS | BIDDER RESPONSE (YES/NO) | DEVIATIONS / COMMENT |
|---------|--|--------------------------|-----------------------|
| 1 | SCOPE OF SUPPLY: | | |
| | Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer. | | |
| 2 | DEFINITIONS | | |
| A | 'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL. | | |
| B | 'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder. | | |
| C | 'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB. | | |
| D | 'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order. | | |
| E | 'Goods/Material' shall include Works and Services which are incidental or consequential to supply. | | |
| 3 | GENERAL INSTRUCTIONS: | | |
| A | Mode of submission of offer shall be as indicated in SCC | | Non Deviatable |
| B | The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders. | | Non Deviatable |
| C | Incomplete offers are liable for rejection. | | Non Deviatable |
| D | Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations. | | Non Deviatable |
| E | Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation. | | Non Deviatable |
| F | Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelops shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name. | | Non Deviatable |
| G | Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained. | | Non Deviatable |
| H | Unsolicited offers will not be considered. | | Non Deviatable |
| 4 | OTHER PARTICULARS (Please indicate applicable data) | | |
| A | Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase). | | |
| B | Name of the Port of loading and Port of Discharge (applicable to imports). | | |



| | | | |
|-----|---|--|---------------------------|
| 5 | BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER: | | |
| A | For Single Part Bids: | | |
| | The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, Vendor Complex, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at vendor complex on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID pricebid_hyd@bhel.in only as an attachment. | | Non Deviatable |
| B. | For two-Part Bids: | | |
| i | <p>The offer is to be submitted in two parts viz., Techno-commercial Bid - (Part-I), with all technical specification & scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date AND Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) & due date.</p> <p>Both the above covers (Part –I & II) shall be kept in a Third cover superscribing Enquiry no. & due date.</p> <p>Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID.</p> <p>In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection.</p> <p>All techno commercial terms & conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.</p> | | Non Deviatable |
| ii | The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted. | | |
| iii | Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices. | | Non Deviatable |
| C | Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date. | | Non Deviatable |
| 6 | DELIVERY TERMS | | |
| A | Indigenous Purchase | | |
| | <p>a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination.</p> <p>b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works.</p> <p>i. Incase specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination.</p> <p>ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.</p> | | |
| B. | Imports | | |
| | The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea. | | |
| 7 | Documentation for Payment | | |
| A | Indigenous Purchase | | |
| | <p>Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site</p> <p>a. Two numbers of Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)/ e-invoice of GST Portal if applicable)</p> <p>b. Packing List - clearly showing number of packages, gross weight and net weight.</p> <p>c. Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC)</p> <p>d. Insurance intimation/declaration certificate</p> <p>e. Pre-dispatch Inspection report /Third Party Inspection Certificates.</p> <p>f. Consignee copy of LR signed & stamped by Customer/Site representative for DD Items</p> <p>g. e-waybill</p> <p>h. Any other documents as specified in SCC.</p> <p>Softcopies of the above documents shall be uploaded in Pradan portal https://hpep.bhel.com/mm/ immediately after dispatch of the material.</p> | | Non Deviatable |

