

**MATERIAL DESCRIPTION & SPECIFICATION (Catalogue)**

| Enquiry Srl. No. | Item Detail                                                                        | BHEL Material Code |
|------------------|------------------------------------------------------------------------------------|--------------------|
| 1.               | <b>RING SEGMENT</b><br>DRG: 3139410100002 REV: 08<br><b>SPEC: AA22216 REV: 04</b>  | W98413900654       |
| 2.               | <b>RING SEGMENT</b><br>DRG: 3139410100001 REV: 08<br>SPEC: AA22216 REV: 04         | W98413900646       |
| 3.               | <b>RING SEGMENT</b><br>DRG: 3139410100000 REV: 08<br>SPEC: AA22216 REV: 04         | W98413900638       |
| 4.               | <b>MEASURING ROD</b><br>DRG: 31450401003 REV: 02<br>SPEC: AA22216 REV: 04          | W96414500100       |
| 5.               | <b>RING SEGMENT</b><br>DRG: 3139410100003 REV: 08<br>SPEC: AA22216 REV: 04         | W98413900662       |
| 6.               | <b>INSULATING TUBE</b><br>DRG: 41431001016 REV: 05<br><b>SPEC: TG60650 REV: 01</b> | W98414300294       |

| S No                               | Tender Term and Condition                                                                                                                                                                                                                                                                                                                                                                                                                                        | Confirmation from bidder |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <b>General Requirements</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |
| 1.                                 | Bidder to provide the documents as per pre-qualification requirements (PQR) and Technical Offer along with their offer.                                                                                                                                                                                                                                                                                                                                          |                          |
| 2.                                 | Bidder who fails to qualify Pre-qualification requirement, their offer will not be considered for technical evaluation and price bid opening part (part -2 of this tender).                                                                                                                                                                                                                                                                                      |                          |
| 3.                                 | Bidder to confirm that their quoted unit price in this tender is all-inclusive of basic rate, freight, insurance, packing & forwarding charges & any other charges if applicable + applicable GST. (F.O.R Delivery)                                                                                                                                                                                                                                              |                          |
| 4.                                 | Delivery Schedule as per GeM tender.                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |
| 5.                                 | Bidder to inform % of GST.                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |
| 6.                                 | Term and condition shall be as per GeM T&C and GEM tender.                                                                                                                                                                                                                                                                                                                                                                                                       |                          |
| 7.                                 | Confirm that there is no deviation with respect to BHEL Specifications. However, deviations, if any, are to be listed as a separate attachment. The offers that do not meet the substantial requirements of our enquiry are liable to be ignored. The bidders shall be deemed to comply with all the requirements of bidding documents except for listed deviations without any extra cost irrespective of any mention to the contrary anywhere else in the bid. |                          |
| <b><u>QUALITY REQUIREMENTS</u></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |
| 1.                                 | Vendor to submit Test Certificate (TCs) as per BHEL Specifications along with dispatch documents at the time of supply.                                                                                                                                                                                                                                                                                                                                          |                          |
| 2.                                 | Vendor to submit Guarantee Certificate for satisfactory operation for a period of 12 months from the date of dispatch of material (invoice) to BHEL works, along with dispatch documents at the time of supply.                                                                                                                                                                                                                                                  |                          |
| 3.                                 | Pre-inspection will be done by BHEL / BHEL nominated inspection agency at supplier's works before dispatch as per BHEL SQP.                                                                                                                                                                                                                                                                                                                                      |                          |
| 4.                                 | Vendor to endorse BHEL Quality plan for <i>Measuring rod</i> and <i>Ring segment</i> - "QA/BE/QP/044 Rev. 08" along with offer.                                                                                                                                                                                                                                                                                                                                  |                          |
| 5.                                 | Vendor to endorse BHEL Quality plan for <i>Insulation Tube</i> - "QA/BE/QP/094 Rev. 00" along with offer.                                                                                                                                                                                                                                                                                                                                                        |                          |

**Important Instruction to bidders.**

1. Following attachment with this Catalogue for tender preparation.
  - Pre-qualification requirement (PQR) for Ring segment and Measuring Rod.
  - Pre-qualification requirement (PQR) for Insulating tube.
  - BHEL SQP "QA/BE/QP/044 Rev. 08"
  - BHEL SQP "QA/BE/QP/094 Rev. 00"
  - FCA
2. All supporting document shall be sign and stamped by bidder.
3. FCA is required to be signed & stamped on every page after filling relevant details. Other cross-referred documents (Specifications &/or Drawings) can be obtained by email duly signed & Stamped FCA to [lalitk@bhel.in](mailto:lalitk@bhel.in) &/or [vbskush@bhel.in](mailto:vbskush@bhel.in).

**PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR**  
**RING SEGMENT (AA22216)**

**INTRODUCTION:** Ring Segments are machined components manufactured from "Phenolic Laminated Cotton Fabric Sheets (Grade F-4 as per IS:2036)", which are made from layers of cotton fabric using thermosetting phenolic resin as bonding medium. Material has temperature index of at least 105°C. These segments are used in manufacturing of wound stator of Turbo-Generators as an overhang support and are also used as air gap seal rings, for sealing the air gap in Turbo-Generator.

1. **EXPERIENCE:** The vendor should have the experience of successful manufacturing and supplying the machined components prepared from above "Phenolic Laminated Cotton Fabric Sheet" to OEM of Generator of capacity 200 MW and above during last ten years from date of issuance of enquiry. In support of above vendor to submit the following documents: -
  - 1.1. Unpriced Copy of two successfully executed purchase orders for machined components from above Phenolic Laminated Cotton Fabric Sheet used in Generator of capacity 200MW and above.
  - 1.2. Copy of Test Certificates (for dimensional, mechanical and electrical test, etc.) for any one of the purchase orders submitted against clause 1.1.
  - 1.3. Documentary evidence of acceptance of material, pertaining to purchase order for which TCs has been submitted against clause 1.2
2. **MANUFACTURING FACILITIES:**
  - 2.1) Vendor to confirm that they have all in-house manufacturing facilities for above Ring Segment meeting the requirements as per BHEL specification AA22216 Rev 04 and also to provide the details of the same.
  - 2.2) If the vendor plans to outsource any manufacturing activity, particulars of the same along with details of the sub-vendor to be furnished to BHEL for review.
3. **TESTING FACILITIES:**
  - 3.1) Vendor to confirm that they have in-house test facilities, sufficient to carry out all the test as per enquired specification AA22216 Rev 04 and also to provide the details of the same.
  - 3.2) In case vendor conducts test at an external testing agency, vendor to furnish the details of the same, e.g. NABL accredited/Government approved Lab.
4. Vendor to provide the details/TC of raw material used for manufacturing of the enquired item, along with offer.
5. Vendor to confirm the detailed technical requirements of the specification AA22216 REV. 04.
6. Vendor who is supplying this item to BHEL for the first time, have to submit one complete set of samples as per Table – 1, to test the material as per Clause 8, 9 & 10 of specification AA22216 rev 04. Vendor will be qualified on the basis of successfully passing the test of submitted samples as per specification AA22216 rev 04 in addition to qualifying other requirement of PQR.

*[Signature]*  
 04/11/22  
 (NITIN RAS)  
 Mgr - ISE&CPL

*[Signature]*  
 4/11/22  
 (Pratibha Gupta)  
 Manager/EME

*[Signature]*  
 4/11/2022  
 (Ajay Kr. Gupta)  
 DGM/EME

*[Signature]*  
 4/11/22  
 Anindita Tripathi  
 ASM (ISE&CPL, GRI)  
 1 | Page



TABLE - 1

| S.no | Test                              | Length (mm) | Width (mm)    | Thickness (mm)                                                                                       | Quantity |
|------|-----------------------------------|-------------|---------------|------------------------------------------------------------------------------------------------------|----------|
| 1    | CBS                               | >20xt       | 10 to 25      | 10<br>If t>10: Machine down to 10mm leaving one surface intact                                       | 5        |
| 2    | Impact Strength (Charpy edgewise) | 63.5±0.5    | 12.7+0.0/-0.1 | 10 (Notch as per Figure 1)                                                                           | 5        |
| 3    | Splitting Load                    | 20±0.2      | 20±0.2        | 10±0.1 mm<br>If t>10: Machine down to 10mm uniformly on both sides<br>(Applicable for sheets ≥ 10mm) | 5        |
| 4    | Resistance to Hot oil             | 75          | 75            | 10 (No surface machining allowed)                                                                    | 2        |
| 5    | Water Absorption                  | 50±1        | 50±1          | 10 (No surface machining allowed)                                                                    | 3        |
| 6    | BDV-Flatwise (For sheets < 3mm)   | 150         | 150           | 2-3 (No surface machining allowed)                                                                   | 3        |
| 7    | BDV-Edgewise (For sheets >3mm)    | 100         | 25±0.2        | 10 (No surface machining allowed)                                                                    | 3        |
| 8    | Insulation Resistance             | Fig.12      | Fig.12        | 10 (No surface machining allowed)                                                                    | 3        |
| 9    | Heat Ageing                       | 100         | 100           | 10 (No surface machining allowed)                                                                    | 2        |

