



NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

**Tender for Framework Agreement of
Aluminium alloy Plates & Sheets and
aluminium extruded products requirements
across BHEL
Till 31st March 2028**



**Unified Procurement Cell,
Corporate Office, New Delhi**

For any clarifications, kindly contact:

Name	Sh. N C Sharma	Sh. Nitish Kumar
Designation/Dept	Sr. Manager (UPC)	Manager (UPC)
Address	BHEL SADAN, Sector – 16A, Noida, U.P.	BHEL SADAN, Sector – 16A, Noida, U.P.
Phone	0-120-2218457	0-120-2218343
E-Mail	ncsharma@bhel.in	nitishkumar@bhel.in



NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

Unified Procurement Cell (UPC), Corporate Office, BHEL Invites tenders for finalization of Framework Agreement for Procurement of Aluminium alloy Plates & Sheets and aluminium extruded products upto 31st March 2028 . Vendors are required to refer and comply to following instructions before participation in tender.

INSTRUCTION TO VENDOR FOR SUBMISSION OF OFFER FOR E-NIT:

1. E-NIT **#2026_BHEL_63548_1** has been issued for finalization of framework agreement for Supply of Aluminium alloy Plates & Sheets and aluminium extruded products.
2. This NIT is a **two-part bid E-tender. Part I** (Techno-Commercial Bid) & **Part II** (Price bid).
3. The bidder shall submit bid against the tender on e-procurement platform at <https://eprocurebhel.co.in/> within due date/time of this tender. The bidder would be required to register on the e-procurement market place <https://eprocurebhel.co.in/> and submit their bids online. SEALED COVER BIDS/ E-MAILS / FAX / Manual offers will not be accepted. Amounts shall be indicated in figures in the bid format, wherein for each item corresponding value in words will appear automatically. Supplier may take cognizance of the quoted value in both figures and corresponding words for each item before submission of bid.
4. Below mentioned documents forms part of the of NIT. Vendor shall ensure the documents are uploaded in E-Procurement Portal as per instructions below.

Sl. No.	Type	DESCRIPTION	REMARKS
Part I (Techno - Commercial bid)			
i	Mandatory	Instructions for bidders	Document required against Part – I bid: i. Bidders must submit a signed & stamped copy of this document as a token of acceptance of T&C of the tender. ii. Supporting Documents against Technical PQR
Part II (Price bid)			
ii	Mandatory Fill and upload	Price Bid	Bidders shall download the Price Bid format (BOQ Excel sheet) from the NIC e-Procurement Portal (EPS) and follow the steps below: 1. Enter Vendor Code & Name in the designated space. 2. Fill in the Rate (Rs. per UoM) in the appropriate fields. 3. Validate the Excel sheet to ensure correctness. 4. Save the Excel sheet after validation.



NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

			5. Upload the Excel sheet in EPS and digitally sign it using the option available in EPS. Note:- Bidders who are either not willing to quote for a particular Rate Schedule should leave the corresponding field blank in the Price Bid.
--	--	--	--

5. In case of non-submission of above documents in requisite manner, offer submitted by Vendor may be rejected.
6. All other statutory documents such as Local Content Certificate (PPP-MII), Integrity Pact, Non-Disclosure Agreement, Restrictions under rule 144 (xi) of GFR 2017 etc. shall be governed as per General Conditions of Contract (GCC).
7. **Evaluation Criteria:** Evaluation shall be done on itemwise FOR destination basis L1 price i.e. inclusive of Packing, forwarding, freight & insurance charges etc.
Please note that no other charges on any account will be admissible at any stage of contract.
8. **Evaluation Criteria in case of more than one L-1 bidder:** In the course of evaluation, if more than one bidder happens to occupy L-1 status for any item, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss / draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding
9. **Validity of FA: Ordering against the finalised** Framework Agreement will be done up to 31.03.2028.
10. **Reverse Auction:** Reverse Auction **will not be conducted** against this tender.
11. If any supplier quotes against this tender, it will be deemed that the offer/price submitted is in line with the terms and conditions agreed in the NIT, without any deviation to the same. Any **discussion/clarification/deviation over specifications/size of tendered items** should be taken up by vendors before Part – I bid submission end date/time. Any deviation sheet submitted by vendor along with quotation shall be considered null and void, and vendor's quotation for those items (against which deviation is quoted) is liable for rejection.
12. **Irrespective of the value of the invoice amount, the bidder / vendor should necessarily upload the despatch & invoice details on BHEL SUVIDHA portal at <https://suvidha.bhel.in/suvidha/> prior to despatch. All documents as per PO checklist , along with additional documents (if any), must be uploaded on the portal. It is mandatory that tax invoices with a net amount (including taxes) exceeding Rs five lakhs uploaded on the portal are digitally signed using a Class 3 Digital Signature Certificate (DSC) issued by a licensed Certifying Authority. Submission of invoice document in hard copy is allowed for invoices with a net amount (including taxes) equal to and upto Rs five lakhs , in case they were not digitally signed and uploaded on the portal. The material will not be accepted inside BHEL/destination in absence of the above.**



NIT#2026ALPLTSHTXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

13. Schedule for Pre-Bid Discussion/Meeting:

Interested bidders are requested to confirm their participation for Pre Bid Discussion (PBD) meeting either by physical meeting at above mentioned place or through Video Conferencing (VC). For VC link, bidder may contact the BHEL officials mentioned as above.

14. To enable Vendor for submission of error-free offer, the following checklist has been provided. bidders may refer the same before submission of offer.

Sl. No.	CHECKLIST FOR SUBMISSION OF OFFER BY VENDORS
1.	Read and understand scope of work of NIT
2.	Note the Unit of measurement in this tender. Care to be taken before offer submission.
3.	Note the offer validity and Framework Agreement validity.
4.	Read and understand the GST clause
5.	Read and Understand the BHEL Guidelines for Suspension of business dealings with suppliers/contractors (available at www.bhel.com) fully.
Note:	
1	The above checklist is only indicative and not exhaustive.
2	Terms & conditions given in the NIT shall be final and binding on the bidder. Participation in the tender shall be deemed as acceptance to NIT by the respective bidders.
3	Bidders are strictly advised to read and understand terms & conditions given in all the sections of the NIT before submission of offer.
4	Any changes to offer after bid opening will NOT be entertained.

Enclosure:

1. NIT (Notice Inviting Tender)
2. CONDITIONS OF CONTRACT (CoC)
3. GCC
4. MII (Make in India) Declaration (Annexure-III of GCC)
5. Declaration GTE Restrictions (Annexure-IV of GCC)
6. Integrity Pact (Annexure-II of GCC)
7. Annexure-A- List of Rate Schedule
8. Annexure-B_Section Details for Aluminium Plates Sheets & Extruded Products
9. Annexure-B1_List of drawings and relevant specifications
10. Annexure-C_PQR
11. BOQ_cum_Price Schedule
12. BHEL QAP



NIT#2026ALPLTSHTXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

CONDITIONS OF CONTRACT (CoC):

Sl No.	BHEL REQUIREMENTS
1.0	Technical Specification, Size and Quantity: Item wise applicable specifications, estimated Qty. and indicative sizes are mentioned in the Annexure “B” and “B1”. Supply shall be made strictly as per size, technical specifications mentioned in the individual order placed against the finalised FA. Offer submitted by bidder should be complete in all respect. BHEL may consider some deviation on exceptional basis only. Any deviation if taken, same shall be indicated clearly in prescribed format of the “deviation sheet” available in the tender documents. Deviations mentioned anywhere else in the bid shall not be considered.
1.1	Technical Specifications of Aluminum Alloy Sheet and Plate, aluminium extruded products shall be as per Annexure-A, B & B1 (as applicable for different sizes, alloy, grade & temper), BHEL QAP (quality assurance plan) & BHEL Drawings.
1.2	Material shall be suitably packed to prevent corrosion and damage during transit, material must be dispatched in proper packed conditions with proper identification. Material shall be manufactured as per BHEL required section. No additional cost on account of new die/ tool shall be admissible at any stage.
1.3	Pre Despatch Inspection: If required, BHEL/TPIA/customer will have pre despatch inspection at supplier's works.
1.4	Guarantee/ Warranty: Goods shall comply with the specifications for material, workmanship and performance. The warranty shall be for a period of 24 months from the date of supply or 18 months from the date of commissioning whichever is earlier. A warranty/guarantee certificate shall be send along with each lot (consignment) of goods. If the material/ goods is found non-compliant during the warranty period, leading to rejection, the Seller shall arrange free replacement / repair of goods, within one month from the date of intimation or any mutually agreed period. The rejected goods shall be taken away by the Seller at his cost and replaced on Delivered Duty Paid (DDP) (FOR - BHEL Stores / designated destination basis) within such period. In the event of the Seller's failure to comply, Purchaser may take action as appropriate, including Repair / Replenish of rejected goods & disposal of rejections, as per Breach of Contract clause of GCC. The rejected material shall be taken back only after receipt of replacement. In case of rejection of material after receipt at BHEL/site, seller is required to take back the rejected material at their cost within 30 days from the date of rejection memo / note. If seller fails to take back the rejected material from BHEL/site within 90 days from the date of rejection memo / note. BHEL reserves the right to dispose of the rejected material at the risk of the seller and no further claim for the rejected material will be entertained.
1.5	Ordering Quantity Tolerance (Itemwise): +30 % Supply Quantity Tolerance (Itemwise): +/- 5%
2.0	Bid currency: Bid currency shall be INR. Hence, all rates shall be quoted in INR.
2.1	Payment Term: A) For MSE Suppliers: Payment within 45 days from the date of receipt of material subject to acceptance of material and submission of clear & admissible bill through TReDS platforms. MSME suppliers should mandatorily route their invoices via TReDS platforms such as RXIL, M1xchange or Invoicemart etc. B) For Non-MSE Suppliers: Payment within 90 days from the date of receipt of material subject to acceptance of material and submission of clear & admissible bill. OR

NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

LC Payment Terms:- Payment through Letter of Credit (LC) is normally discouraged.

Payment through Usance LC with 120 days interest free credit (IFC) period (subject to approval of competent authority) reckoned from the date of submission of documents at Beneficiary Bank. All bank charges shall be to seller's account i.e. Bank charges as applicable shall be recovered / deducted from the first payable bill under that LC.

Loading for deviation in credit period short of 120 days, Bank charges will be as per below formula::
[Loading in % = (Repo rate + 4%) x Short Credit period in days / 365 + Bank charges as applicable.

- LC shall be opened within 21 days from the date of PO and negotiation period will be 14 days.
- Validity of LC shall be 90 days.
- **Incoterm:** Carriage and insurance paid to (CIP) destination basis or DDP (Delivered Duty Paid) as applicable.
- **Documents required** for bill/invoice processing: Generally GST compliant Invoice, MTC (Material Test Certificate), Insurance Policy/declaration, LR /GR/ RR copy are required. However, any document required by the LC opening bank, same has to be provided by the supplier.

2.2 **Bill submission & Invoicing:**

Supplier should ensure timely submission of invoice and all relevant documents for processing the payment. Any undue delay on account of bill submission/ incomplete documents shall be to suppliers account. Two sets of following document shall be sent with the material for delivery .

- 1) GST Invoice
- 2) Packing list
- 3) LR /GR/ RR copy
- 4) Copy of waybill
- 5) Guarantee/ warranty certificate
- 6) Material Test certificate

2.3 **Price Variation Clause (PVC):**

Price quoted shall be subject to variation (PVC basis). Following formula shall be used to compute actual rate at the time of dispatch

$$P1 = P0 + (AL1 - AL0)$$

Where, P0 = Rate Quoted in Rs. /kg excluding GST.

P1 = Actual rate payable with price variation in Rs. /kg.

AL0 = Basic Price of Aluminium Ingot IC20 from Price Circular of NALCO w.e.f. dt. 29.07.2026 @ 354.65 /kg

AL1 = Average of basic Prices of Aluminium Ingot IC20 from Price Circulars of NALCO issued during month prior to the month of despatch.

In case of delay in delivery due to reasons not attributable to BHEL, PVC shall be restricted to the contractual delivery date or the actual dispatch date whichever is advantageous to BHEL. In case PO delivery date is extended by BHEL, the PVC shall be applicable for the extended delivery date.

Illustration for arriving rates while invoicing:
For Example:



NIT#2026ALPLTSHTXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

Invoice date is 20.07.2026.
 Rate Quoted in PO as per FA (P0) = 100 Rs. /Kg.
 Price of Aluminium Ingot IC20 (AL0) (NALCO Price circular dtd 11/07/26) = 352.55 Rs. /Kg.
 Average of Price of Aluminium Ingot IC20 (AL1) will be =

SN.	NALCO Circulars	(Prices in Rupees Per MT)
1	Price Ex Works w.e.f. 01.06.2024	412250
2	Price Ex Works w.e.f. 05.06.2024	416050
3	Price Ex Works w.e.f. 10.06.2024	402050
4	Price Ex Works w.e.f. 13.06.2024	393550
5	Price Ex Works w.e.f. 18.06.2024	376250
6	Price Ex Works w.e.f. 26.06.2024	348750
Average of price =		= (412250+416050+402050+393550+376250+348750)/6 i.e. 391483.33

P1 = Rate payable with price variation in Rs. /Kg.=
 = 100 + (391.48 - 354.65)
 = 100 + 36.83
 = 136.83 Rs. /Kg.

- 2.4 **Penalty for delay in supply (LD):**
 If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the contractual delivery period(s) specified in the contract/PO, the Buyer/BHEL will be entitled to deduct/recover the LD for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period, not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.
 For LD calculation Store Receipt Voucher (SRV) / receipted LR date (in case of site delivery) shall be considered as proof of delivery.
LD in case of rejection: In case the material is rejected, then date of replacement will be considered as the actual date of delivery. LD shall be calculated as per clause 2.4 above accordingly.
- 2.5 **GST:** Vendors must ensure compliance of all extant rules and procedure as envisaged in the GST Regime.
- a) Supplier shall have valid GST registration and offer of supplier with valid registration will only be considered.
 b) Supplier shall mention their GSTIN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTIN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.



NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

	c) All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code). d) A declaration to the effect that all invoice particulars are/were uploaded in the GSTIN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL (if asked by BHEL). e) All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so. f) In case of discrepancy in the data uploaded by supplier in the GSTIN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTIN portal or issue credit note (details to be uploaded in GSTIN portal) for the shortages or rejections in the supplies, within the calendar month notified by BHEL. g) In addition to the agreed LD terms, Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number. TDS will be deducted in line with Notification 50/2018 –Central Tax dated 13.09.2018 and certificate will be issued for the same. h) For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty (if any) will be deducted for the delayed period i.e. from the month of receipt of material till the month tax credit is availed, from the running bills.
2.6	<u>Transit Insurance: in Spllier scope.</u> Supplier must insure the material for risks during transportation at their cost and is not payable by BHEL.
2.7	<u>Weighing Tolerance:</u> Payment shall be made based on the actual net weight received and verified at the BHEL Unit or site. A weighbridge tolerance of +/-0.25% between the dispatch invoice weight and BHEL received weight is permissible. If the actual received weight is less than the invoice weight by more than 0.25%, the entire shortage quantity (from the first kilogram, not just the excess) shall be penalized. Under any circumstance, payment shall not exceed *claimed amount (weight). However, this clause is only for weighing of received material. Total accepted quantity by BHEL shall not exceed the PO quantity with supply tolerance. *Claimed weight by the supplier shall be supported by “Weigh Bridge Slip”.
3.0	<u>OFFER VALIDITY:</u> The quotation should be valid for a minimum period of 90 days from the date of bid part-I opening.
3.1	<u>Delivery Period for Supply:</u> BHEL shall place purchase orders (PO) as per requirement under the Framework Agreement finalized against this NIT with delivery period within 02 months from the date of placement of Purchase order/40 days of LC Opening (as applicable). In case of urgency of items based on our end customer requirement/site urgency, BHEL may ask for early delivery.
3.2	Monthly Manufacturing Capacity to be filled by bidder: ---- MT/month.
3.3	<u>Delivery Terms & Price basis:</u> Delivery term shall be FOR destination basis. However, bidders shall quote Item Rate per Kg (exclusive of GST) but inclusive of Packing, forwarding, freight, charges for offering the material for inspection, tool/die development charges etc. Applicable GST rate shall be as per actual. Tentative list of Delivery locations: BHEL CFP Rudrapur etc.
3.4	<u>Offer evaluation:</u> Evaluation will be done on item-wise basis and only those Bidders who meet PQR, other tender requirements, will be qualified for the price bid opening for the given item.
3.5	<u>Framework Agreement (FA):</u> After finalization of this tender, BHEL shall enter into Framework Agreement with successful bidders. Framework Agreement shall be valid for the quantity mentioned in NIT and for a