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|---|--|--|--|
| B | <p>Imports</p> <p>i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery. For Hazardous cargo/DG cargo, supplier must provide the following documents prior to handing over shipment to freight forwarder, wherever freight is in BHEL scope:</p> <ol style="list-style-type: none"> Valid MSDS DGD certificate with appropriate UN numbers. Labelling and marking on DG cargo along with photo of packaging. Self-declaration for consignment Packaging Certificate as per DG Standards TSA Approved Truckers details to be provided to forwarder at the time of shipment <p>In addition to the above, supplier should ensure to comply all IATA DG regulations, if any new requirement is added in future.</p> <p>ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (https://hpep.bhel.com/mm) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.</p> <p>iii) AWB/BL must contain the information of BHEL GST no., and PAN no.</p> <p>iv) Air Shipments: Bidder shall ensure the following</p> <ol style="list-style-type: none"> Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC). Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier. Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings "Cargo handed over in sound condition for Air freighting". Note: Warehouse receipt will not be considered for penalty calculations. In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment. Following dimensions of single package may be noted. <ol style="list-style-type: none"> Maximum dimension of the cargo(ODC) -- 125" x 88" x 63" Maximum weight of the cargo -- 3.5 MT. <p>If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder.</p> If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support. <p>v) Sea Shipments:- bidder shall ensure the following</p> <ol style="list-style-type: none"> Port of discharge -- Nhavaseva/Mumbai/Chennai. Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS. In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt. If the material cannot be containerized in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder. For CIP shipments <ol style="list-style-type: none"> In case of FCL shipments, Detention free period must be 14 days. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment. No charges for the services rendered till place of destination will be payable by BHEL. In case liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill. bidder must insure the cargo for 110% of material value including the freight amount. Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT. <p>If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under:</p> <ol style="list-style-type: none"> EUROPE/USA/Black Sea/ Far East/Middle East/South East sector <p>A. For FOB Sea Consignments:-</p> <p>Penalty for late submission / negotiation of documents beyond 14 days shall be as under:</p> | | |
|---|--|--|--|

| | | | | | |
|----|--------|--------------------------------------|----------------------------------|---|----------------|
| | Sl. no | Period (From Date of Bill of Lading) | Recoverable Charges | Recoverable Charges per day per container | |
| | | | LCL per Break bulk cargo per day | 20FT Container | 40FT Container |
| | | | | | |
| i | | Upto 14th day | Nil | Nil | Nil |
| ii | | 15th day onward | USD 10 | USD 110 | USD 200 |

B. For CIP Sea Shipments: -
Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard.
In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges.

(vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis.

(viii) Bidder shall provide package details including number of packages, gross weight, net weight etc.

(ix) The bidder shall provide the following documents at the time of submission of offer:
a) No Business Connection in India declaration issued by the bidder as per the format specified. (or)
b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified.
(ii) Tax Residence Certificate issued by the bidder's tax authorities.
(iii) Form 10F, as attached in Annexure V, to be issued by the bidder.
c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.

| | | | |
|-----------|--|--|-----------------------|
| 8 | Delivery Schedule | | |
| | The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/Hold on payment. | | Non Deviatable |
| 9 | Pricing Terms | | |
| | Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the execution of PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC. | | Non Deviatable |
| 10 | PRICE VALIDITY : | | |
| | Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid opening (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC. | | Non Deviatable |
| 11 | Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided) | | |

| | | | |
|----|--|--|-------------------|
| A | <p>Indigenous Purchase</p> <p>i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer.</p> <p>ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer.</p> <p>iii) Bidder to quote the applicable taxes in the following manner:</p> <ul style="list-style-type: none"> - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided <p>iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services.</p> <p>v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated.</p> <p>vi) Any other taxes & duties not covered anywhere above may be indicated separately.</p> <p>Taxes deducted at source:</p> <ul style="list-style-type: none"> - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax. | | Non Deviatable |
| | <p>Terms & Conditions to be complied</p> <p>1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc.</p> <p>2. Reimbursement of GST amount will be made only upon completion of the following:</p> <ol style="list-style-type: none"> i. Bidder declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal. <p>3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices.</p> <p>4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest.</p> <p>5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/ leviable on BHEL.</p> <p>6. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal.</p> <p>7. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.</p> <p>8. Vendors who fall under the E-Invoice regulations, i.e., having an annual turnover of Rs. 10 crores (Rs 5 crore w.e.f 01.08.2023) in the previous year shall issue e-invoice in line with Rule 48(4) of CGST Rules failing which GST amount will not be reimbursed to the vendor even if the other requirements are fulfilled.</p> <p>9. In case the vendor is exempted by the GST department under the Rule 48(4) of CGST Rules from issuing E-invoice, a declaration as prescribed in the Notification 17/2022 - Central Tax dated 01-08-2022 shall be provided on the invoice.</p> <p>10. Vendors who do not fall under the E-Invoice regulations, i.e., whose annual turnover is less than Rs. 10 crores (Rs 5 crore w.e.f 01.08.2023) in the previous year have to give an undertaking indemnifying BHEL that the vendor is not falling under the E-invoice requirement category and that in case of any breach of this E-invoicing requirement, the vendor indemnifies BHEL of any consequences that may arise due to such a breach.</p> <p>11. No GST shall be levied on liquidated damages / penalty.</p> | | |
| B. | Foreign Purchase (Imports) | | |