t: Sheet Thickness (in mm)

Sample machining must be done in a manner such that Length & Width side are parallel to Glass Fabric layers and Thickness is perpendicular to Glass Fabric layers.

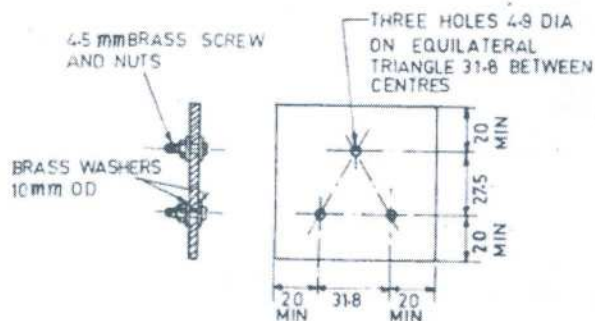


Fig. 12 Specimen And Electrodes

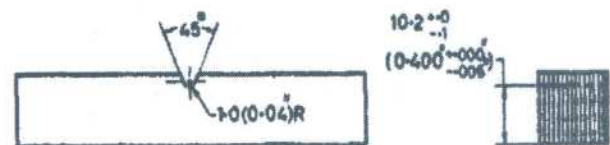


Figure - 1

**NOTE**

- BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected.
- All the documents should be furnished in English language only. If the document provided by vendor is in any language other than English, it must be supported with its certified English translation.

*Nitin Raj*  
Nitin Raj 04/11/22  
Manager / ISE & CPL

*Pratibha Gupta*  
Pratibha Gupta  
Manager/EME

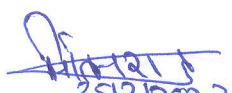
*Ajay Kr. Gupta*  
Ajay Kr. Gupta  
DGM / EME

*Anirudha Tijare*  
Anirudha Tijare  
AGM / ISE, CPL & GRI

**PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR**  
**MEASURING ROD (AA22216)**

**INTRODUCTION:** Measuring Rod is a machined component manufactured from "Phenolic Laminated Cotton Fabric Sheets (Grade F-4 as per IS:2036)", which are made from layers of cotton fabric using thermosetting phenolic resin as bonding medium. Material has temperature index of at least 105°C. These measuring rods are used to monitor the usable length of carbon brushes in static excitation system, during operation.

1. **EXPERIENCE:** The vendor should have the experience of successfully manufacturing and supplying the round machined components prepared from above "Phenolic Laminated Cotton Fabric Sheet" to OEM of Generator of capacity 200 MW and above. In support of above vendor to submit the following documents: -
  - 1.1. Unpriced Copy of two successfully executed purchase orders for machined components manufactured from Glass fabric/Glass Mat/Cotton Fabric based laminated Sheets for use in Generator of capacity 200MW and above.
  - 1.2. Copy of Test Certificates (for dimensional, mechanical and electrical test, etc.) for any one of the purchase orders submitted against clause 1.1.
  - 1.3. Documentary evidence of acceptance of material, pertaining to purchase order for which TCs has been submitted against clause 1.2
2. **MANUFACTURING FACILITIES:**
  - 2.1) Vendor to confirm that they have all in-house manufacturing facilities for above Measuring Rod meeting the requirements as per BHEL specification AA22216 Rev 04. Vendor to provide details of manufacturing facility required for manufacturing above Phenolic Laminated Cotton Fabric Sheet along with photographs.
  - 2.2) If the vendor plans to outsource any manufacturing activity, particulars of the same along with details of the sub-vendor to be furnished to BHEL for review.
3. **TESTING FACILITIES:**
  - 3.1) Vendor to confirm that they have in-house test facilities, sufficient to carry out all the test as per enquired specification AA22216 Rev 04. Vendor to provide the details of testing facilities.
  - 3.2) In case vendor conducts test at an external testing agency, vendor to furnish the details of the same, e.g. NABL accredited/Government approved Lab.
4. The vendor to provide the details/TC of raw material used for manufacturing the enquired item.
5. Vendor to confirm the detailed technical requirements given in the enquired specification AA22216 Rev. 04.
6. Vendor who is supplying this item to BHEL for the first time, have to submit one complete set of samples as per Table – 1, **FREE of cost**, to test the material as per Clause 8, 9 & 10 of specification AA22216 Rev 04. Vendor will be qualified on the basis of successfully passing the tests of submitted samples as per specification AA22216 Rev 04 in addition to qualifying other requirement of PQR.