NIT#2026ALPLTSHTXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

	period i.e. upto 31st March 2028. BHEL may extend the Frame-work Agreement Period / Quantity by with mutual consent. However, finalization & signing of Framework Agreement does not entitle any bidder to any firm order. Any claim by the bidder on account of capacity blocking, funds etc. due to entering into the FA shall not be entertained. FA sets out terms and conditions under which specific purchases can be made during the term of the agreement and shall include agreement on prices which are determined after following the tendering procedure. BHEL shall place purchase order(s) in line with Framework Agreement and as per BHEL's requirement.
3.6	BHEL reserves the right to cancel, terminate or short close the Framework Agreement or take any other action to safeguard BHEL's interest in the Project / Contract, after giving a notice period of 15 days to the supplier without assigning any reason thereof. No claim on account of cancel/shortclose/termination of contract shall be admissible.
3.7	<u>Reverse Auction(RA):</u> REVERSE ACUTION SHALL NOT BE CONDUCTED FOR THIS TENDER.
4.0	<u>Corrigendum/Addendum:</u> Any corrigendum/addendum related to this tender shall be updated on BHEL eProcurement portal https://eprocurebhel.co.in and BHEL website www.bhel.com. Bidders are requested to regularly visit the BHEL website to keep themselves abreast with updates.
4.1	Any documents required due to BHEL/Govt. guidelines like Income tax clearance, registration documents of company, copy of PAN Card of company, Authorization letter etc. must be furnished by Bidder.
4.2	<u>Cancellation of PO/Contract:</u> In the event of non-performance of the contract by the supplier, BHEL reserves the right to cancel the purchase order with issue of a written notice through e-mail/postal etc. BHEL would provide a curing period of not more than 30 days for the supplier to rectify the situation. If situation is not rectified within notice period after issue of notice, BHEL shall be free to execute Breach of Contract clause in addition other available remedies under the contract.
4.3	<u>Mode of Communication:</u> Contract formation, the communication of proposals, the acceptance of proposals, the revocation of proposals and acceptance, termination of contract as the case may be, shall be in electronic form either through BHEL's E-Procurement portal or e-mail communication. All queries/clarifications related to the tender, frame work agreement, purchase order, drawings etc. shall be exchanged through email. BHEL shall also send purchase orders (PO), drawings, QAP etc. through email. Date of email shall be considered as date of communication. Such contract, notice shall not be deemed unenforceable or un-delivered solely on the ground that electronic form or means was used for that purpose and no communication was received from BHEL in paper form through postal route or any other means. Primary mode of communication between BHEL and bidders/contractors shall be through e-mail. No bidder/contractor shall insist for the mode of communication to be through postal route like speed post or courier.
5.0	<u>Offer Submission:</u> Offer must be submitted in two-part bids i.e. pre-qualification bid & techno-commercial bid (Part-I) and Price bid/finance bid (part-2) through BHEL EPS Portal https://eprocurebhel.co.in/. Offer received through any other mode like postal, courier etc. shall not be entertained. Supplier may visit BHEL EPS Portal to get further details. After due date/time, no offer can be submitted on EPS portal.
5.1	Supplier must not indicate price anywhere other than price bid in EPS portal. Supplier must not attach any attachment/file with price bid (Part-2). No cognizance of any attachment/file in price bid shall be taken. Bids mentioning quoted rate anywhere else other than price bid are liable to be rejected.
5.2	<u>Supplier Registration:</u> New Suppliers who are not registered with BHEL shall submit Supplier registration Form through online portal https://supplier.bhel.in/ to get registered with respective BHEL Unit. There are separate forms for indigenous and foreign suppliers.



NIT#2026ALPLTSHTEXTR for Procurement of Aluminium alloy Plates & Sheets and Aluminium Extruded products

6.0	<u>REGISTRATION ON GeM:</u> BIDDERS are advised to get themselves registered on GeM (Government e-market place) and furnish GeM seller ID to BHEL for future reference.

Requirement for Aluminum sheets & plates & extruded products

RS No.	UNIFIED MATERIAL CODE (UMC)	Thickness range (mm)	Width range (mm)	Depth range (mm)	Length range (mm)	Rate Schedule (RS)	Sum of Qty. (Kg)
RS-1	AA1231902019	0.1 - 1.00	600-1200	-	coil form	Aluminium alloy sheet as per IS 5082 or IS 737 - Gr19500 H18 / 19501 H1 / 19501 H2, Spec. no: AA12302	10000
RS-2	AA1231712066	1.01-5.00	1000-1250	-	1400-4000	Aluminium alloy sheet as per IS 737 - Gr31000 H12, Spec. no: AA12312	335000
RS-3	AA1231712317	1.01-5.00	1000-1250	-	4001-4800	Aluminium alloy sheet as per IS 737 - Gr31000 H12, Spec. no: AA12312	90000
RS-4	AA1231703024	1.01-5.00	1000-1250	-	1400-4000	Aluminium alloy sheet as per IS 5082 - Gr19501 H1, Spec. no: AA12303	40000
RS-5	AA1231803010	5.01-6.35	1000-1250	-	2000-4000	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	125000
RS-6	AA1231803029	6.36-10.00	200-1250	-	2500-4000	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	60000
RS-7	AA1231803037	6.36-10.00	1000-1250	-	4001-5370	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	240000
RS-8	AA1231803045	10.01-20.00	200-1545	-	2500-3140	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	425000
RS-9	AA1231803053	20.01-36.00	500-1076	-	2000-3140	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	35000
RS-10	AA1232729086	6.35-13.18	41.8-92.87	101.6-254	3500-5500	Aluminium Alloy Channel as per IS 5082 - Gr63401 WP (Range 2), Spec. no: AA12329	300000
RS-11	AA1230303014	8-20	50-250	-	2000-5200	Aluminium Alloy Flat as per IS 5082 - Gr19501 H1, Spec. no: AA12303	50000
RS-12	AA1232604011	Refer Drg No: DEV./WIN./17 /01 REV 00 IT.NO-001 at Annexure B1			5000	Aluminium Unequal Angle (Drg No: DEV./WIN./17 /01 REV 00 IT.NO-001) as per IS 733 - Gr6063Z T6, Spec. no: AA12304	10000
RS-13	AA1232704016	2.5-6.35	50.8-53	67-101.6	2000-6000	Aluminium Alloy Channel as per IS 733 - Gr6063Z T6, Spec. no: AA12304	10000
RS-14	AA1232504017	4.78-5	32-50.8	32-50.8	4000-5000	Aluminium Alloy Angle as per IS 733 - Gr6063Z T6, Spec. no: AA12304	60000
Grand Total							1790000

Notes:

- 1) This is a FA requirement up to 31.03.2028 and individual PO shall be issued as per the actual requirement during the execution of the contract.
- 2) Financial commitment shall only be made once PO is issued, thus there is no financial commitment being made as of now. Price circular of aluminium Metal issued by M/s NALCO is attached for reference.
- 3) Indicative itemwise list is attached at Annexure B. Mostly sections which may be required have been included, however actual requirement may vary from these sizes.
- 4) Drawings and Technical specifications as per Annexure B1 enclosed.
- 5) PQR as per Annexure-C for ALUMINIUM ALLOY SHEETS AND PLATES & ALUMINIUM EXTRUDED PRODUCTS is enclosed.
- 6) Quality Assurance plan Ref: BHE/RUD/QLY/GQP/AL_ALY/Rev.01 dt. 16.07.2026 for aluminium sheets and plates & extruded products is enclosed.

SI No.	Material Description	Aluminium Section Details T x W x L (in mm)	Sum of qty. (Kg)
1	Aluminium alloy sheet as per IS 5082 or IS 737 - Gr19500 H18 / 19501 H1 / 19501 H2 , Spec. no: AA12302 Size Range: Thickness: .1 to 1mm Width from 600 to 1200 mm in coil form UMC: AA1231902019	Foil 0.46 x 914 x coil form	10,000
2	Aluminium alloy sheet as per IS 737 - Gr31000 H12 , Spec. no: AA12312 Size Range: Thickness: 1.01 to 5.00mm Width from 1000 to 1250 mm and Cut length from 1400 mm to 4000 mm UMC: AA1231712066	Sheet 3 x 1219 x 3188 Sheet 3.15 x 1219 x 3188 Sheet 3.15 x 1219 x 3582 Sheet 3.15 x 1219 x 3587 Sheet 3.15 x 1219 x 3993 Sheet 4 x 1219 x 2123 Sheet 4 x 1219 x 2236 Sheet 4.78 x 1219 x 1400 Sheet 4.78 x 1219 x 1430 Sheet 4.78 x 1219 x 1620 Sheet 4.78 x 1219 x 1650 Sheet 4.78 x 1219 x 2121 Sheet 4.78 x 1219 x 2166 Sheet 4.78 x 1219 x 2436 Sheet 4.78 x 1219 x 2466 Sheet 4.78 x 1219 x 2550 Sheet 4.78 x 1219 x 2737 Sheet 4.78 x 1219 x 2767 Sheet 4.78 x 1219 x 2852	3,35,000
3	Aluminium alloy sheet as per IS 737 - Gr31000 H12 , Spec No.: AA12312 Size Range: Thickness: 1.01 to 5.00mm Width from 1000 to 1250 mm and Cut length from 4001 mm to 4800 mm UMC: AA1231712317	Sheet 2 x 1219 x 4650 Sheet 3.15 x 1219 x 4788	90,000
4	Aluminium alloy sheet as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 1.01 to 5.00mm Width from 1000 to 1250 mm and Cut length from 1400mm to 4000 mm UMC: AA1231703024	Plate 4 x 1219 x 2123	40,000
5	Aluminium alloy plate as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 5.01 to 6.35mm Width from 1000 to 1250 mm and Cut length from 2000mm to 4000 mm UMC: AA1231803010	Plate 6 x 1219 x 2852 Plate 6.35 x 1219 x 2156 Plate 6.35 x 1219 x 2430 Plate 6.35 x 1219 x 2466 Plate 6.35 x 1219 x 2470 Plate 6.35 x 1219 x 2732 Plate 6.35 x 1219 x 2772 Plate 6.35 x 1219 x 3121 Plate 6.35 x 1219 x 3162 Plate 6.35 x 1219 x 3342 Plate 6.35 x 1219 x 3362 Plate 6.35 x 1219 x 3382 Plate 6.35 x 1219 x 3397 Plate 6.35 x 1219 x 3750 Plate 6.35 x 1219 x 3790 Plate 6.35 x 1219 x 3850 Plate 6.35 x 1219 x 3870	1,25,000
6	Aluminium alloy plate as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 6.36 to 10.00mm Width from 200 to 1250 mm and Cut length from 2500mm to 4000 mm UMC: AA1231803029	Plate 8 x 456 x 2500 Plate 8 x 1219 x 3117 Plate 8 x 1219 x 3167 Plate 8 x 1219 x 3242 Plate 8 x 1219 x 3337 Plate 8 x 1219 x 3387 Plate 9 x 753 x 2500	60,000

SI No.	Material Description	Aluminium Section Details T x W x L (in mm)	Sum of qty. (Kg)
7	Aluminium alloy plate as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 6.36 to 10.00mm Width from 1000 to 1250 mm and Cut length from 4001 mm to 5370 mm UMC: AA1231803037	Plate 8 x 1219 x 4688 Plate 8 x 1219 x 4738 Plate 8 x 1219 x 5002 Plate 8 x 1219 x 5052 Plate 8 x 1219 x 5126 Plate 8 x 1219 x 5312 Plate 9 x 1219 x 5313 Plate 9 x 1219 x 5370 Plate 10 x 1060 x 4500	2,40,000
8	Aluminium alloy plate as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 10.01 to 20.00mm Width from 200 to 1545 mm and Cut length from 2500mm to 3140 mm UMC: AA1231803045	Plate 12.7 x 1067 x 3140 Plate 15 x 1545 x 2500 Plate 15 x 634 x 2500 Plate 15 x 712 x 2500 Plate 15 x 760 x 2500 Plate 15 x 1388 x 2500 Plate 15 x 657 x 2500 Plate 16 x 474 x 2500 Plate 16 x 632 x 2500 Plate 16 x 757 x 2500 Plate 16 x 1067 x 3140 Plate 16 x 1182 x 2500 Plate 20 x 1067 x 3140	4,25,000
9	Aluminium alloy plate as per IS 5082 - Gr19501 H1 , Spec No.: AA12303 Size Range: Thickness: 20.01 to 36mm Width from 500 to 1076 mm and Cut length from 2000mm to 3140 mm UMC: AA1231803053	Plate 25 x 1067 x 3140 Plate 25 x 1076 x 3140 Plate 36 x 750 x 2300	35,000
10	Aluminium Alloy Channel as per IS 5082 - Gr63401 WP (Range 2) , Spec. no: AA12329; Size Range: Thickness: 6.35 to 13.18mm Depth: 101.6-254 mm, Width: 41.8-92.87 mm, Length: 3500-5500 mm, UMC: AA1232729086	101.6 mm (Height) x 41.8 mm (Width)x 6.68 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300010 127.2 mm (Height) x 47.8 mm (Width)x 8 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300012 152.4 mm (Height) x 51.6 mm (Width)x 8.1 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300013 177 mm (Height) x 76 mm (Width)x 8 mm (Thk.)x 5500 mm (Length), details as per drg.No 41002300023 177.8 mm (Height) x 58.4 mm (Width)x 9.98 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300014 177.8 mm (Height) x 58.4 mm (Width)x 9.98 mm (Thk.)x 4500 mm (Length), details as per drg.No 41002300014 203.2 mm (Height) x 65 mm (Width)x 11.85 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300015 254 mm (Height) x 92.87 mm (Width)x 13.18 mm (Thk.)x 3500 mm (Length), details as per drg.No 41002300016	3,00,000
11	Aluminium Alloy Flat as per IS 5082 - Gr19501 H1 , Spec. no: AA12303; Size Range: Thickness: 8 to 20mm Width: 50-250 mm, Length: 2000-5200 mm UMC: AA1230303014	8 mm (Thk.)x 150 mm (Width)x 4500 mm (Length) 8 mm (Thk.)x 200 mm (Width)x 4500 mm (Length) 8 mm (Thk.)x 250 mm (Width)x 4500 mm (Length) 10mm (Thk.)x 80 mm (Width)x 4500 mm (Length) 10mm (Thk.)x 100 mm (Width)x 4500 mm (Length) 10 mm (Thk.)x 250 mm (Width)x 4500 mm (Length) 12.7 mm (Thk.)x 100 mm (Width)x 4500 mm (Length) 12.7 mm (Thk.)x 127 mm (Width)x 4500 mm (Length) 12.7 mm (Thk.)x 150 mm (Width)x 4500 mm (Length) 12.7 mm (Thk.)x 175 mm (Width)x 4500 mm (Length) 12.7 mm (Thk.)x 250 mm (Width)x 4500 mm (Length) 16 mm (Thk.)x 100 mm (Width)x 4500 mm (Length) 16 mm (Thk.)x 150 mm (Width)x 4500 mm (Length) 20 mm (Thk.)x 150 mm (Width)x 4500 mm (Length)	50,000
12	Aluminium Unequal Angle as per IS 733 - Gr6063Z T6 , Spec. no: AA12304, Length: 5000 mm UMC: AA1232604011	Drg No: DEV./WIN./17 /01 REV 00 IT.NO-001	10,000

SI No.	Material Description	Aluminium Section Details T x W x L (in mm)	Sum of qty. (Kg)
13	Aluminium Alloy Channel as per IS 733 - Gr6063Z T6 , Spec. no: AA12304; Size Range: Thickness: 2.5 to 6.35 mm Depth: 67-101.6 mm, Width: 50.8-53 mm, Length: 2000-6000 mm UMC: AA1232704016	101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 2150 mm (Length), details as per drg.No 41002300011	10,000
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 2350 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 2600 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 2900 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 3200 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 3600 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 3800 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 4200 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 4300 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 5200 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 5460 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 5700 mm (Length), details as per drg.No 41002300011	
		101.6 mm (Depth)x 50.8 mm (Width)x 6.35 mm (Thk.)x 5800 mm (Length), details as per drg.No 41002300011	
		67 mm (Depth)x 53 mm (Width)x 2.5 mm (Thk.)x 3700 mm (Length), details as per drg.No 41002300024	
		67 mm (Depth)x 53 mm (Width)x 2.5 mm (Thk.)x 3740 mm (Length), details as per drg.No 41002300024	
		67 mm (Depth)x 53 mm (Width)x 2.5 mm (Thk.)x 5000 mm (Length), details as per drg.No 41002300024	
		67 mm (Depth)x 53 mm (Width)x 2.5 mm (Thk.)x 5200 mm (Length), details as per drg.No 41002300024	
14	Aluminium Alloy Angle as per IS 733 - Gr6063Z T6 , Spec. no: AA12304; Size Range: Thickness: 4.78 to 5mm Depth: 32-50.8 mm, Width: 32-50.8 mm, Length: 4000-5000 mm UMC: AA1232504017	32 mm (Depth)x 32 mm (Width)x 5 mm (Thk.)x 5000 mm (Length), details as per drg.No 41002300017	60,000
		50.8 mm (Depth)x 50.8 mm (Width)x 4.78 mm (Thk.)x 5000 mm (Length), details as per drg.No 41002300018	

Note- Above itemwise list is indicative. Mostly sections which may be required have been included in this list, however actual requirement may vary from these sizes.