| | | | |
|-----------|---|--|---------------------------|
| | <p>The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price.</p> <p>Taxes deducted at source:</p> <p>a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered.</p> <p>b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.</p> | | Non Deviatable |
| 12 | Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment. | | |
| A | <p>Indigenous:</p> <p>a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days</p> <p>b. Medium Enterprises - 100% Direct EFT payment within 60 days</p> <p>c. Non MSME Bidders - 100% direct EFT Payment within 90 Days</p> <p>Note</p> <p>A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made for Material accepted value .</p> <p>B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL</p> <p>C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less.</p> <p>D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment.</p> <p>E. In case of packaged items, 10% of supply value will be retained till completion of total supplies.</p> <p>F. Bidders to comply with clause 11 on GST requirements</p> <p>G. MSE benefits are not applicable to Traders/Wholesalers registered as MSEs</p> | | |
| B | <p>Imports:</p> <p>i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a credit period of 60 days - Cash Against Documents (CAD)</p> <p>ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with respective bank charges to respective accounts and loading of 0.50%</p> <p>iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in Indian Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract.</p> | | |
| C | <p>Conditions for LC:</p> <p>a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account.</p> <p>b. LC will be opened after successful completion of pre dispatch inspection prior to the scheduled / agreed delivery date. LC will be opened within 15 bank working days from the date of request.</p> | | Non Deviatable |
| D | <p>Conditions for both Indigenous & Foreign Bidders:</p> <p>a. In case Bidders insist for lesser Credit period and BHEL accepts, a loading of 0.60% for every 15 days reduction will be applicable.</p> <p>b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim.</p> <p>c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.</p> | | Non Deviatable |
| E | <p>Wherever EMD is applicable, the EMD will be paid back to unsuccessful bidders within fifteen days after award of the contract. Successful bidder's EMD will be retained till submission of Performance Bank Guarantee (PBG).</p> <p>Tender Fee wherever applicable is not refundable.</p> <p>No interest shall be payable by BHEL on earnest money or security deposit or any money due to the contractor by BHEL.</p> | | Non Deviatable |



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| 13 | Penalty clause: | | |
| | <p>In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable</p> <p>a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC).</p> <p>b. Penalty applicable for delay in documentation is as per SCC.</p> <p>c. Date Reckoned for Penalty</p> <ul style="list-style-type: none">- Indigenous Orders with delivery terms FOR HPEP: C Note date.- Indigenous Orders (Others): Date of e-waybill.- Imports: For CIP/CIF Orders: IGM date- Imports: For FOB Orders: AWB / BL date- Imports:For FCA Orders:Date of acknowledgement from Freight Forwarder.For Ex Work Orders (both air and sea):Latest of Air Freight Request (AFR), Invoice, Packing List, Inspection date (if applicable) or any other documentary evidence confirming material readiness. <p>d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder.</p> <p>e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery.</p> | | |
| 14 | Excess materials supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law. | | Non Deviatable |
| 15 | Rejected materials , if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials. | | Non Deviatable |
| 16 | Guarantee / Warranty Period: <p>Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance.</p> <p>a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.</p> <p>b. In case erection & commissioning is involved, guarantee period shall be 12 months from the date of commissioning.</p> <p>c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment.</p> <p>The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense.</p> <p>A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery.</p> <p>Loading for deviation:</p> <p>In case warranty specified in SCC is over and above the period mentioned in b & c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.</p> | | Non Deviatable |
| 17 | PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC) <p>In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII.</p> <p>Further detailing on PBG as specified in SCC.</p> <p>The PBG shall be for the performance of the goods and shall remain binding notwithstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.</p> | | Non Deviatable |
| NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following. | | | |
| 18 | Evaluation and Loading Criteria: | | |