  
 25/2/2023  
 (NITIN RAJ)  
 Manager/ISE&CPL

  
 25.2.2023  
 (SS Meena)  
 DGM/EME

  
 25/2/23  
 (Anirudh Tripathi)  
 ASM/ISE&CPL/SRI  
 1 | Page



TABLE - 1

| S.no | Test                              | Length (mm) | Width (mm)    | Thickness (mm)                                                                                       | Quantity |
|------|-----------------------------------|-------------|---------------|------------------------------------------------------------------------------------------------------|----------|
| 1    | CBS                               | >20xt       | 10 to 25      | 10<br>If t>10: Machine down to 10mm leaving one surface intact                                       | 5        |
| 2    | Impact Strength (Charpy edgewise) | 63.5±0.5    | 12.7+0.0/-0.1 | 10 (Notch as per Figure 1)                                                                           | 5        |
| 3    | Splitting Load                    | 20±0.2      | 20±0.2        | 10±0.1 mm<br>If t>10: Machine down to 10mm uniformly on both sides<br>(Applicable for sheets ≥ 10mm) | 5        |
| 4    | Resistance to Hot oil             | 75          | 75            | 10 (No surface machining allowed)                                                                    | 2        |
| 5    | Water Absorption                  | 50±1        | 50±1          | 10 (No surface machining allowed)                                                                    | 3        |
| 6    | BDV-Flatwise (For sheets < 3mm)   | 150         | 150           | 2-3 (No surface machining allowed)                                                                   | 3        |
| 7    | BDV-Edgewise (For sheets >3mm)    | 100         | 25±0.2        | 10 (No surface machining allowed)                                                                    | 3        |
| 8    | Insulation Resistance             | Fig.12      | Fig.12        | 10 (No surface machining allowed)                                                                    | 3        |
| 9    | Heat Ageing                       | 100         | 100           | 10 (No surface machining allowed)                                                                    | 2        |

t: Sheet Thickness (in mm)

Sample machining must be done in a manner such that Length & Width side are parallel to Glass Fabric layers and Thickness is perpendicular to Glass Fabric layers.

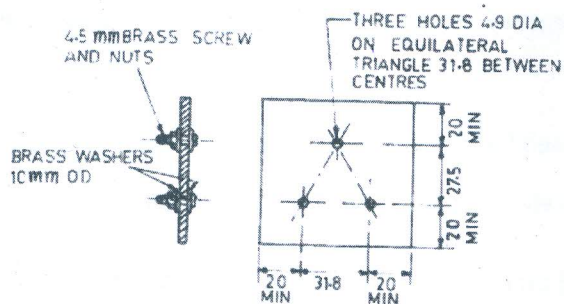


Fig. 12 Specimen And Electrodes

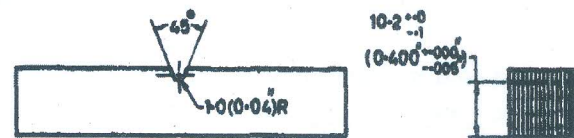


Figure - 1

**NOTE**

- a. BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected.