Annexure B1- List of drawings and relevant specifications**List of relevant specifications**

SI No.	Technical Specifications	Spec No.	Rev No.
1	WROUGHT ALUMINIUM SHEET AND STRIP ANNEALED GR:19500 H18/19501 H1/19501 H2	AA12302	0
2	ALUMINIUM ALLOY BARS, RODS, TUBE, SECTIONS, PLATES AND SHEET FOR ELECTRICAL APPLICATION GR:19501 H1	AA12303	0
3	WROUGHT ALUMINIUM, ALUMINIUM ALLOY BARS, RODS AND SECTIONS GRADE: 6063Z T6	AA12304	0
4	ALUMINIUM ALLOY SHEETS, Gr: 31000 H12	AA12312	4
5	ALUMINIUM ALLOY RODS, BARS, TUBES, SECTIONS AND PROFILES HEAT TREATED - Gr: 63401 WP range 2	AA12329	5

List of Drawings

SI No.	Drawing Title	Drawing No.	Rev No.
1	Al. Unequal Angle	DEV./WIN./17/01	0
2	Section Drawing of Aluminium Channel 254x 92.87 x 13.18TK	41002300016	0
3	Section Drawing of Aluminium Channel 203.2x 65 x 11.85TK	41002300015	0
4	Section Drawing of Aluminium Channel 177.8x 58.4 x 9.98TK	41002300014	0
5	Section Drawing of Aluminium Channel 177x 76 x 8TK	41002300023	0
6	Section Drawing of Aluminium Channel 152.4x 51.6 x 8.1TK	41002300013	0
7	Section Drawing of Aluminium Channel 127.2x 47.8 x 8.0TK	41002300012	0
8	Section Drawing of Aluminium Channel 101.6x 50.8 x 6.35TK	41002300011	0
9	Section Drawing of Aluminium Channel 101.6x 41.8 x 6.68TK	41002300010	0
10	Section Drawing of Aluminium Channel 67x 53 x2.5TK	41002300024	0
11	Section Drawing of Aluminium Angle 50x50x5TK	41002300018	0
12	Section Drawing of Aluminium Angle 32x32x5TK	41002300017	0



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12302

Rev No. 00

PAGE 1 of 3

पिटवां एल्युमीनियम की चादर एवं पत्ती
WROUGHT ALUMINIUM SHEET AND STRIP ANNEALED
GR:19500 H18/19501 H1/19501 H2

1 General

This specification governs the quality requirements of Aluminium sheet and strip over 0.2mm thick but less than 6mm.

2 Application

Deep drawing, spinning and for electrical application.

3 Condition of Delivery

Hot / Cold rolled and annealed.

4 Compliance with National Standards / Codes

The material shall comply with the requirements of the following national standard and also meet the requirements of this specification:

IS:737 – 2024 | Wrought Aluminium and Aluminium Alloy Sheet and Strip for General Engineering Purposes — Specification; Grade 19500, Condition H18

IS:5082 – 1998 | Wrought Aluminium and Aluminium Alloy Bars, Rods, Tubes, Sections, Plates and Sheets for Electrical Applications; Grade 19501, Condition H1/H2

5 Chemical Composition

The chemical composition of the material, when analysed in accordance with IS:504 (Methods of chemical analysis of aluminium and its alloys) or any other conventional/ instrumental methods shall be as specified below:

Element	Percentage	
	Minimum	Maximum
Aluminium	99.50	-
Copper	-	0.04
Silicon	-	0.15
Iron	-	0.35
Manganese	-	0.05
Zinc	-	0.02
Chromium	-	0.02
Others	-	0.10 (0.03 each)
Titanium + Vanadium	-	0.02

*Note: These elements need not be determined when the material supplied conforms to the mechanical properties specified in this specification. However, the supplier shall ensure that the composition of the material lies within the limits specified above.

संशोधन Revisions:

अनुमोदित APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(NFM+HE)
अंतर संस्थान मानकीकरण समिति – आई पी एस सी

Rev No. 00

Amd. No.

Reaffirmed

निर्माण Prepared
CFP, Rudrapur

ज़ारी Issued
Corp. R&D

Dt. of 1st Issue
June 2026

Dt:23-06-2026

Dt:

Year:

स्वाधिकार एवं गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाय

COPYRIGHT AND CONFIDENTIAL
The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the Interest of the company.

6 Dimension and Tolerances

6.1 Sizes:

The material shall be supplied to the dimensions specified in BHEL order.

6.1.1 Sizes and tolerances for profiles shall be as per drawing/ order.

6.1.2 Tolerance on thickness, width and length shall comply with the general tolerances of IS: 2676

7 Freedom from defects

The material shall be perfectly flat, of good surface finish and free from scratches, cracks, laminations and other injurious imperfections. It is important that no embedded particles of iron or steel shall be present.

8 Test Samples

One sample per heat shall be taken for chemical analysis.

One sample per heat per heat-treatment batch shall be selected for mechanical tests.

9 Mechanical Properties

The test pieces, when tested as per IS1608 shall follow the following properties.

Tensile strength: 85 N/mm², min.

Elongation on 50 mm Gauge Length, Percent, for Thickness (Min)				
0.2 mm to 0.5 mm	0.5 mm to 0.8 mm	Over 0.8 mm, up to and including 1.3 mm	Over 1.3 mm, up to and including 2.6 mm	Over 2.6 mm, up to and including 6.0 mm
1	2	3	4	4

12.2 Bend Test (For material of 2.6mm and Thinner):

The bend test piece shall not be less than 15mm wide, of convenient length and cut with its longer axis transverse to the direction of rolling. The test piece shall not crack nor show any visible crack on the outer surface when bent through 180° flat on itself.

10 Electrical Properties

The electrical resistivity shall be determined on test pieces by direct measurement. For determining electrical resistivity, reference may be made to IS 3635.

OR

The electrical conductivity in percent IACS shall be determined by the test method based on Eddy Current Measurement.

The material shall be show following electrical properties:

Electrical Conductivity at 20°C: 60.0% IACS (minimum)

11 Retest

Should any of the test pieces first selected fail, to pass the prescribed tests mentioned under various clauses in this specification, two further samples from the same batch shall be selected for testing, one of which shall be from the same sheet/ strip from which the original test sample was taken, unless that sheet/ strip has been withdrawn by the supplier.

Should the test pieces from both these additional samples pass, the batch represented by the test sample shall be accepted. Should the test pieces from either of these additional samples fail, the batch represented by the test sample shall be rejected.



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12302

Rev No. 00

PAGE 3 of 3

12 Inspection, Testing & Certification Requirements at supplier's Works

Whenever specified, tests and inspection are to be conducted in the presence of customer's representative. The representative shall have free access at all the times while the work on the contract is being performed, to all the parts of the manufacturer's works. The manufacturer shall offer the purchaser's representative all reasonable facilities, without charge, to satisfy the latter that the material is being furnished in accordance with this specification.

The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL's representative in advance about the readiness of the material for inspection and testing. BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

13 Test Certificates

Three copies of test certificates shall be supplied with consignment unless otherwise stated on BHEL order.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

- AA12302 (Rev 00)- WROUGHT ALUMINIUM SHEET AND STRIP ANNEALED GR:19500 H18/19501 H1/19501 H2
- BHEL order No:
- Supplier's reference and name:
- Batch No.:
- Consignment/Identification No.:
- Results of Chemical analysis, Mechanical and all other tests as called for in this specification.

14 Packing & Marking

The material shall be suitably packed crates to prevent corrosion and damage during transit. Each package or crate shall be legibly marked with the following information:

- AA12302
- BHEL Order No.
- Batch No.
- Consignment/ Identification No.
- Size and Weight
- Supplier's Name and reference

15 REFERRED STANDARDS (Latest Publications Including Amendments):

- 1) IS: 737 2) IS: 5082 3) IS: 504 4) IS: 1608 5) IS: 2676



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12303

Rev No. 00

PAGE 1 of 3

विद्युत अनुप्रयोग के लिए एल्यूमिनियम मिश्र बार, छड़ें, नलिकाएँ, सेक्शन, प्लेटें और चदरें
ALUMINIUM ALLOY BARS, RODS, TUBE, SECTIONS, PLATES
AND SHEET FOR ELECTRICAL APPLICATION GR:19501 H1

1 General

This specification governs the quality requirements of Quarter Hard Aluminium Alloy Bars, Tube, Sections, Plates and Sheets of minimum 60%IACS conductivity.

2 Application

For electrical application.

3 Condition of Delivery

H1 - Quarter Hard

4 Compliance with National Standards / Codes

The material shall comply with the requirements of the following national standard and also meet the requirements of this specification:

IS:5082-1998 | Wrought Aluminium and Aluminium Alloy Bars, Rods, Tubes, Sections, Plates and Sheets for Electrical Applications

5 Chemical Composition

The chemical composition of the material, when analysed in accordance with IS:504 (Methods of chemical analysis of aluminium and its alloys) or any other conventional/ instrumental methods shall be as specified below:

Element	Percentage	
	Minimum	Maximum
Aluminium	99.50	-
Copper	-	0.04
Silicon	-	0.15
Iron	-	0.35
Manganese	-	0.02
Zinc	-	0.02
Chromium	-	0.02
Others	-	0.10 (0.03 each)
Titanium + Vanadium	-	0.02

संशोधन Revisions:

अनुमोदित APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(NFM+HE)
अंतर संस्थान मानकीकरण समिति – आई पी एस सी

Rev No. 00

Amd. No.

Reaffirmed

निर्माण Prepared
CFP, Rudrapur

ज़ारी Issued
Corp. R&D

Dt. of 1st Issue
June 2026

Dt:23-06-2026

Dt:

Year:

स्वाधिकार एवं गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाय

COPYRIGHT AND CONFIDENTIAL
The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.

6 Dimension and Tolerances

6.1 Sizes:

The material shall be supplied to the dimensions specified in BHEL order.

6.2 Tolerances:

The tolerance on thickness, width and length shall comply with:

IS:2673 - for Extruded Tube

IS:2676 - for Rolled Sheets

IS:2677 - for Rolled Plates

IS:2678 - for Drawn Tube

IS:3965 - for Bar, Rod and Sections

IS:6477 - for Hollow Sections

7 Freedom from defects

The material shall be sound and free from harmful defects, such as scratches, cracks, laminations and other injurious imperfections.

8 Test Samples

One sample per heat shall be taken for chemical analysis.

One sample per size per consignment per heat treatment batch shall be selected for mechanical tests.

9 Mechanical Properties

The material, when tested in accordance with IS:1608 shall show the following properties:

Tensile strength : 85 N/mm², min

Elongation on 50mm Gauge Length : 10%, min.

10 Electrical Properties

The electrical resistivity shall be determined on test pieces by direct measurement. For determining electrical resistivity, reference may be made to IS 3635.

OR

The electrical conductivity in percent IACS shall be determined by the test method based on Eddy Current Measurement.

The material shall be show following electrical properties:

Electrical Conductivity at 20°C : 60.0% IACS (minimum)

Electrical Resistivity at 20°C : 0.02874 Ω-mm²/m (maximum)

11 Inspection, Testing & Certification Requirements at supplier's Works

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative. BHEL's representative shall have free access at all the times while the work on the contract is being performed to all the parts of the manufacturer's works. The manufacturer shall offer BHEL's representative all reasonable facilities without charge to satisfy the latter that the material is being furnished in accordance with this specification.



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12303

Rev No. 00

PAGE 3 of 3

The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL's representative in advance about the readiness of the material for inspection and testing. BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

12 Test Certificates

Three copies of test certificates shall be supplied with consignment unless otherwise stated on BHEL order.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

- AA12303 (Rev 00)- ALUMINIUM ALLOY BARS, RODS, TUBE, SECTIONS, PLATES AND SHEET FOR ELECTRICAL APPLICATION GR:19501 H1
- Material Code:
- BHEL order No:
- Supplier's reference and name:
- Batch No.:
- Consignment/Identification No.:
- Dimensional inspection.
- Size and Weight
- Results of Chemical and Mechanical tests as called for in this specification.

13 Packing & Marking

The material shall be suitably packed to prevent corrosion and damage during transit.

Each package shall be legibly marked with the following information:

- Material Code
- BHEL Order No.
- Consignment/ Identification No.
- Size and Weight
- Supplier's Name and reference

14 REFERRED STANDARDS (Latest Publications Including Amendments):

- | | | | | |
|-------------|-------------|-------------|-------------|--------------|
| 1) IS: 504 | 2) IS: 5082 | 3) IS: 1608 | 4) IS: 3635 | 5) IS: 2673 |
| 6) IS: 2676 | 7) IS: 2677 | 8) IS: 2678 | 9) IS: 3965 | 10) IS: 6477 |



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12304

Rev No. 00

PAGE 1 of 3

पिटवां एल्यूमीनियम, एल्यूमीनियम मिश्रधातु बार्स, छड़ें और सेक्शन
WROUGHT ALUMINIUM, ALUMINIUM ALLOY BARS, RODS AND
SECTIONS GRADE: 6063Z T6

1 General

This specification governs the requirements of Wrought Aluminium, Aluminium Alloy Bars, Rods and Sections.

2 Application

For general engineering purposes.

3 Condition of Delivery

Shall be heat treated in WP condition.

4 Compliance with National Standards / Codes

The material shall comply with the requirements of the following national standard and also meet the requirements of this specification:

IS: 733 - 2025 I Wrought Aluminium and Aluminium Alloy Bars, Rods, Sections, Extruded Tubes, Hollow Sections and Profiles for General Engineering Purposes - Specification

5 Chemical Composition

The chemical composition of the material, when analysed accordance with IS:504 (Methods of chemical analysis of aluminium in and its alloys) or any other conventional/ instrumental methods shall be as specified below:

Element	Percentage	
	Minimum	Maximum
Copper		0.1
Magnesium	0.4	0.9
Silicon	0.3	0.7
Iron		0.6
Manganese		0.3
Zinc		0.2
Titanium and / or other grade refining elements		0.2
Chromium		0.1
Aluminium	Remainder	

6 Dimension and Tolerances

संशोधन Revisions:

अनुमोदित APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(NFM+HE)
अंतर संस्थान मानकीकरण समिति – आई पी एस सी

Rev No. 00

Amd. No.

Reaffirmed

निर्माण Prepared
CFP, Rudrapur

ज़ारी Issued
Corp. R&D

Dt. of 1st Issue
June 2026

Dt:23-06-2026

Dt:

Year:

स्वाधिका एव गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाय

COPYRIGHT AND CONFIDENTIAL
The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.
It must not be used directly or indirectly in any way detrimental to the Interest of the company.

कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

**6.1 Sizes:**

The material shall be supplied to the dimensions specified in BHEL order.

6.2 Tolerances:

The tolerance on thickness, width and length shall comply with:

IS:2673 - for Extruded Tube

IS:2676 - for Rolled Sheets

IS:2677 - for Rolled Plates

IS:2678 - for Drawn Tube

IS:3965 - for Bar, Rod and Sections

IS:6477 - for Hollow Sections

7 Heat Treatment

The bars, tubes, sections and profiles shall be fully heat treated i.e. solution treated and subsequently precipitation hardened.

8 Freedom from defects

The material shall be sound and free from harmful defects, such as scratches, cracks, laminations and other injurious imperfections.

9 Test Samples

One sample per heat shall be taken for chemical analysis.

One sample per size per consignment per heat treatment batch shall be selected for mechanical tests.

10 Mechanical Properties

The material, when tested in accordance with IS:1608 shall show the following properties:

Tensile strength: 185MPa for thickness <150mm and 150MPa for thickness 150 to 200mm

Elongation on 50mm Gauge Length: 7%

11 Inspection, Testing & Certification Requirements at supplier's Works

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative. BHEL's representative shall have free access at all the times while the work on the contract is being performed to all the parts of the manufacturer's works. The manufacturer shall offer BHEL's representative all reasonable facilities without charge to satisfy the latter that the material is being furnished in accordance with this specification.