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| | <p>i) Evaluation Currency for this tender shall be “INR”.</p> <p>ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC.</p> <p>iii) Evaluation shall be on the basis of delivered cost, i.e. “Total Cost to BHEL” w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading).</p> <p>iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding.</p> <p>INDIGENOUS</p> <p>a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL.</p> <p>b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value.</p> <p>c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at “Total Cost to BHEL”</p> <p>IMPORTS</p> <p>For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.</p> <p>In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at “Total Cost to BHEL”:</p> <p>- Import duty as applicable on the date of Part-I bid opening.</p> <p>- Loading will be as per the table below</p> <table><tr><td></td><td>Ex Works</td><td>FOB/FC A</td><td>CIF/CFR</td><td>CIP</td></tr><tr><td>Foreign Inland freight and insurance</td><td>2%</td><td></td><td></td><td></td></tr><tr><td>Marine freight and marine insurance</td><td>3%</td><td>3%</td><td></td><td></td></tr><tr><td>Destination Port handling charges</td><td>0.50%</td><td>0.50%</td><td>0.50%</td><td></td></tr><tr><td>clearing charges & inland freight and insurance</td><td>2%</td><td>2%</td><td>2%</td><td>2%</td></tr></table> <p>COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL"</p> <p>A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation.</p> <p>B. Loading for payment terms as per clause 12 of ITB</p> <p>C. Loading for deviation in Warranty & PBG as per clause 16,17.</p> | | Ex Works | FOB/FC A | CIF/CFR | CIP | Foreign Inland freight and insurance | 2% | | | | Marine freight and marine insurance | 3% | 3% | | | Destination Port handling charges | 0.50% | 0.50% | 0.50% | | clearing charges & inland freight and insurance | 2% | 2% | 2% | 2% |
| | Ex Works | FOB/FC A | CIF/CFR | CIP | | | | | | | | | | | | | | | | | | | | | | |
| Foreign Inland freight and insurance | 2% | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marine freight and marine insurance | 3% | 3% | | | | | | | | | | | | | | | | | | | | | | | | |
| Destination Port handling charges | 0.50% | 0.50% | 0.50% | | | | | | | | | | | | | | | | | | | | | | | |
| clearing charges & inland freight and insurance | 2% | 2% | 2% | 2% | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | RIGHT OF REJECTION /NON- PLACEMENT OF PO: BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | INTEGRITY PACT Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder’s offer will be rejected. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Public Procurement | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | Make in India For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time. Proforma for self-certification for minimum local content and auditor’s certification is given in Annexure III. | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with competent authority. GOI website https://www.mea.gov.in/ to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV. | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | Startups: For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) – Indigenous Purchase | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents | | | | | | | | | | | | | | | | | | | | | | | | | |