  
Nitin Raj  
Manager / ISE & CPL

  
SS Meena  
DGM/EME

  
Anirudha Tijare  
AGM / ISE, CPL & GRI



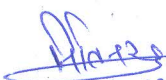
## **PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR** **INSULATING TUBE (TG60650)**

**INTRODUCTION:** These tubes are round tubes made from Glass cloth (E grade Yarn) with epoxy resin as binder. It is used in Diode wheel assembly of Brushless Exciters. The tube manufactured & tested as per Drawing (41431001016) must withstand 13Kv for 1 minute and pass compressive load of 1900 kg for 1 minute.

1. **EXPERIENCE:** The vendor should have the experience of successful manufacturing and supplying the Insulating Tube to OEM of Generator of capacity 200MW and above, in support of which, vendor to submit the following documents: -
  - 1.1. Unpriced Copy of two successfully executed purchase order of the Insulating Tubes (made of resin system as mentioned above) used in Generator of capacity 200MW and above.
  - 1.2. Copy of one Test Certificates for the above material corresponding to any one purchase order submitted above as per clause 1.1.
  - 1.3. Vendor to submit documentary evidence of acceptance of material, pertaining to purchase order for which TC has been submitted against clause 1.2.
2. **MANUFACTURING FACILITIES:** Vendor to confirm that they have all the in-house manufacturing facilities for above Insulating Tube meeting the requirements as per BHEL specification TG60650 REV. 01 and also to provide the details of the same.
3. **TESTING FACILITIES:** Vendor to confirm that they have in-house test facilities, sufficient to carry out all the test as per enquired specification TG60650 REV. 01 and also to provide the details of the same. In case vendor conducts test at an external testing agency, vendor to furnish the details of the same, e.g. NABL/ILAC/APLAC approved lab.
4. The vendor to provide the details/TC of raw materials required for manufacturing the enquired item.
5. Vendor to confirm the detailed technical requirements given in the enquired specification and drawing.
6. Vendor who is supplying this item to BHEL for the first time has to submit 8 nos. of tubes (Non-Returnable/ free of cost) manufactured as per drawing 41431001016 for testing the material as per Clause 4 of BHEL specification TG60650 REV. 01 & Drawing (41431001016). Vendor will be qualified on the basis of successfully laboratory evaluation of samples and shop trial, in addition to qualifying other requirement of PQR.

### **NOTE**

- a) BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected.