The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL's representative in advance about the readiness of the material for inspection and testing. BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

12 Test Certificates

Three copies of test certificates shall be supplied with consignment unless otherwise stated on BHEL order.



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12304

Rev No. 00

PAGE 3 of 3

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

- AA12304 (Rev 00)- WROUGHT ALUMINIUM, ALUMINIUM ALLOY BARS, RODS AND SECTIONS
GRADE: 6063Z T6
- Material Code:
- BHEL order No:
- Supplier's reference and name:
- Batch No.:
- Consignment/Identification No.:
- Dimensional inspection.
- Size and Weight
- Results of Chemical and Mechanical tests as called for in this specification.

13 Packing & Marking

The material shall be suitably packed to prevent corrosion and damage during transit.

Each package shall be legibly marked with the following information:

- Material Code
- BHEL Order No.
- Consignment/Identification No.
- Size and Weight
- Supplier's Name and reference

14 REFERRED STANDARDS (Latest Publications Including Amendments):

- | | | | | |
|-------------|-------------|-------------|-------------|--------------|
| 1) IS: 504 | 2) IS: 733 | 3) IS: 1608 | 4) IS: 3635 | 5) IS: 2673 |
| 6) IS: 2676 | 7) IS: 2677 | 8) IS: 2678 | 9) IS: 3965 | 10) IS: 6477 |



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12312

Rev No. 04

PAGE 1 of 3

एल्युमिनियम मिश्र धातु की चादरें, ग्रेड: 31000 H12
ALUMINIUM ALLOY SHEETS, Gr: 31000 H12

1 GENERAL

This specification governs the quality requirements of strain hardened and partially annealed Aluminium Alloy Sheets over 0.15 mm thick but less than 6 mm.

2 APPLICATION

For general engineering purposes.

3 CONDITION OF DELIVERY

Strain hardened and partially annealed.

4 COMPLIANCE WITH NATIONAL STANDARDS

The material shall comply with the requirements of the following national standard and also meet the requirements of this specification.

IS:737- 2024 Gr: 31000 | Wrought Aluminium and Aluminium Alloy Sheet and Strip for General
Condition H12 | Engineering Purposes- Specification (Including Amendment No. 1)

5 DIMENSIONS AND TOLERANCES

5.1 Sizes

The material shall be supplied to the dimensions specified in BHEL order.

5.2 Tolerances

The tolerance on thickness, width and length shall comply with IS:2676

6 FREEDOM FROM DEFECTS

The material shall be sound and free from harmful defects, such as scratches, cracks, laminations and other injurious imperfections.

7 CHEMICAL COMPOSITION

The chemical composition of the material, when analysed in accordance with IS:504 (Methods of chemical analysis of aluminium and its alloys) or any other conventional/instrumental methods shall be as specified below:

संशोधन Revisions:

अनुमोदित APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(NFM+HE)
अंतर संस्थान मानकीकरण समिति – आई पी एस सी

Rev No. 04

Amd. No.

Reaffirmed

निर्माण Prepared
CFP, Rudrapur

ज़ारी Issued
Corp. R&D

Dt. of 1st Issue
December 1977

Dt:23-06-2026

Dt:

Year:

संस्थापिका एवं गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका
प्रलेख एवं अप्रलेख रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में
हानिकारक हो न किया जाय

COPYRIGHT AND CONFIDENTIAL
The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.
It must not be used directly or indirectly in any way detrimental to the Interest of the company.

कॉर्पोरेट क्रय विनिर्देश CORPORATE PURCHASING SPECIFICATION



Element	Percent, min	Percent, max.
*Copper	--	0.1
*Magnesium		0.1
*Silicon		0.6
*Iron		0.7
*Manganese	0.8	1.5
*Zinc		0.2
*Chromium		0.2
*Titanium		0.2
Aluminium	Remainder	

* Note: These elements need not be determined when the material supplied conforms with the mechanical properties specified in this specification. However, the supplier shall ensure that the composition of the materials lies within the limits specified above.

8 TEST SAMPLES

One sample per heat shall be taken for chemical analysis.

One sample per size per consignment per heat treatment batch shall be selected for mechanical tests.

9 MECHANICAL PROPERTIES

9.1 Tensile

The material, when tested in accordance with IS:1608 shall show the following properties:

- a) Tensile strength : 115 - 150 N/mm²
- b) Elongation on 50mm Gauge length : 8%, min. (For sizes >2.6mm but ≤6mm thick.)
7% min (For sizes >1.3mm but ≤2.6mm thick)

9.2 Bend Test (For sizes 2.6mm and thinner):

The bend test piece shall be not less than 15mm wide, of convenient length and cut with its larger axis transverse to the direction of rolling. The test piece shall not crack nor show any visible crack on the outer surface when bent through angle of 180° around a former having a radius equal to the thickness of the test piece.

10 Electrical Properties

The electrical resistivity shall be determined on test pieces by direct measurement. For determining electrical resistivity, reference may be made to IS 3635.

OR

The electrical conductivity in percent IACS shall be determined by the test method based on Eddy Current Measurement.

The material shall be show following electrical properties:

Electrical Conductivity at 20°C : 45.0% IACS (minimum)

11 INSPECTION AT SUPPLIER'S WORKS

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative.

BHEL's representative shall have free access at all the times while the work on the contract is being performed to all the parts of the manufacturer's works. The manufacturer shall offer BHEL's representative all reasonable facilities without charge to satisfy the latter that the material is being



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12312

Rev No. 04

PAGE 3 of 3

furnished in accordance with this specification. The manufacturer shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities do not exist at his works, the manufacturer shall make necessary arrangements for carrying out the prescribed tests elsewhere. The manufacturer shall notify BHEL's representative in advance about the readiness of the material for inspection and testing.

BHEL reserves the right to test the material at BHEL's works and the final acceptance of the material shall be based on these test results.

12 TEST CERTIFICATES

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

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

- BHEL order No
- AA12312 (Rev.No. 04)- ALUMINIUM ALLOY SHEETS, Gr: 31000 H12
- Supplier's reference and name:
- Batch No.:
- Consignment/Identification No.:
- Dimensional inspection.
- Size and Weight
- Results of Chemical and Mechanical tests as called for in this specification.

13 PACKING AND MARKING

The material shall be suitably packed to prevent corrosion and damage during transit. Each package shall be legibly marked with the following information:

- AA12312
- BHEL Order No.
- Consignment/Identification No.
- Size and Weight
- Supplier's Name and reference.

14 REFERRED STANDARDS (Latest Publications Including Amendments):

- 1) IS: 504 2) IS: 737 3) IS: 1608 4) IS: 2676



कॉर्पोरेट क्रय विनिर्देश CORPORATE PURCHASING SPECIFICATION

AA12329

Rev No. 05

PAGE 1 of 5

एल्युमिनियम मिश्र धातु की छड़ें, बार, ट्यूब, सेक्शन और प्रोफाइल (ऊष्मा उपचारित) - ग्रेड: 63401 WP रेंज 2 ALUMINIUM ALLOY RODS, BARS, TUBES, SECTIONS AND PROFILES HEAT TREATED - Gr: 63401 WP range 2

1 GENERAL

This specification governs the requirements of Wrought Aluminum Alloy Bars, Drawn Tubes, Sections and Profiles.

2 APPLICATION

For bus bars, shunt reactors, etc.

3 CONDITION OF DELIVERY

Fully heat treated.

4 COMPLIANCE WITH NATIONAL STANDARDS

The material shall comply with the requirements of the following national standards and also meet the requirement of this specification.:

IS: 5082 – 1998 Gr.: 63401, | Wrought Aluminium and Aluminium Alloy Bars, Rods, Tubes,
Condition: WP range 2 | Sections, Plates and Sheets for Electrical Applications

5 DIMENSIONS AND TOLERANCES

5.1 Sizes

The material shall be supplied as per the dimensions specified in BHEL order.

- Size for equal leg angles shall be as per IS: 3908 (Specifications for Aluminum Equal Leg Angles).
- Sizes for unequal leg angles shall be as per IS:3909 (Specification for Aluminum Unequal Leg Angles).
- Sizes for channels shall be as per IS:3921 (Specification for Aluminum Channels).
- Sizes for Drawn tubes shall be as per IS:2678 (Dimensions and tolerances for wrought aluminium and aluminium alloy drawn round tube).
- Sizes and tolerances for profiles shall be as per drawing/Order.
- Sizes and tolerance for bars, rods and section shall be as per IS:3965

5.2 Tolerances

- Tolerances on diameter of Round Bars:

DIAMETER	TOLERANCE		
	CLASS A		CLASS B
	Plus (+)	Minus (-)	±
Up to 12.0	0.03	0.07	±0.20

संशोधन Revisions:

अनुमोदित APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(NFM+HE)
अंतर संस्थान मानकीकरण समिति – आई पी एस सी

Rev No. 05

Amd. No.

Reaffirmed

निर्माण Prepared
CFP, Rudrapur

ज़ारी Issued
Corp. R&D

Dt. of 1st Issue
June 1984

Dt:23-06-2026

Dt:

Year:

संस्थाधिकार एवं गोपनीय
इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स लिमिटेड की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाय

COPYRIGHT AND CONFIDENTIAL
The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the Interest of the company.

कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION



Over 12 up to 25	0.05	0.10	±0.25
Over 25 up to 40	0.07	0.13	±0.30
Over 40 up to 50	0.13	0.13	±0.38
Over 50 up to 56	0.15	0.15	±0.46
Over 56 up to 71	0.20	0.20	±0.53
Over 71 up to 80	0.25	0.25	±0.61
Over 80	Half % of Diameter	Half % of Diameter	±1 % of diameter

Note: Class A tolerances are applicable for drawn rods and not to the as extruded rods. In case of diameters other than standard and not included in the above table, the tolerance applicable are those for the nearest smaller diameter.

2) Tolerance on length:

Unless otherwise agreed, the length tolerances shall be as given below:

Nominal diameter, mm		Length, mm		
Over	Upto & incld.	Upto & incld 1500	Over 1500 upto & incld 6000	Over 6000
--	50	±4	±5	±6
50	100	±5	±6	±7
100	150	±6	±7	±8
150	--	±7	±8	±9

3) Tolerance on over allwidths and width across flats of bars and regular sections.

Width and width Across Flats, mm	Tolerance, mm
6.4	± 0.20
10	± 0.23
12	± 0.25
16	± 0.28
25	± 0.30
32	± 0.38
50	± 0.46
60	± 0.53
80	± 0.69
100	± 0.75
120	± 0.85
160	± 1.02
200	± 1.14
250	± 1.40
300	± 1.65
320	± 1.70

Note: For intermediate sizes, tolerance for the next higher size shall be taken.

4) Tolerances on thickness of regular sections and bars (other than those cover by clause 5.2 Sl.No 1&2):



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12329

Rev No. 05

PAGE 3 of 5

Width of Sections (All dimensions in millimetres)

Thickness of section	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320
1.2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1.6	0.18	0.20	0.20	0.20	0.20	*	*	*	*	*	*	*	*	*	-
2	0.18	0.20	0.20	0.20	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.46	-
2.5	0.18	0.20	0.20	0.20	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.46	-
3.2	0.18	0.20	0.20	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.48	-
4	0.20	0.23	0.23	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46	0.51	-
5	0.20	0.23	0.23	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46	0.51	-
6	0.20	0.23	0.23	0.23	0.25	0.28	0.30	0.33	0.36	0.41	0.46	0.51	0.56	0.66	-
8	0.23	0.25	0.25	0.25	0.28	0.30	0.33	0.36	0.38	0.43	0.48	0.53	0.58	0.71	-
10	0.23	0.25	0.25	0.25	0.28	0.30	0.33	0.36	0.38	0.43	0.48	0.53	0.58	0.71	-
12	0.25	0.28	0.28	0.28	0.30	0.33	0.36	0.38	0.41	0.46	0.48	0.53	0.58	0.74	0.97
16	0.28	0.30	0.30	0.30	0.33	0.36	0.38	0.41	0.43	0.48	0.51	0.56	0.61	0.76	1.02
20		0.30	0.30	0.30	0.36	0.38	0.41	0.43	0.46	0.51	0.53	0.61	0.69	0.79	1.04
25		0.30	0.30	0.30	0.36	0.38	0.41	0.43	0.46	0.51	0.53	0.61	0.69	0.79	1.04
32					0.38	0.41	0.43	0.46	0.48	0.53	0.56	0.66	0.74		
40						0.46	0.48	0.51	0.53	0.56	0.61	0.71	0.79		
50							0.53	0.56	0.58	0.61	0.66	0.76	0.84		
63								0.61	0.64	0.66	0.71	0.81	0.89		
80									0.69	0.71	0.74	0.86	0.94		
100										0.76	0.79	0.91	0.99		
125											0.89	0.97	1.04		
160												1.02	1.09		
200													1.14		

*To be regarded as special sections. Note – for intermediate sizes, take tolerances for the next higher value.

5) Tolerances for Drawn Tubes shall be as per IS: 2678.

6) Tolerances for bars and sections of dimensions larger than those covered above shall be subject to mutual agreement between BHEL and the supplier.

a) Sections not covered in clause 5.2.1 and 5.2.4 and where additional manufacturing operations are necessary, where specially close tolerances are required, such tolerances shall be agreed upon between BHEL and the supplier.

5.3 Tolerance for concavity and convexity, twist and straightness.

All the bars, sections shall be supplied in a straightened condition and reasonably free from twist.

- 1) The twisting of profile, bars, flats, etc. around the axis shall not exceed 1° per meter length.
- 2) The deflections in any one-meter length of profile bars and flats not be more than 2mm.
- 3) The bars, profiles, rods etc., shall be cut at right angle to the longitudinal axis. The skewing of the cut relative to the axis shall not exceed 3° .

5.4 Angular tolerance:

The tolerance on angles of regular sections measured at the extremities of the section shall be as follows:

कॉर्पोरेट क्रय विनिर्देश CORPORATE PURCHASING SPECIFICATION



Thickness of thinnest leg, mm		Allowable deviation from angle specified
Over	Up to & including	
--	5.0	$\pm 2^\circ$
5.0	19.0	$\pm 1.5^\circ$
19.0	--	$\pm 1^\circ$

1) Tolerance on angle of other sections shall be agreed to between BHEL and the supplier

6 MANUFACTURE

The method of manufacture of the material shall be at the discretion of the manufacturer. However, the sections shall be manufactured by the extrusion process.

7 HEAT TREATMENT

The bars, tubes, sections and profiles shall be fully heat treated i.e. solution treated and subsequently precipitation hardened.

8 FREEDOM FROM DEFECTS

The material shall be clean, smooth and free from fins, spills, porosity, cracks or other defects and shall be reasonably straight and free from twists.

9 CHEMICAL COMPOSITION

The chemical composition of the material, when analysed in accordance with IS: 504 (Methods of chemical analysis of aluminum alloys and its alloys) shall be as follows: -

Element	Percent	
	Min.	Max.
Magnesium	0.4	0.9
Silicon	0.3	0.7
Copper	-	0.05*
Iron	-	0.5*
Manganese		0.03
Zinc		0.10
Titanium		0.10
Chromium		0.03
Total Impurities		0.10 0.3 each
Aluminium	Remainder	

***Note:** The impurities need be determined only when the mechanical electrical properties do not meet the specification requirements.

10 TEST SAMPLES

1) Bars, tubes, sections and profiles of the same dimensions produced under similar conditions and of the same composition, shall be grouped into lots or 2000 kg/heat treatment batch/consignment.

Note: In case a heat treatment batch is less than a lot size as defined above, it shall be considered as a lot by itself.

2) One test sample, shall be cut from a bar, tube section or profile selected from each lot.

The test sample, after heat treatment shall not be mechanically worked (except for preparing the test piece before they are tested).

3) One sample from each heat shall be analysed for chemical composition.



कॉर्पोरेट क्रय विनिर्देश
CORPORATE PURCHASING SPECIFICATION

AA12329

Rev No. 05

PAGE 5 of 5

- 4) Should any of the test pieces first selected fail in the mechanical tests, two further samples from the same lot shall be selected for testing, one of which shall be from the same bar or tube from which the original test sample was taken, unless those material have been withdrawn by suppliers.

Should the test pieces from both these additional samples pass, the lot represented by these test samples shall be deemed to comply with this specification. Should the test pieces from either of these additional samples fail, the lot represented by such sample shall be deemed not to comply with this specification.