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| B | In tender, MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply at least 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. Out of these 25% minimum 3% shall be earmarked for MSEs owned by women and 6.25% for MSEs owned by SC/STs who submit the relevant documents. |
| C | If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category. |
| D | BHEL HPEP is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per the GOI guidelines. |
| 24 | Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage. |
| 25 | ISO-9001, ISO14001 & OHSMS 45001 shall be complied. |
| 26 | If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines. |
| 27 | BREACH OF CONTRACT, REMEDIES AND TERMINATION: In case of Breach of Contract, BHEL shall recover 10% amount of the contract value from the vendor in any of the following manners: (i) Forfeiture/ encashment of Security instruments (Performance security, EMD etc.) available against the said contract. (ii) Pending / Available bills of the vendor , any amount available with BHEL HPEP or any other units of BHEL. (iii) In case recovery is not possible from security instruments or from financial remedies mentioned above, legal remedies shall be pursued. Important Notes: (1) Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. (2) Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD). |
| 28 | Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered. |
| 29 | All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders. |
| 30 | Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL. |
| 31 | The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: www.bhel.com |
| 32 | Ordering and confirmation of order |
| | The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order. |
| 33 | Execution |
| | The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms. |
| 34 | Progress Report |
| | The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (https://hpep.bhel.com/mm/). Non updation will adversely affect service rating of bidder performance. |
| 35 | Non-disclosure Obligations |

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| | <p>Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract.</p> <p>The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification.</p> <p>All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party.</p> <p>The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer.</p> <p>In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per Annexure- II wherever applicable.</p> |
| 36 | Inspection and Testing |
| A | The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery. |
| B | <p>Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract.</p> <p>For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently.</p> <p>Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract.</p> <p>The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with or the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.</p> |
| 37 | Quality and Condition of the Deliverables |
| | The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials. |
| 38 | Packaging and Dispatch |
| | <p>The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied.</p> <p>Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (Lx B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.</p> |
| 39 | Contract variations; Increase or decrease in the scope of supply |
| | <p>Buyer may vary the contracted scope during execution due to exigencies of project requirement.</p> <p>If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect.</p> <p>The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication.</p> <p>In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.</p> |
| 40 | Rejected/Short shipments/ warranty/guarantee replacements |
| | In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items. |
| 41 | Export Administration Regulations |

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| | If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc. |
| 42 | Force Majeure |
| | <p>The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions.</p> <p>Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time.</p> <p>In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL.</p> <p>In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.</p> |
| 43 | Non-waiver of Defaults |
| | If any individual provision of the contract is invalid, the other provisions shall not be affected. |
| 44 | Settlement of Disputes |
| | <p>Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final.</p> <p>Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration</p> <p>The bidder shall continue to perform the contract, pending settlement of disputes(s).</p> |
| 45 | Conciliation clause |
| | <p>CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 .</p> <p>The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB</p> |
| 46 | ARBITRATION (WITH SOLE ARBITRATOR) |
| | <p>46.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 14.1 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to IAMC (International Arbitration and Mediation Centre, Hyderabad) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the IAMC Rules.</p> <p>46.2 A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to IAMC. The Notice shall be addressed to the Head of the Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.</p> <p>46.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to IAMC and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.</p> <p>46.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.</p> <p>46.5 The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be Hyderabad.</p> <p>46.6 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Hyderabad.</p> <p>46.7 Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.</p> <p>46.8 It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.</p> <p>46.9 In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within</p> |

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| | <p>their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.</p> <p>46.10 In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 14.2.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.</p> <p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-12-2022 as amended from time to time</p> |
| 47 | Applicable Laws and jurisdiction of Courts |
| | <p>This contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause 46 of this contract, the Civil Court having original Civil Jurisdiction at Hyderabad, shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract."</p> |
| 48 | BHEL-Fraud prevention policy shall be adhered to. |
| | <p>The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ 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> <p>List of nodal officers is hosted on BHEL Hyderabad website https://hpep.bhel.com/.</p> |
| 49 | Suspected Cartel Formation |
| | <p>The Bidder 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 .</p> |
| 50 | Conflict of Interest: |
| | <p>"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <ol style="list-style-type: none"> a) they have controlling partner (s) in common; or b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or c) they have the same legal representative/agent for purposes of this bid; or d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from. one bidding manufacturer in more than one bid; or f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following: <ol style="list-style-type: none"> 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal; or g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. " |

Note: Purchase officer has to fill Annexure-I while sending enquiry