  
Nitin Raj 03/07/2023  
Manager / ISE & CPL

  
S S Meena 03.7.2023  
DGM / EME

  
Suparna Majumdar  
DGM / ISE & CPL



# QUALITY PLAN

Page 1 of 1

QPNO : QA/BE/QP/044

REV.NO. : 08

DESCRIPTION: PHENOLIC LAMINATED COTTON FABRIC SHEET GRADE - F4 AND COMPONENTS

SPECNO: AA22216

REV.NO. : 04

DRG : As Per PO

REV.NO. : --

LEGENDS:-

P - PERFORMED BY  
W - WITNESSED BY  
V - VERIFIED BY

1 - BHELREP,  
2 - VENDOR  
3 - SUBVENDOR

| SL. NO. | COMPONENT/ OPERATION  | CHARACTERISTICS                                                                                                                                                                                                            | CLASS  | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORDS        | AGENCY P W V | REMARKS                               |
|---------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------|------------------|--------------------|------------------|--------------------------|--------------|---------------------------------------|
| 1       | 2                     | 3                                                                                                                                                                                                                          | 4      | 5             | 6                | 7                  | 8                | 9                        | 10 11 12     | 13                                    |
| 1.0     | Raw Material          |                                                                                                                                                                                                                            |        |               |                  |                    |                  |                          |              |                                       |
| 1.1     |                       | Verification of material certification.                                                                                                                                                                                    | Major  | Verification  | 100%             | AA22216            | AA22216          | TC / COC                 | 2 - 1        |                                       |
| 1.2     |                       | Raw material are to be procured from BHEL approved source for components.                                                                                                                                                  | Major  | Verification  | 100%             | AA22216            | AA22216          | Laminate manufacturer TC | 2 - 1        | M/S Bakelite, M/S Formica, M/S Permal |
| 2.0     | Inprocess Inspection  |                                                                                                                                                                                                                            |        |               |                  |                    |                  |                          |              |                                       |
| 2.1     |                       | Verification of process regime.                                                                                                                                                                                            | Major  | Verification  | 100%             | AA22216            | AA22216          | Internal record          | 2 - 1        |                                       |
| 3.0     | Final Inspection      |                                                                                                                                                                                                                            |        |               |                  |                    |                  |                          |              |                                       |
| 3.1     | Physical Properties   | Water absorption, resistance to hot oil & heat ageing.                                                                                                                                                                     | Major  | Test          | Per batch        | AA22216            | AA22216          | Test report *            | 2 1 -        |                                       |
| 3.2     | Mechanical Properties | Cross breaking strength, Shear strength, Impact strength, Splitting load edgewise, Punching & Machinability.                                                                                                               | Major  | Test          | 100%             | AA22216            | AA22216          | TC*                      | 2 - 1        |                                       |
| 3.3     | Electrical Properties | Insulation resistance & Proof voltage in oil at 90 deg.C.                                                                                                                                                                  | Critic | Test          | 100%             | AA22216            | AA22216          | TC*                      | 2 - 1        |                                       |
| 3.4     |                       | Dimensional check.                                                                                                                                                                                                         | Major  | Measurement   | 100%             | AA22216/ Drawing   | AA22216/ Drawing | Inspection report*       | 2 1 -        |                                       |
| 3.5     |                       | Freedom from surface / visual defects like flatness, blisters, loose fibre, resin concentration, delamination, wrinkles, local deformation and dents.                                                                      | Major  | Visual        | 100%             | AA22216            | AA22216          | Inspection report*       | 2 1 -        |                                       |
| 3.6     |                       | Compliance of technical requirements..                                                                                                                                                                                     | Major  | Verification  | 100%             | AA22216/ Drawing   | AA22216/ Drawing | COC*                     | 2 - -        |                                       |
| 3.7     |                       | Completeness & correctness of documents.                                                                                                                                                                                   | Major  | Verification  | 100%             | AA22216/ PO / QP   | AA22216/ PO / QP | Documents                | 2 - 1        |                                       |
| 4.0     | Packing & Marking     |                                                                                                                                                                                                                            |        |               |                  |                    |                  |                          |              |                                       |
| 4.1     |                       | Packing & marking.                                                                                                                                                                                                         | Major  | Visual        | 100%             | AA22216            | AA22216          | Internal record          | 2 - 1        |                                       |
| Note:-  |                       | <p>1. BHEL reserves the right to carry out repeat testing at their lab for Mechanical &amp; Electrical properties.</p> <p>2. Records as marked * shall essentially be submitted by vendor as QA documentation package.</p> |        |               |                  |                    |                  |                          |              |                                       |

*S.K. Chauhan*  
18.06.03  
(सतीश कुमार चौहान)  
अभिषेक (क्यू.ए.)  
S. K. CHAUHAN, ENGINEER (OAX)  
बी.एच.ई.एल., हरिद्वार  
HARDWAR

Digitally signed  
by Nishant  
Kumar  
Date:  
2021.06.18  
10:41:35 +05'30'



|                                 |                        |                 |                        |               |                  |                     |                  |                   |        |    |   |         |
|---------------------------------|------------------------|-----------------|------------------------|---------------|------------------|---------------------|------------------|-------------------|--------|----|---|---------|
| MANUFACTURER'S NAME AND ADDRESS |                        |                 | STANDARD QUALITY PLAN  |               |                  |                     |                  |                   |        |    |   |         |
| BHEL                            | VENDOR'S NAME          | ITEM            | <b>Insulating Tube</b> |               | QP NO.           | <b>QA/BE/QP/094</b> |                  |                   |        |    |   |         |
|                                 |                        |                 |                        | REV           | 00               |                     |                  |                   |        |    |   |         |
|                                 |                        | DRG. NO.        | AS PER PO              |               |                  |                     |                  |                   |        |    |   |         |
|                                 |                        | SPEC.           | TG60650                |               |                  |                     |                  |                   |        |    |   |         |
|                                 |                        | REV             | 01                     |               | Page 1 of 1      |                     |                  |                   |        |    |   |         |
| SL. NO.                         | COMPONENT & OPERATIONS | CHARACTERISTICS | CLASS                  | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT  | ACCEPTANCE NORMS | FORMAT OF RECORDS | AGENCY |    |   | REMARKS |
|                                 |                        |                 |                        |               |                  |                     |                  |                   | M      | B  | N |         |
| 1                               | 2                      | 3               | 4                      | 5             | 6                | 7                   | 8                | 9                 | D      | 10 |   | 11      |