11 MECHANICAL PROPERTIES:

11.1 Tensile Test

The material when tested in accordance with IS:1608 shall show the following tensile properties:

Tensile strength : 200 N/mm², minimum
0.2 % Proof Stress : 170 N/mm², minimum
Elongation on 5.65√So or 50mm G.L. : 10 percent, minimum

11.2 Bend Test (Up to 12mm thick):

Flat sections shall withstand, when bent cold, flat wise through an angle of 90° cover a former of radius equal to twice the thickness, without showing signs of visible fracture.

12 ELECTRICAL RESISTIVITY

The electrical resistivity shall not exceed a value of 0.03135 Ω-mm²/m at 20°C, when tested to clause 9 of IS: 5082, minimum 55.0% IACS conductivity.

13 TEST CERTIFICATES

The supplier shall submit three copies of test certificates giving the following information:

- AA12329 (Rev No. 05): ALUMINIUM ALLOY RODS, BARS, TUBES, SECTIONS AND PROFILES HEAT TREATED - Gr: 63401 WP range 2
- BHEL order No.
- Supplier's reference and Name
- Batch No.
- Drawing/Pattern No.
- Consignment/Identification No.
- Results of chemical analysis, mechanical and all other tests as called for in this specification/order

14 PACKING AND MARKING

The material shall be suitably packed to prevent corrosion and damage during transit. Each package or crate shall be legibly marked with the following information.

- AA12329
- BHEL order No.
- Batch No.
- Identification Mark/No
- Weight.
- Supplier's reference and Name.

15 REFERRED STANDARDS (Latest Publications Including Amendments):

- | | | | |
|-------------|-------------|-------------|-------------|
| 1) IS: 504 | 2) IS: 1608 | 3) IS: 2678 | 4) IS: 3965 |
| 5) IS: 3908 | 6) IS: 3909 | 7) IS: 3921 | 8) IS: 5082 |

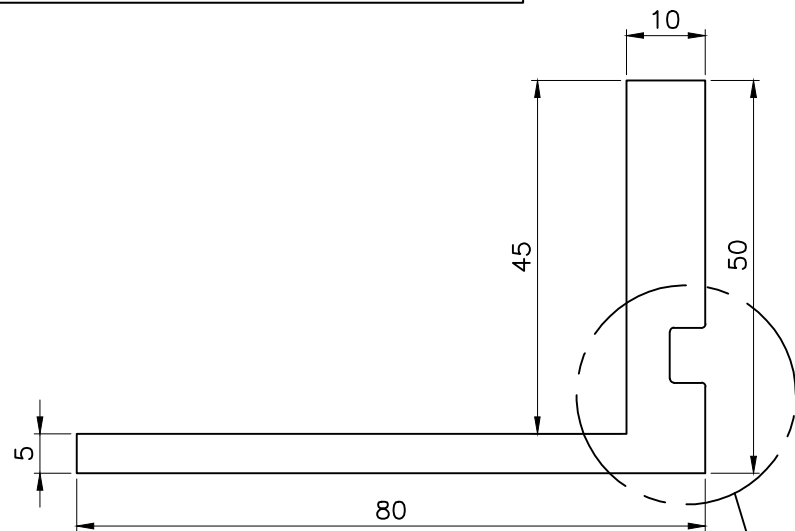
INVENTORY NO. _____ SIGN. & DATE _____ REF. DRG. NO. _____

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

First Angle Projection

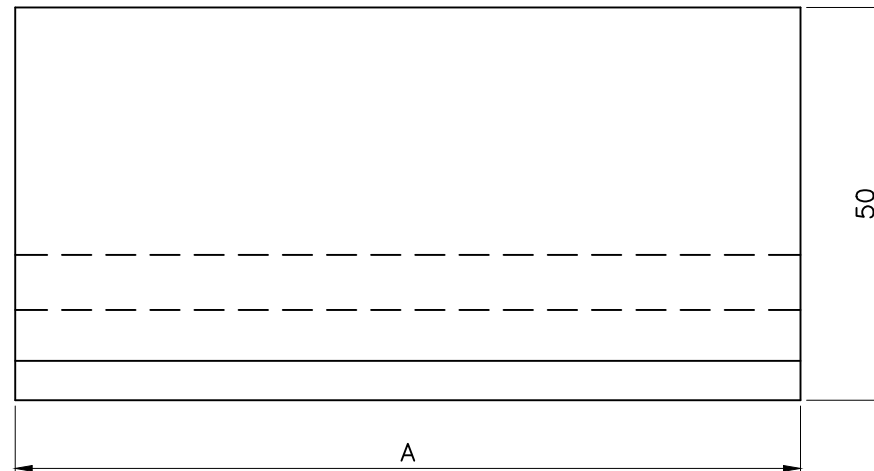
All Dimensions in 'mm'

DRAWING NO. DEV./WIN./17/01



ITEM-001

CROSS SECTION AREA =818.5 SQ.MM.



NOTE:

1. SURFACE ARE TO BE PERFECTLY FLAT AND FREE FROM DEFECTS.
2. ALL BURRS TO BE REMOVED.

WEIGHT = 2.210 PER METER

-	-	001	AL. UNEQUAL ANGLE	-	-	-	0.000
VAR 00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	IT.NO. VAR	MATL. CODE MATL. SPECN.	WT(KG) QTY.

BILL OF QUALNTITY

ADDITIONAL INFORMATION			TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
STATUS OF DRAWING _____			GENERAL									
DISTRIBUTION OF PRINTS _____												
			BHARAT HEAVY ELECTRICALS LTD. RUDRAPUR			DRN/DSGN	NAME	SIGN	DATE	NO. OF VAR		
						CKD	PIYUSH		24.08.17			
						APPD	ARVIND		24.08.17			
REV.	DATE	ALTERED — CHECKED — APPD. —	DEPT. BDE	UNTOL.DIMS.GR.	SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.		ITEM NO.	NO. OF ITEM		
—	—		CODE —	m		—	—		—	—		
Zone —			TITLE				DRAWING NO.				REV.	
			AL. UNEQUAL ANGLE				DEV./WIN./17/01				00	
							SHT. NO. 01		NO. OF SHT. 01			

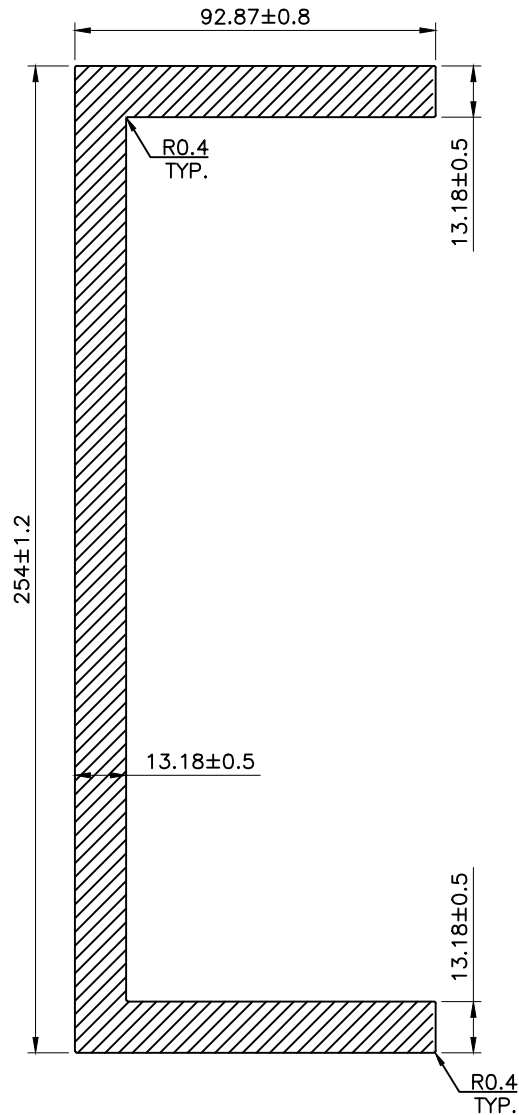
SIZE -A3

First Angle Projection

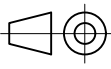
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) –1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	C		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 254x92.87x13.18TK					41002300016			00
					SHT. NO.	01	NO. OF SHT.	01

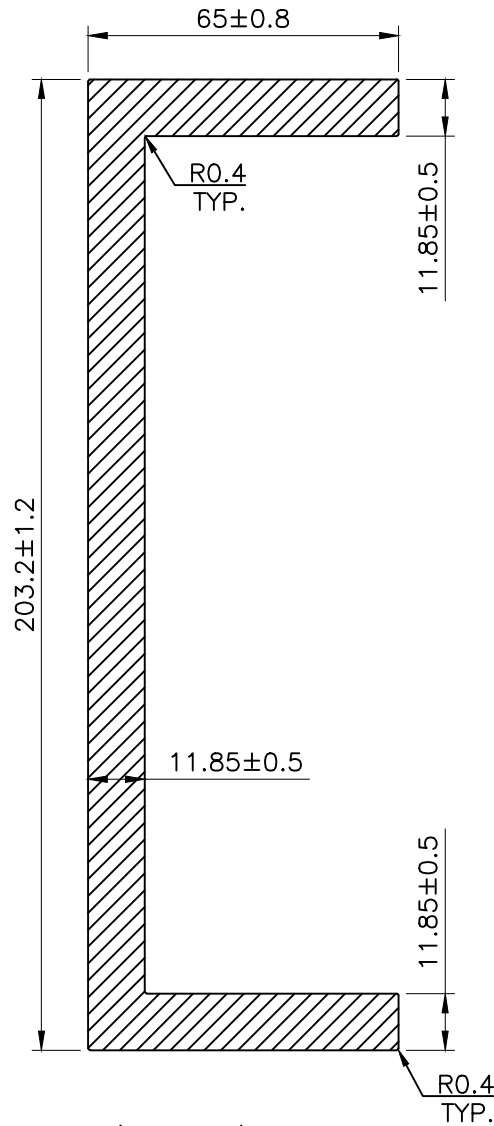
SIZE -A4

First Angle Projection

All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) – 1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.	SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.		ITEM NO.	NO. OF ITEM
CODE	C	—	—	—		—	—	
TITLE				DOCUMENT NO.				REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 203.2x65x11.85TK				41002300015				00
				SHT. NO. 01		NO. OF SHT. 01		

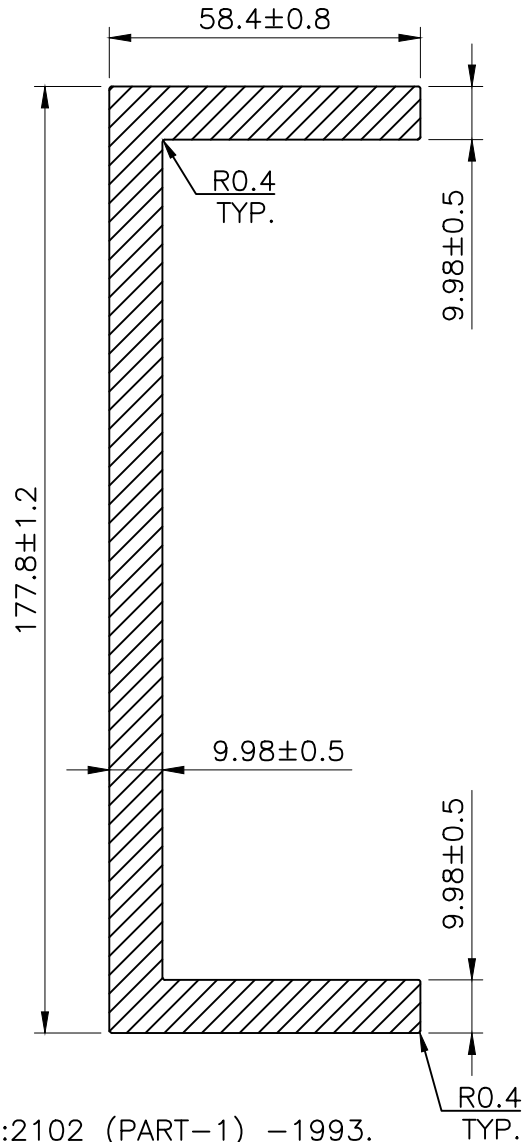
SIZE -A4

First Angle Projection

All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) – 1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.	SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.		ITEM NO.	NO. OF ITEM
CODE	C		—	—	—	—	—	
TITLE				DOCUMENT NO.				REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 177.8x58.4x9.98TK				41002300014				00
				SHT. NO. 01		NO. OF SHT. 01		

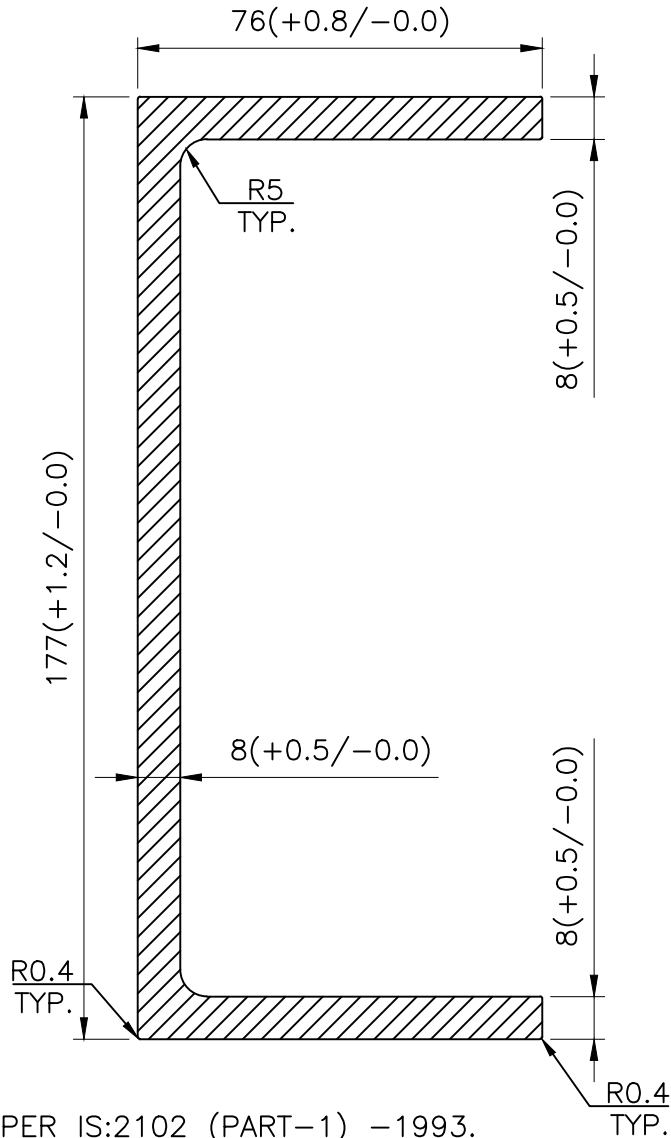
SIZE -A4

First Angle Projection

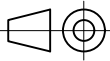
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) -1993.

CUSTOMER					PROJECT/PRODUCT				
GENERAL					GENERAL				
	BHARAT HEAVY ELECTRICALS LTD. RUDRAPUR					NAME	SIGN	DATE	NO. OF VAR
					DRN	PIYUSH		29/07/26	
					CKD	RUPESH		29/07/26	
					APPD	RUPESH		29/07/26	
DEPT. BDE	UNTOL.DIMS.GR. C		SCALE —	WEIGHT(KG) —	REF. TO ASSY. DRG. —		ITEM NO. —	NO. OF ITEM —	
CODE —									
TITLE SECTION DRAWING OF ALUMINIUM CHANNEL 177x76x8TK					DOCUMENT NO. 41002300023			REV. 00	
					SHT. NO. 01		NO. OF SHT. 01		

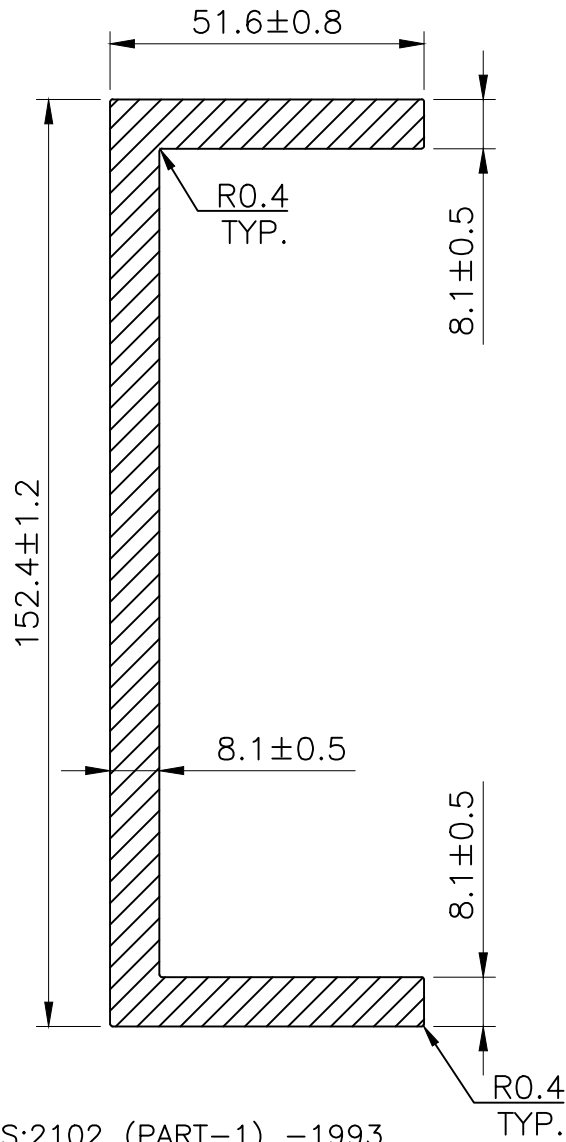
SIZE -A4

First Angle Projection

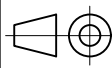
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) – 1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.	SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.		ITEM NO.	NO. OF ITEM
CODE	C		—	—		—	—	
TITLE				DOCUMENT NO.				REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 152.4x51.6x8.1TK				41002300013				00
				SHT. NO. 01		NO. OF SHT. 01		

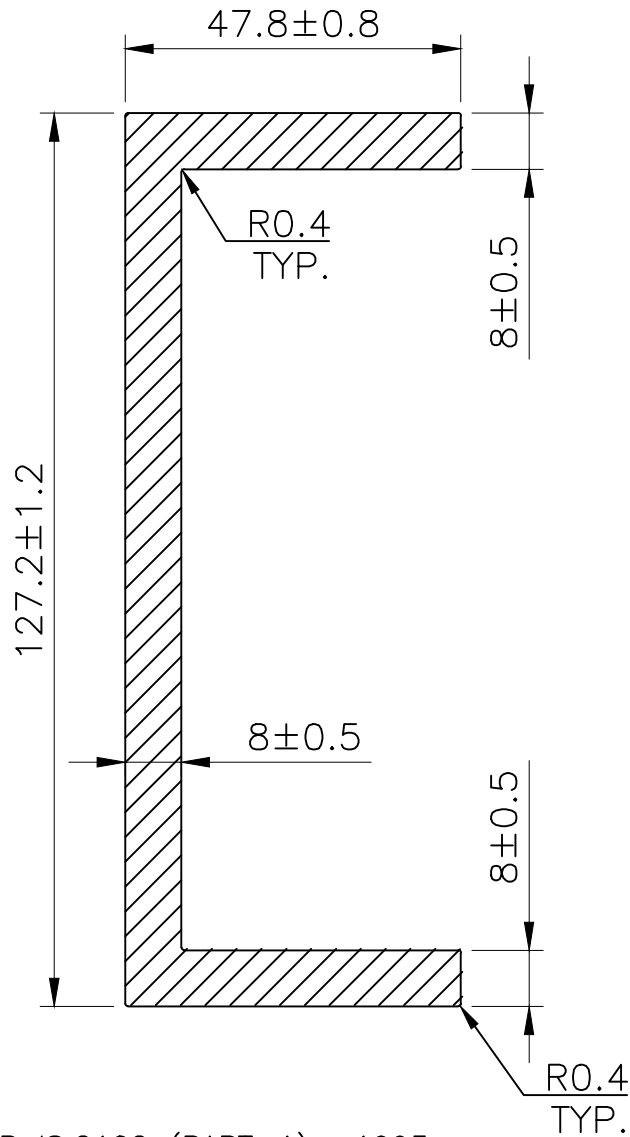
SIZE -A4

First Angle Projection

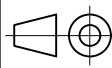
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) –1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	C		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 127.2x47.8x8.0TK					41002300012			00
					SHT. NO. 01		NO. OF SHT. 01	

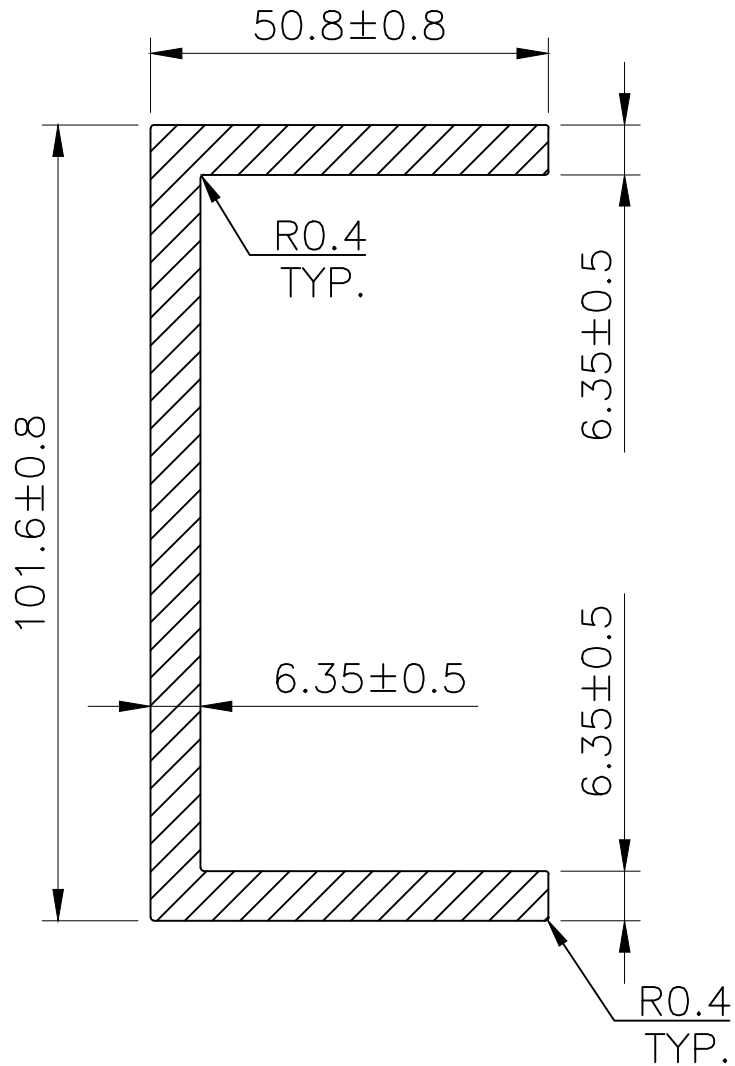
SIZE -A4

First Angle Projection

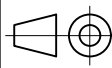
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) –1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	C		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 101.6x50.8x6.35TK					41002300011			00
					SHT. NO.	01	NO. OF SHT.	01

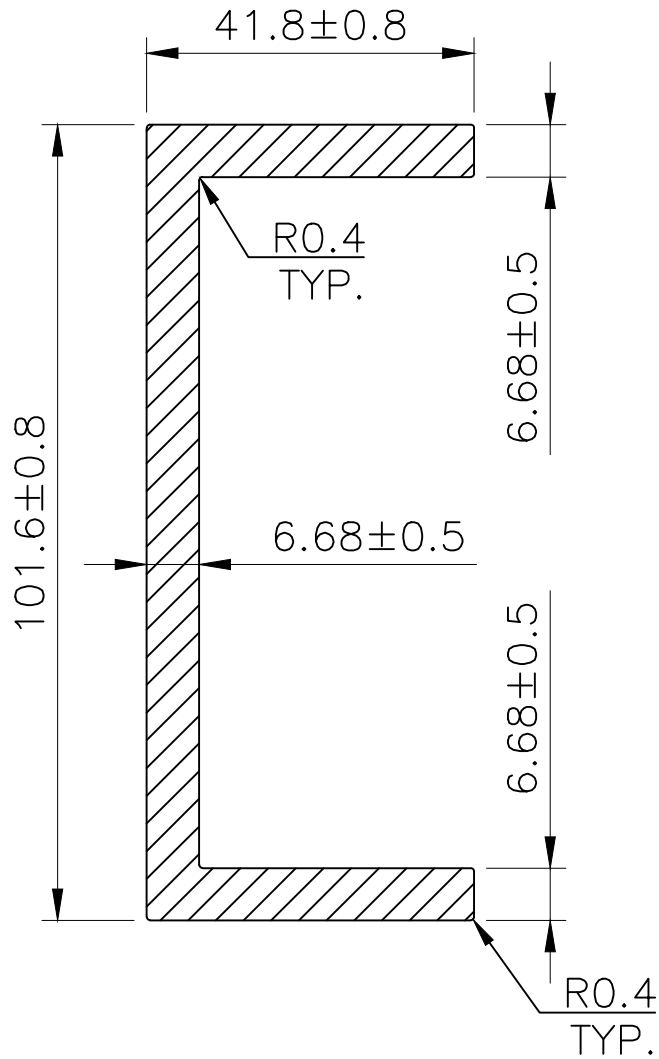
SIZE -A4

First Angle Projection

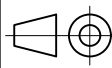
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) – 1993.

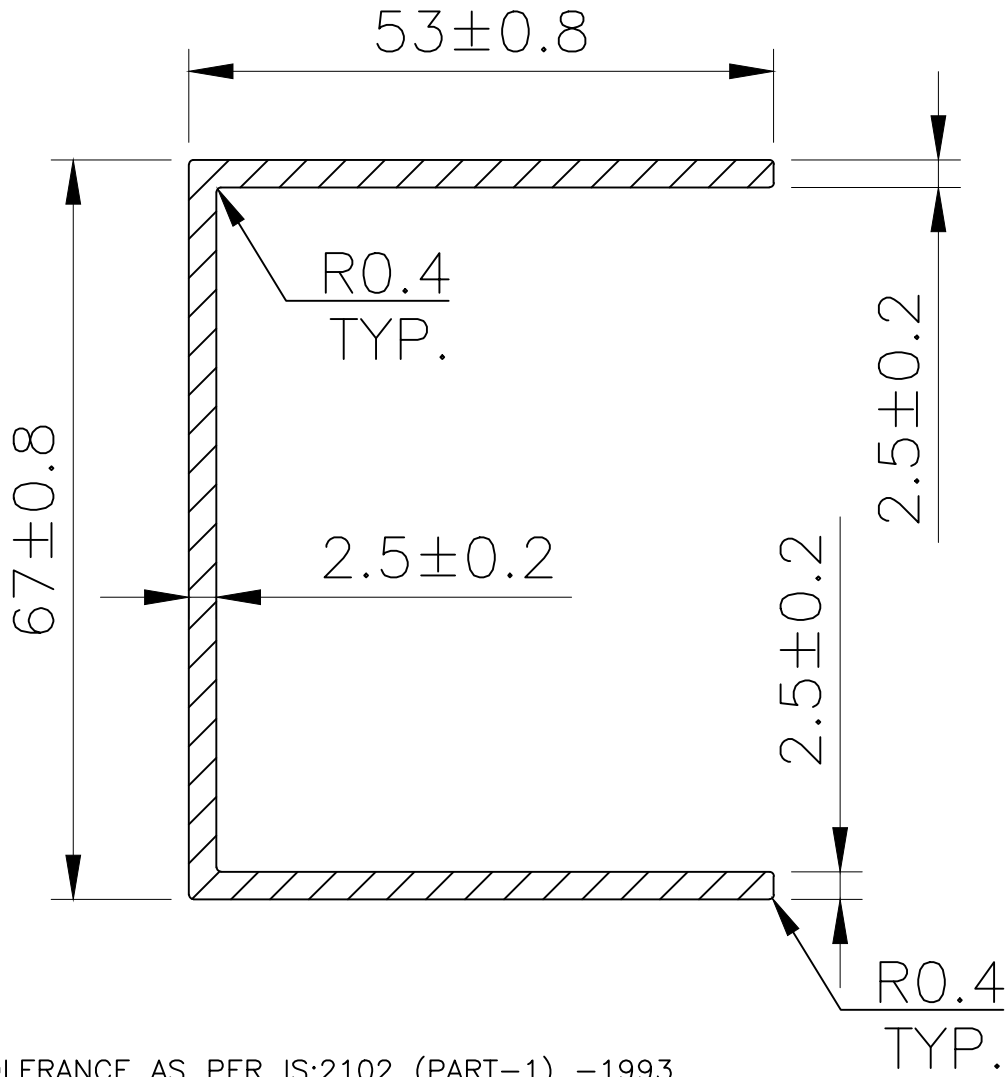
CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	C		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM CHANNEL 101.6x41.8x6.68TK					41002300010			00
					SHT. NO.	01	NO. OF SHT.	01

SIZE -A4

First Angle Projection

All Dimensions in 'mm'

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) –1993.

CUSTOMER

GENERAL

PROJECT/PRODUCT

GENERAL



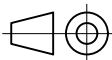
BHARAT HEAVY ELECTRICALS LTD.

RUDRAPUR

DEPT.
BDE
CODE
—

UNTOL.DIMS.GR.

C



SCALE

—

WEIGHT(KG)

—

NAME

SIGN

DATE

NO. OF
VAR

DRN

SURAJ

29/07/26

CKD

RUPESH

29/07/26

APPD

RUPESH

29/07/26

—

REF. TO ASSY. DRG.

ITEM NO.

NO. OF
ITEM

DOCUMENT NO.

REV.

41002300024

00

SHT. NO. 01

NO. OF SHT. 01

SECTION DRAWING OF
ALUMINIUM CHANNEL
67x53x2.5TK

SIZE -A4

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REF. DRG. NO.

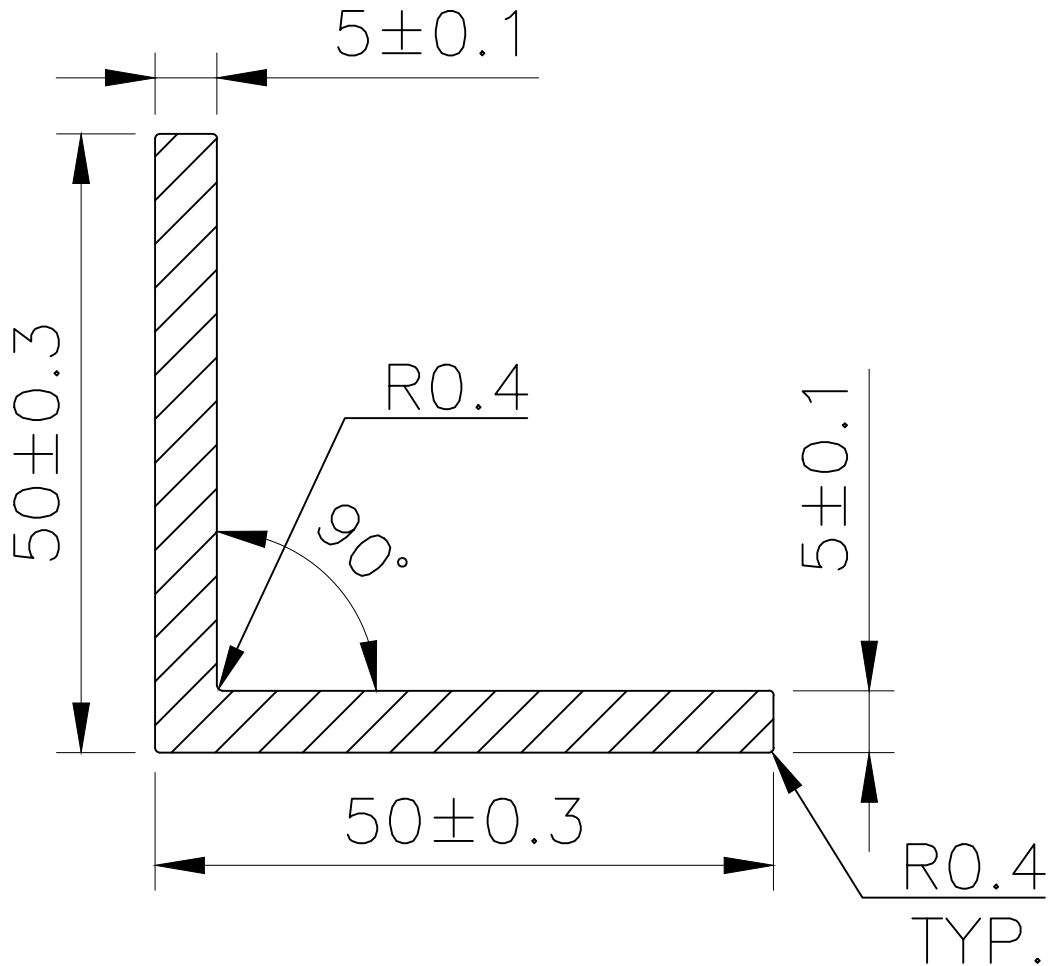
SIGN. & DATE

INVENTORY NO.

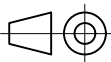
First Angle Projection

All Dimensions in 'mm'

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) – 1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	m		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM ANGLE 50x50x5TK					41002300018			00
					SHT. NO.	01	NO. OF SHT.	01

SIZE -A4

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

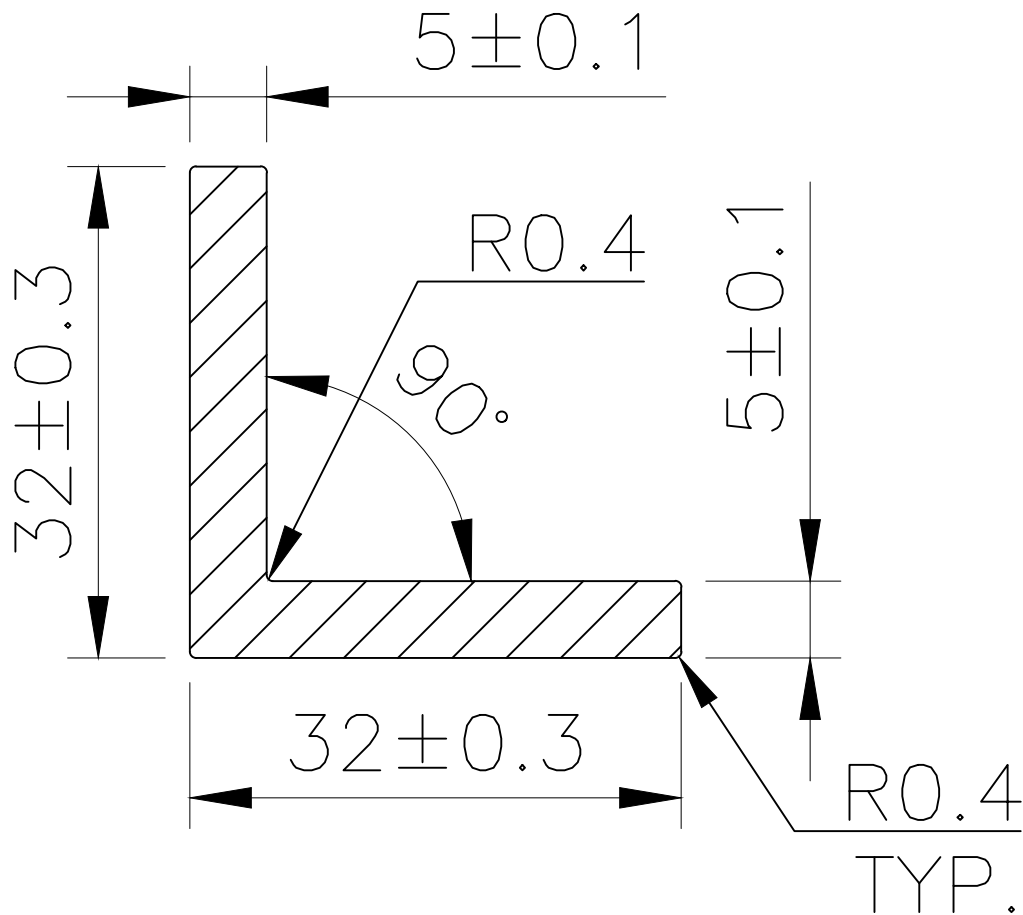
INVENTORY NO. _____ SIGN. & DATE _____ REF. DRG. NO. _____

First Angle Projection

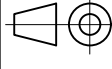
All Dimensions in 'mm'

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV.	DATE	ALTERED —	REV.	DATE	ALTERED —	REV.	DATE	ALTERED —
—	—	CHECKED —	—	—	CHECKED —	—	—	CHECKED —
		APPD. —			APPD. —			APPD. —



TOLERANCE AS PER IS:2102 (PART-1) –1993.

CUSTOMER				PROJECT/PRODUCT				
GENERAL				GENERAL				
	BHARAT HEAVY ELECTRICALS LTD.			DRN	SANJAY	SIGN	DATE	NO. OF VAR
	RUDRAPUR			CKD	RUPESH		04/10/22	
				APPD	A NARAYAN		04/10/22	
	DEPT. BDE	UNTOL.DIMS.GR.		SCALE	WEIGHT(KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
CODE	m		—	—	—	—	—	
TITLE					DOCUMENT NO.			REV.
SECTION DRAWING OF ALUMINIUM ANGLE 32x32x5TK					41002300017			00
					SHT. NO.	01	NO. OF SHT.	01

SIZE -A4

Annexure-C: Pre-qualification Requirements for
Procurement of ALUMINIUM ALLOY SHEETS AND PLATES
& ALUMINIUM EXTRUDED PRODUCTS

SL No.	Pre-qualifying Criteria	Bidder's Response															
1	a) The Bidder should be a Manufacturer of tendered material. b) Bidder has to provide Self-Undertaking on Company's Letter Head along-with their quotation/ offer. <i>"We are capable of executing the job and have in-house Manufacturing facilities (Melting Furnace, Extrusion Mill, Rolling Mill, Heat Treatment facilities etc.). Testing facilities in compliance with BHEL purchase specifications, national/ international standards & BHEL/ BHEL's customer Quality Plan."</i> c) Offer of traders/ stockists shall NOT be considered.	☐ YES ☐ Submitted															
2	SUPPLY EXPERIENCE: a) Bidders should have experience of having supplied 'Aluminium alloy Sheets & Plates/ Aluminium Extruded Products', henceforth called "Goods" to any of the customer listed below. The Customer should be any of the following in the last three years: i) PSU-State/ Central Government ii) Government – State/ Central iii) Power utility who have use of the said goods b) To qualify, the bidder should have executed minimum two orders which will be valid for all items (put together) for which bidders have quoted for goods in the last three years till the date of Part I (Techno-commercial) Bid Opening. c) Bidders to submit copies of Purchase Order & Tax Invoice/ completion certificate of same order as a documentary proof for minimum quantum as mentioned in clause 3.	☐ YES Pl tick✓ as applicable															
3	Minimum quantum: For qualifying, bidder should have supplied minimum 10% (For non- MSEs) or 7% (For MSEs) of tender quantity of item quoted. Vendor to submit details of executed PO <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Customer Name</th><th>Order No. & Date</th><th>Qty. supplied in UoM</th><th>Tax Invoice/ completion certificate & Date</th><th>Remarks, if any</th></tr> </thead> <tbody> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Customer Name	Order No. & Date	Qty. supplied in UoM	Tax Invoice/ completion certificate & Date	Remarks, if any											
Customer Name	Order No. & Date	Qty. supplied in UoM	Tax Invoice/ completion certificate & Date	Remarks, if any													
4	It is better / desired that new vendors who are not registered with BHEL, should submit duly filled " Supplier Registration Form (SRF) " along with their requested documents. The SRF is available on line on our website BHEL SUPPLIER REGISTRATION (https://supplier.bhel.in) . However, the same is not mandatory.																
5	We agree that our bid is liable to be rejected in case (a) the relevant information is not filled, (b) documentation is incomplete, (c) there are false declarations, and (d) if we do not meet the PQR.																

(Signature of the Supplier with Name, Designation & Seal)

Item Wise BoQ

Name of Work: Tender Enquiry for Framework Agreement of Aluminium alloy Plates & Sheets and Aluminium Extruded products requirements across BHEL till 31st March 2028

Name of the Bidder/ Bidding Firm / Company :

PRICE SCHEDULE														
This BOQ template must not be modified/duplicated by the bidder and the same should be updated after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only.)														
NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	TEXT	TEXT #	NUMBER #	TEXT	TEXT	TEXT	NUMBER #	NUMBER #	TEXT #	
Sl. No.	Item Description	Item Code	Quantity (Kg)	Unit of Measurement (Kg)	Thickness (mm)	Width range (mm)	Quoted Currency INR	BASIC RATE (inclusive of Packing, forwarding, freight & insurance charges etc.) In Figures To be entered by the Bidder in Rs./Kg	Offer Status	Length range (mm)	Depth range (mm)	FOR TOTAL RATE (Without Taxes) (NR/MT)	TOTAL AMOUNT (for tendered Quantity) (Without Taxes)	TOTAL AMOUNT In Words
1	2	3	4	5	6	7	12	13	14	15	16	17	18	19
RS-1	Aluminium alloy sheet as per IS 5082 or IS 737 - Gr19500 H18 / 19501 H1 / 19501 H2, Spec. no: AA12302	AA1231902019	10000	Kg	0.1 - 1.00	600-1200	INR		Not quoted	coil form	-	0.0000	0.0000	INR Zero Only
RS-2	Aluminium alloy sheet as per IS 737 - Gr31000 H12, Spec. no: AA12312	AA1231712066	335000	Kg	1.01-5.00	1000-1250	INR		Not quoted	1400-4000	-	0.0000	0.0000	INR Zero Only
RS-3	Aluminium alloy sheet as per IS 737 - Gr31000 H12, Spec. no: AA12312	AA1231712317	90000	Kg	1.01-5.00	1000-1250	INR		Not quoted	4001-4800	-	0.0000	0.0000	INR Zero Only
RS-4	Aluminium alloy sheet as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231703024	40000	Kg	1.01-5.00	1000-1250	INR		Not quoted	1400-4000	-	0.0000	0.0000	INR Zero Only
RS-5	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231803010	125000	Kg	5.01-6.35	1000-1250	INR		Not quoted	2000-4000	-	0.0000	0.0000	INR Zero Only
RS-6	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231803029	60000	Kg	6.36-10.00	2000-1250	INR		Not quoted	2500-4000	-	0.0000	0.0000	INR Zero Only
RS-7	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231803037	240000	Kg	6.36-10.00	1000-1250	INR		Not quoted	4001-5370	-	0.0000	0.0000	INR Zero Only
RS-8	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231803045	425000	Kg	10.01-20.00	200-1545	INR		Not quoted	2500-3140	-	0.0000	0.0000	INR Zero Only
RS-9	Aluminium alloy plate as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1231803053	35000	Kg	20.01-36.00	500-1076	INR		Not quoted	2000-3140	-	0.0000	0.0000	INR Zero Only
RS-10	Aluminium Alloy Channel as per IS 5082 - Gr63401 WP (Range 2), Spec. no: AA12320	AA1232729086	300000	Kg	6.35-13.18	41.8-92.87	INR		Not quoted	3500-5500	101.6-254	0.0000	0.0000	INR Zero Only
RS-11	Aluminium Alloy Flat as per IS 5082 - Gr19501 H1, Spec. no: AA12303	AA1230303014	50000	Kg	8-20	50-250	INR		Not quoted	2000-5200	-	0.0000	0.0000	INR Zero Only
RS-12	Aluminium Unequal Angle (Drg No: DEF /WTN/17 /01 REV 00 IT.NO-001) as per IS 733 - Gr60632 T6, Spec. no: AA12304	AA1232604011	10000	Kg	-	-	INR		Not quoted	5000	-	0.0000	0.0000	INR Zero Only
RS-13	Aluminium Alloy Channel as per IS 733 - Gr60632 T6, Spec. no: AA12304	AA1232704016	10000	Kg	2.5-6.35	50.8-53	INR		Not quoted	2000-6000	67-101.6	0.0000	0.0000	INR Zero Only
RS-14	Aluminium Alloy Angle as per IS 733 - Gr60632 T6, Spec. no: AA12304	AA1232504017	60000	Kg	4.78-5	32-50.8	INR		Not quoted	4000-5000	32-50.8	0.0000	0.0000	INR Zero Only
Total In Figures												0.0000	0.0000	INR Zero Only
Quoted Rate in Words														

Volume-I

GENERAL CONDITIONS OF CONTRACTS (GCC)

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE OFFICE
UNIFIED PROCUREMENT CELL (UPC)





**UNIFIED PROCUREMENT
CELL (UPC)**
PURCHASE DEPARTMENT

**GENERAL CONDITIONS OF
CONTRACT (GCC)**

GENERAL CONDITIONS OF CONTRACTS (GCC)

1. INSTRUCTIONS TO BIDDERS
2. GENERAL COMMERCIAL TERMS & CONDITIONS
3. ANNEXURES

**BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE OFFICE
UNIFIED PROCUREMENT CELL
BHEL SADAN
PLOT NO. 25, SECTOR – 16A
NOIDA – 201301 (U.P.)**

Not for Publication

For Official Use



**UNIFIED
PROCUREMENT CELL
(UPC)
PURCHASE DEPARTMENT**

**GENERAL CONDITIONS OF
CONTRACT (GCC)**

**INSTRUCTIONS TO
BIDDER**

1.1 GENERAL INSTRUCTIONS:

- 1.1.1** The General Conditions of Contract form part of the Tender specifications. For this tender, bidders shall use electronic Signature Viz. Digital Signature Certificate while uploading the tender documents on the e-procurement portal. The information furnished shall be complete by itself. The tenderer is required to furnish all the details and other documents as required in the following pages.
- 1.1.2** Tenderers are advised to study all the tender documents carefully. Any submission of tender by the tenderer shall be deemed to have been done only after careful study and examination of the tender documents and with the full understanding of the implications thereof. The specifications and terms and conditions shall be deemed to have been accepted unless otherwise specifically commented upon in the deviation sheets by the tenderer in his offer. Non-compliance with any of the requirements and instructions of the Tender Enquiry may result in the rejection of the tender.
- 1.1.3** Price bids of only those bidders will be opened who will qualify for the subject job on the basis of evaluation of Techno-commercial bids / Pre – Qualification criteria and as considered suitable by BHEL. BHEL shall have sole discretion to adopt its own method for evaluation of Techno-commercial bids/ Pre - Qualification Criteria.
- 1.1.4** No revision of price will be entertained after tenders are opened, unless mentioned in our enquiry/ asked so by BHEL.
- 1.1.5** BHEL reserves the right to split, accept or reject any or all tenders without assigning any reason what so ever.
- 1.1.6** BHEL reserves the right to reduce/cancel the tendered item and/or quantity, while awarding the order, without assigning any reason what so ever.
- 1.1.7** In case supplier fails to execute the Purchase Order (PO) as per terms and conditions of PO, BHEL shall have the right to arrange/procure the material from alternate sources as deemed appropriate by BHEL in line with Clause no. 2.13.2 of GCC.

1.2 PROCEDURE FOR SUBMISSION & OPENING OF TENDERS:

- 1.2.1** The tenderers must submit their tenders to Officer inviting tender as per instructions in the NIT. E-Tenders shall be submitted through E-Procurement portal as per instruction in NIT. Tenderers to upload offers well in advance in order to avoid last minute congestion in e-procurement website. However, after submission of the tender, the tenderer can re-submit revised tender but before due date and time of submission of tender as notified.
- 1.2.2** PART-I (techno-commercial bid) shall be opened on the due date and time as specified in the NIT. Tenderers or their authorized representatives may witness the event online through BHEL E-Procurement site.
- NOTE:** In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day.
- 1.2.3** Tenderers whose bids are found techno commercially qualified shall be informed the date and time of opening of the Price Bid through system generated email from BHEL E-Procurement system. Tenderers or their authorized representatives may witness the event online through BHEL E-Procurement site (<https://eprocurebhel.co.in>).
- 1.2.4** No correspondence shall be entertained from the tenderers after the opening of Part-II (Price bid) of the tender.
- 1.2.5** Purchaser may negotiate the tender, if the quoted rates/terms are found to be unreasonable or in the unacceptable range.



**UNIFIED
PROCUREMENT CELL
(UPC)
PURCHASE DEPARTMENT**

**GENERAL CONDITIONS OF
CONTRACT (GCC)**

**INSTRUCTIONS TO
BIDDER**

1.3 CLARIFICATIONS REQUIRED BY BIDDERS:

Technical and Commercial clarifications required, if any, before submission of tender, should be addressed (on or before the date as mentioned in NIT to the official inviting the tenders.

1.4 DEVIATIONS – LISTING:

Tenders shall be submitted strictly in accordance with the requirements of tender documents. Deviations (Technical and Commercial), if any, shall be listed out separately. Technical deviations and Commercial deviations shall be furnished in separate sheets under headings “**TECHNICAL DEVIATIONS**” and “**COMMERCIAL DEVIATIONS**” respectively, along with reasons for taking such deviations. Deviations mentioned elsewhere but not included in the above sheet as above shall not be accepted. Deviations (if any) may be addressed before finalization of bid submission itself.

1.5 METRIC SYSTEM:

Suppliers are requested to give metric measurements while quoting.

1.6 ETHICS IN BUSINESS DEALINGS/ SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS:

BHEL reserves the right to take action against Contractors who either fail to perform or Tenderers/Contractor who indulge in malpractices, by suspending business dealings with them in line with BHEL guidelines issued from time to time.

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.

If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860(Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage:

http://www.bhel.com/vender_registration/vender.php

The abridged version of extant ‘Guidelines for suspension of business dealings with suppliers/ vendors’ is available on www.bhel.com on “supplier registration page” i.e., <https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors> Bidders should get themselves acquainted with these guidelines.

Fraud Prevention Policy: Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.



1.7 INTEGRITY COMMITMENT:

The offers of the bidders who are on the debarred list and also the offer of the bidders, who engage the services of the debarred firms, shall be rejected. The list of debarred firms is available on BHEL web site www.bhel.com on <supplier registration page i.e., <<https://www.bhel.com/list-debarred-firms>>.

1.7.1 Integrity commitment, performance of the contract and punitive action thereof:

1.7.1.1 Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender Process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.7.1.2 Commitment by Bidder/ Supplier:

1.7.1.2.1 The bidder/ supplier commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.7.1.2.2 The bidder/ supplier will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.7.1.2.3 The bidder/ supplier will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ vendor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the prices or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ vendor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

1.8 INTEGRITY PACT (IP):

Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer) along with techno-commercial bid, if applicable (as given at Clause no. 1 (xi), Salient Features of NIT). This pact shall be considered as a preliminary qualification for further participation. The names and other details of Independent External Monitor (IEM) for the subject tender is as given below:

- a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Supplier / Vendor s are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

Sl. No.	IEM	Email
1.	Dr. Sarat Kumar Acharya (Ex-CMD, NLC)	iem1@bhel.in
2.	Shri Rajagopalan Mukundan (IRPS (Retd.))	iem2@bhel.in
3.	Shri Madan Lal Meena IAS (Retd.)	iem3@bhel.in

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	INSTRUCTIONS TO BIDDER
--	---	---	-----------------------------------

- b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are as per SCC of tender.

(Please submit the Integrity Pact Format as per Annexure – II).

1.9 MICRO & SMALL SCALE ENTERPRISES (MSE):

- 1.9.1** Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their Techno-commercial offer;

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ST & Women)
Micro			
Small			

NOTE: - *If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.*

- 1.9.2** MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration Certificate. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. Documents submitted by the bidder may be verified by BHEL for rendering the applicable benefits.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	INSTRUCTIONS TO BIDDER
--	---	---	-----------------------------------

For this procurement, purchase preference to MSE shall be in line with Office Order No. F. No. DPE/3(3)/10-Fin dated 29.05.2023 forwarded by Department of Public Enterprises against Department of Expenditure O M No. F.1/4/2021-PPD dated 18.05.2023. In case of subsequent orders issued by the nodal ministry, changing the definition of MSE, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

1.10 LANGUAGE & CORRECTIONS:

- a) The Bid shall be in English language. All correspondence and documents relating to the bid exchanged between the bidder and the purchaser shall also be in ENGLISH language. However, any technical document/ literature etc. printed in a language other than English shall be accompanied by its true English translation duly signed for its correctness. Any document submitted with the bid but not in English language shall not be treated as part of the bid document. The responsibility for the correctness of the translations if any solely rests on the bidder and purchaser shall not be responsible for any loss/likely loss arising out of error in translation whatsoever. In such cases, for the purpose of interpretation of the bid, the English translation shall prevail.
- b) Tenderer shall quote the rates in English language and Indo-Arabic numerals only. These rates shall be entered in figures as well as in words. For the purpose of tender, metric system of units shall be used.
- c) All entries in the tender shall either be typed or written legibly in ink. Cancellations, insertions, erasement, over-writing (if unavoidable) shall be authenticated with signature and seal by the bidder.
- d) Tenderer's offer, remarks and deviations shall be with reference to sections and clause numbers given in the tender documents.

1.12 PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA):

For this procurement, the local content to categorize a supplier/Vendor as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

1.12.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017

- I. 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 the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means:-
 - a) An entity incorporated established or registered in such a country; or
 - b) A subsidiary of an entity incorporated established or registered in such a country; or
 - c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d) An entity whose beneficial owner is situated in such a country; or

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	INSTRUCTIONS TO BIDDER
--	---	---	-----------------------------------

- e) An Indian (or other) agent of such an entity; or
- f) A natural person who is a citizen of such a country; or
- g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

IV. The beneficial owner for the purpose of (III) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.
 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.**

Note:

- i. The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-4.
- ii. Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids.

1.13 CONFLICT OF INTEREST:

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:

- 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,

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	INSTRUCTIONS TO BIDDER
--	---	---	-----------------------------------

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:
 - i. The principal manufacturer directly or through one Indian agent on his behalf, and
 - ii. 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."



2.1 DEFINITION OF TERMS:

- 2.1.1 PURCHASER / BUYER** shall mean Bharat Heavy Electricals Limited, a company registered under Indian Companies Act 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI – 110049, or its UPC (Unified Procurement Cell) -Corp. Office (inviting tenders) or its Authorized Officers or its Site Engineers or other employees authorized to deal with any matters with which these persons are concerned on its behalf.
- 2.1.2 TENDERER/ BIDDER** shall mean the Firm/ Company/ Organisation who quotes against the Tender Enquiry issued by Purchaser.
- 2.1.3 SUPPLIER/ VENDOR / CONTRACTOR** shall mean the successful bidder with whom the Order/ Contract is made.
- 2.1.4 GCC** means General Conditions of Contract.
- 2.1.5 GOODS/ STORE / SUPPLIES** means all the items, materials, equipment and/or machinery, which the supplier is required to supply to the purchaser in terms of a contract.
- 2.1.6 CONSIGNEE** means the individual or body to whom the contracted goods are required to be delivered as per the terms and conditions incorporated in a contract.
- 2.1.7 DAY** means calendar day of the Gregorian calendar.
- 2.1.8 MONTH** means calendar month of the Gregorian calendar.

2.2 PRICES:

Prices shall be for the entire scope of supply / services in line with all instructions, specifications, terms & conditions specified in the tender documents and subsequent clarifications/ confirmations till completion of contract.

2.2 INSURANCE:

- 2.2.1** Transit insurance is under Vendor's Scope, the Vendor will insure at his cost the goods for all transit risks.

2.3 LIQUIDATED DAMAGES: Refer NIT.

2.4 TERMINATION:

- 2.4.1** The Purchaser, without prejudice to any other rights or remedies it may possess, may terminate the Contract in the following circumstances:

- a) If the Supplier / Vendor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Supplier / Vendor is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Supplier / Vendor being an individual or if a firm on a partnership thereof, is adjudged insolvent or has a receiving order for administration of his estate made against him or takes any proceeding for composition under any Insolvency Act for the time being in force or if the Supplier / Vendor takes or suffers any other analogous action in consequence of debt.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

- b) If the Supplier / Vendor assigns or transfers the Contract or any right or interest therein in violation of the provision of Clause 17 (Assignment).
- c) If the Supplier / Vendor, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this Sub-Clause:

"Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.

- d) If the Supplier / Vendor has abandoned or repudiated the Contract without assigning any reason.
- e) If the Supplier / Vendor has without valid reason failed to commence work on the contract promptly or has suspended the progress of Contract performance for more than 07 (seven) days after receiving a written instruction from the Purchaser to proceed.
- f) If the Supplier / Vendor persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause.
- g) If the Supplier / Vendor refuses or is unable to provide sufficient goods or materials or any instalment thereof in the manner specified and within the Time specified in the contract.

2.4.2 Purchaser shall have the right to cancel Order/ Contract, wholly or in part, in case they are constrained to do so on account of any decline, diminution, curtailment or stoppage of their business. In such eventuality, the Supplier / Vendor shall make compensation claim in writing upon the purchaser. Thereafter, both the parties shall arrive at mutually acceptable compensation to be accorded to the Supplier / Vendor. The mutually acceptable compensation shall be final and binding upon both the parties.

2.4.3 In case either the Supplier / Vendor himself or any of his representative or agent is found to have been an employee of the Purchaser or has within a period of two years of his retirement accepted the employment of the Supplier / Vendor either as a Supplier / Vendor or as an employee without having obtained prior permission of Purchaser, the Purchaser shall have the right to cancel order/ contract under the provision of Breach of Contract (Clause no. 2.26).

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

2.5 FORCE MAJEURE:

- 2.5.1** "Force Majeure" shall mean circumstance which is:
- beyond control of either of the parties to contract,
 - either of the parties could not reasonably have provided against the event before entering into the contract,
 - having arisen, either of the parties could not reasonably have avoided or overcome, and
 - is not substantially attributable to either of the parties
- And
- Prevents the performance of the contract, such circumstances include but shall not be limited to:
- War, hostilities, invasion, act of foreign enemies.
 - Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war.
 - Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors.
 - Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors.
 - Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity.
 - Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc.
 - Epidemic, pandemic etc.
- 2.5.2** The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.
- 2.5.3** If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.
- 2.5.4** The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.
- 2.5.5** Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not
- Constitute a default or breach of the Contract.
 - Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

- 2.5.6** BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.

2.6 SETTLEMENT OF DISPUTES:

If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not.

If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per Clause 21.1

2.7 ARBITRATION & CONCILIATION:

2.7.1 ARBITRATION:

2.7.1.1 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 21.1 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 Arbitral Institution (to be identified by the contract issuing agency (eg. "IIAC" (India International Arbitration Centre) for Delhi/NCR offices) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.

2.7.1.2 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 arbitral institution. The Notice shall be addressed to the Head of the Region, Power Sector/ 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.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

- 2.7.1.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institutions..... (to be identified by the contract issuing agency) 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.
- 2.7.1.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.
- 2.7.1.5 The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be (to be identified by the contract issuing agency)(i.e. New Delhi for Delhi/NCR based Units).
- 2.7.1.6 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.....(i. e. New Delhi for Delhi/NCR based Units).
- 2.7.1.7 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.
- 2.7.1.8 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.
- 2.7.1.9 In case the disputed amount (Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within 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.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

2.7.1.10 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 2.23.1.9. 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.

2.7.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

2.7.2.1 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.

2.7.3 CONCILIATION:

Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “Dispute”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. 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 for conduct of conciliation proceedings” (as available in www.bhel.com)).

Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding “Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause “Settlement of Disputes” shall be modified accordingly as and when the Mediation Act 2023 gets notified.

2.8 GOVERNING LAWS:

The contract shall be governed by the Law for the time being in force in the Republic of India.

2.9 JURISDICTION OF COURT:

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

This contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause 2.23.1 of this contract, the Civil Court having original Civil Jurisdiction (to be decided by the Unit e.g. Delhi for PSNR, Kolkata for PSER, Nagpur for PSWR, Chennai for PSSR etc.,) shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.

2.10 BREACH OF CONTRACT, REMEDIES AND TERMINATION:

2.13.1 The following shall amount to breach of contract:

- i. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.
- ii. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.
- iii. The Supplier/Vendor delivers equipment/ material not of the contracted quality.
- iv. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.
- v. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.
- vi. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.
- viii. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.
- ix. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.
- x. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.

Note- Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.

In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.

2.13.2 Remedies in case of Breach of Contract:

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

i) Wherein the period as stipulated in the notice issued under clause 2.26.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of “Breach of Contract” without any further notice to contractor.

ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.

iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:

iv) In case the amount recovered under sub clause above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.

v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:

a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.

b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.

vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.

vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.

viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.

Note:

1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting Supplier/Vendor shall mean and include:

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.

b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.

.....

2.14 –SET OFF CLAUSES

Notwithstanding anything contained herein, the payment shall be subject to the deduction of any amount for which the supplier is liable directly or indirectly under this contract or any other contract of the supplier or any other supplier's contract where the proprietor/any of the partners /directors of the present supplier is/are proprietor/director/s /partner/s , in respect of which BHEL is a Contractee"

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

ANNEXURE - I
OFFER SUBMISSION AS PER NIT (To be typed and submitted in the Letter Head of the Company/Firm of Bidder)
Offer Reference No: Date:
To,
_____ (Write Name and Designation of Officer of BHEL inviting the Tender); Bharat Heavy Electricals Limited, Unified Procurement Cell (UPC), BHEL SADAN, Plot No. 25, Sector-16A, Noida, U.P.-201301
Dear Sir,
Sub: Submission of Offer against NIT ref:
Having examined the tender documents against your tender Enquiry No. _____ dated _____ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with _____ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us and as per the indicated delivery schedule.
Authorised Representative of Bidder Signature: Name: Address:
Place: Date:



ANNEXURE – II

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

(hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Bharatiya Nyaya Sanhita (BNS) 2023 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption.–The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Bharatiya Nyaya Sanhita (BNS) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process , terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above , the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee , whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non- binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Bharatiya Nyaya Sanhita (BNS)/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.

10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract.

For & On behalf of the Principal

(Office Seal)

For & On behalf of the Bidder/ Contractor

(Office Seal)

Place _____

Date _____

Witness: _____

(Name & Address) _____

Witness: _____

(Name & Address) _____

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

ANNEXURE – III

DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND SUBSEQUENT ORDER(S)

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

_____ (Write Name and Designation of Officer of BHEL inviting the Tender);
Bharat Heavy Electricals Limited, Unified Procurement Cell (UPC), BHEL SADAN, Plot No. 25, Sector-16A, Noida,
U.P.-201301

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India),
Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref : 1) NIT/Tender Specification No: _____,
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (specify the name of the organization here) has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

ANNEXURE – IV

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017 (To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

To,

_____ (Write Name and Designation of Officer of BHEL inviting the Tender);
Bharat Heavy Electricals Limited,
Unified Procurement Cell (UPC), BHEL SADAN, Plot No. 25, Sector-16A, Noida, U.P.-201301

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref: 1) NIT/Tender Specification No:
2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that _____ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines

	UNIFIED PROCUREMENT CELL (UPC) PURCHASE DEPARTMENT	GENERAL CONDITIONS OF CONTRACT (GCC)	ANNEXURES
--	---	---	------------------

Annexure-V

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), BHEL Supplier Code _____ acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL all documents and property of BHEL including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL business, or in any way obtained by me during the course of contract.

I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL and are reasonable given the nature of the business carried on by the BHEL I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this _____ day of _____, 2026.
(Place) (Date) (Month)

Name:

Company:

Signature & Seal:

GENERAL - QUALITY ASSURANCE PLAN (QAP)

QP NO: BHE/ RUD/ QLY/ GQP/ AL-
ALY/ Rev 01

ALUMINIUM ALLOY – SHEET/ PLATE/ BAR/ TUBE/ EXTRUDED PROFILE

DATE: 16.07.2026

Sl. No.	Characteristics	Category	Method of Check	Extent of Check	Acceptance Norms	Format of Records	AGENCY			Remarks / Records
							P	R	W	
1	Visual Check for Surface Finish	Major	Visual	100 %	As per latest IS / BS / IEC / BHEL Corporate Standard called in PO / BHEL Drawing	IR	2	-	1	
2	Dimensions	Major	Measure- ment	10 % of offered lot		IR	2	-	1	
3	Chemical composition	Major	Review of TC	1 Sample / Offered lot *		TC	2	1	-	* Vendor has to submit manufacturer's TC along with valid calibration certificate of test facility for the offered lot of material if sourced from indigenous manufacturer.
4	Electrical Conductivity (if applicable)	Major				TC	2	1	-	
5	Tensile Strength	Major				TC	2	1	-	
6	Yield Strength / Proof Stress	Major				TC	2	1	-	
7	Elongation	Major				TC	2	1	-	In addition to manufacturer's TC, the vendor has to submit TC from NABL laboratory for the offered lot of material if sourced through import.
8	Bend test (if applicable)	Major				TC	2	1	-	
9	Hardness (if applicable)	Major				TC	2	1	-	
NOTE 1 – SUPPLIER HAS TO CLEARLY LABEL THE MANUFACTURER AS WELL AS ALLOY DESIGNATION IDENTIFICATION ON THE SUPPLY										

NOTE 1 – SUPPLIER HAS TO CLEARLY LABEL THE MANUFACTURER AS WELL AS ALLOY DESIGNATION IDENTIFICATION ON THE SUPPLY

LEGEND:

[P] – PERFORMED BY; [R] – REVIEWED BY; [W] – WITNESSED BY

[IS] – INDIAN STANDARD; [BS] – BRITISH STANDARD, [IEC] – INTERNATIONAL ELECTRO TECHNICAL COMMISSION; [DWG] – DRAWING; [PO] – PURCHASE ORDER;

INSPECTION AGENCY - [1] – BHEL / BHEL NOMINATION AGENCY; [2] – PERFORMER/ MANUFACTURER;
[IR] – INSPECTION REPORT; [TC] – TEST CERTIFICATE


16/7/26
PREPARED BY


16/7/2026
APPROVED BY