|    |                           |                                                                                      |       |                             |                           |                      |                |                      |   |         |        |   |                |
|----|---------------------------|--------------------------------------------------------------------------------------|-------|-----------------------------|---------------------------|----------------------|----------------|----------------------|---|---------|--------|---|----------------|
| 1. | RAW MATERIAL              | Verification of Material<br>Test certificates of Glass<br>cloth, Glass Matt & Binder | Major | Verification                | 100%                      | TG60650              | TG60650        | MTCs                 | ✓ | P/<br>V | V      | - |                |
| 2  | IN- PROCESS<br>INSPECTION | Verification of in process<br>and curing regime                                      | Major | Verification                | 100%                      | TG60650              | TG60650        | Records              | ✓ | P       | V      | - |                |
| 3  | FINAL INSPECTION          | Glass content                                                                        | Major | Physical                    | 1 per lot of<br>100 piece | TG60650              | 45 ±5 %        | Test<br>Certificates | ✓ | P       | W      | - |                |
|    |                           | Specific gravity                                                                     | Major | Physical                    | 1 per lot of<br>100 piece | TG60650              | 1.75±0.1 g/cm3 | Test<br>Certificates | ✓ | P       | W      | - |                |
|    |                           | Compression                                                                          | Major | Physical                    | 1 per lot of<br>100 piece | TG60650              | TG60650        | Test<br>Certificates | ✓ | P       | W      | - |                |
|    |                           | Break down force                                                                     | Major | Physical                    | 1 per lot of<br>100 piece | TG60650              | TG60650        | Test<br>Certificates | ✓ | P       | W      | - |                |
|    |                           | Electrical Strength                                                                  | Major | Electrical                  | 100%                      | TG60650              | TG60650        | Test<br>Certificates | ✓ | P       | W<br>* | - | *Random<br>10% |
|    |                           | Visual & Dimension check<br>including finish & freedom<br>from defects               | Major | Visual &<br>Measuremen<br>t | 100%                      | TG60650              | TG60650        | Test<br>Certificates | ✓ | P       | W<br>* | - | *Random<br>10% |
| 4  | Packing and<br>Marking    | Packing & Marking                                                                    | Major | Physical<br>/visual         | 100%                      | As per vendor<br>std | TG60650        | Int record           | ✓ | P       | V      | - |                |

Note: All page of inspection documents shall be numbered in chronology with the QAP clause , dully mentioning the corresponding QAP clause nos. at the top of each page. One index page containing the documents descriptions, their page no & QAP clause shall be attached upfront the inspection documents.

|                                |  |                                                                                                                                       |                                                                              |             |
|--------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------|
| MANUFACTURER/<br>SUBCONTRACTOR |  | LEGEND:<br>RECORDS IDENTIFIED WITH '✓' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA<br>DOCUMENTATION.                            | FOR CUSTOMER USE                                                             | APPROVED BY |
|                                |  | M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER<br>INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION |                                                                              |             |
|                                |  | ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER                                                                            |                                                                              |             |
|                                |  |                                                                                                                                       | <b>Nishant<br/>Kumar</b>                                                     |             |
|                                |  |                                                                                                                                       | Digitally signed by<br>Nishant Kumar<br>Date: 2024.03.24<br>08:40:09 +05'30' |             |

# **FRAMEWORK CONFIDENTIALITY AGREEMENT CUM UNDERTAKING**

## **(FCA)**

This Agreement made on this the day \_\_\_\_\_ of (month) \_\_\_\_\_ ("Effective Date") by and between M/s BHARAT HEAVY ELECTRICALS LIMITED, having registered office at "BHEL House", Siri Fort, New Delhi — 110049 (India), acting through its Unit \_\_\_\_\_ (hereinafter may be referred to as "BHEL" or "the Company").

And  
M/s \_\_\_\_\_ (address) \_\_\_\_\_  
represented by authorized representative \_\_\_\_\_ Sri (herein after referred to as the "Supplier").

The Supplier and the Company may, unless the context otherwise requires, hereinafter be collectively referred to as "Parties" or singly as the "Party".

### RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL/its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with Contract(s) (as defined hereunder) placed or to be placed upon the Supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as under:

### 1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- a) "Contract" means the Contract entered into with a Supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- b) "Effective Date" means the date of this Agreement as mentioned in the preamble of this Agreement.
- c) "Supplier" includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
- d) "Technical Information" includes Drawings, and/or Product Standards and/or Specifications and/or Corporate / Plant Specifications and/or Technological Process Sheets and/or Technical Data Sheets and/or Jigs & Fixtures and/or Pattern & Dies and/or Special Gauges and/or Tools etc. belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Supplier.
- e) "Intended Purpose" means the purpose for which the Technical Information is provided to the Supplier under or in connection with a Contract.
- f) "Improvement" includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (whether in terms of effectiveness or in terms of efficiency or both) of the product and/or the service to be provided by the Supplier under a Contract.



2. This Agreement shall come into force/deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the Supplier; whichever is earlier.

3. Agreement deemed to be incorporated in each Contract: Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contracts has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.

4. Ownership:

4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.

4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any license or rights of use of such patent, copyright or design or any other intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the Contract and/or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

4.3 Neither Party is obligated by or under this Agreement to purchase from or provide to the other Party any service or product and that any such purchase/sale of any product and/or service by one Party to the other Party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.

4.4 The Supplier is/has been made well aware and acknowledges that the Technical Information being/which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.

4.5 The Supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors/suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the Supplier or its employees or sub-contractors/suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.

4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights/title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings/documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvement in the Technical Information including but not limited to

obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question answers whether a modification amounts to Improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the Supplier.

5. Use and Non-Disclosure:

5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the Supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.

5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the Product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and/or service to any third party, without the prior written consent of the Company.

5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the Supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is/was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the Supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.

5.5 The Supplier undertakes and agrees not to make copies or extracts of and not to disclose to others any or all of the Technical Information in its possession, except as follows:

- a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.
- b) With the prior written consent of Company, the Supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and nondisclosure in respect of such Technical Information.
- c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the Supplier intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was/is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;

- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
  - c) is developed independently of the Disclosing Party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
  - d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.
7. The obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of ----years from the date when the complete Technical Information has been returned to the Company and if Technical Information has been returned in portions on different dates then, the period of ---- years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of ----years.
8. Warranties & Undertakings:
- a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.
  - b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material/documents belonging to him/it or to any other third party.
  - c) The Supplier further undertakes that he/it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and/or equipment of the Company, made available to him/it, and undertakes that he/it shall hold the same as a trustee, in capacity of custodian thereof and use/utilize the same solely for the purpose of executing the Contract awarded by the Company.
  - d) The Supplier further undertakes that he/it shall return all the equipment and/or Technical Information as far as practicable in the same condition in which the same was made available to him/it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope 2 of work or Contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and/or Technical Information/improvement thereof. In case any such equipment and/or Technical Information or Improvement thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or Improvement thereto shall continue to be governed by this Agreement.
  - e) The Supplier undertakes to indemnify the Company for all the direct, indirect and/or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and/or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the foregoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.
9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 8(e) hereinabove, the Company shall have a right to withhold, recover and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him/it by any department/office/Unit/Division of the said Company.
10. Arbitration & Conciliation:



- a) In case amicable settlement is not reached between the Parties, in respect of any dispute or difference or claim or controversy arising out of the formation, breach, termination, validity or execution of the Contract(or Agreement) 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, then, either Party may, by a notice in writing to the other Party refer such dispute or difference or controversy or claim, (except as to any matters, the decision of which is specifically provided for therein) to the sole arbitration by the arbitrator appointed by Head/In-Charge of the Unit/Division/Region.
- b) The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties to the dispute.
- c) Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India), or other statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be at -- (Insert the name of the city/town of the concerned BHEL Unit/Division).
- d) In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:
- e) In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.
- f) Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Supplier shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner.

## II. Governing Law & Jurisdiction:

This Agreement shall be governed by and be construed as per applicable Indian Laws in force at the relevant time. Subject to clauses and hereinabove, all matters in connection with the subject agreement shall be subject to exclusive jurisdiction of Courts situated at — --(insert the name of the place where the BHEL Unit/Division is located)

SIGNATURE:

WITNESSES

1.

Name

Address:

2.

Name:

Address: