

निविदा / Enquiry



भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Limited
पारेषण व्यापार समूह / Transmission Business Group
सामग्री प्रबंधन / Materials Management

Project : NHPC NIMOO BAZGO

Enquiry No	Enquiry Dt	Rev No	Rev Dt	PI No	Enquiry Type	Inspection by	Due Dt	Commercial Comments	Technical Comments	Signing Authority
09Q2000101	14-Aug-19	0		09I2000047	Package		27-Aug-19	BHEL NIT TERMS AND CONDITION ARE APPLICABLE.	TECHNICAL SPECIFICATION ARE APPLICABLE.	BHAGCHAND KUMAWAT

Document Enclosed

SN	Equipment	HSN Code	Phy Unit	Qty	Plan Dt	Comments
1	CLAMPS & CONNECTORS PG CLAMP FOR SHIELD WIRES OF DIA 10.98MM	0	NO	7.0000		REFER ENCLOSED APPROVED DRG. NO. DEW-PG-11 R0
2	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CB CONNECTOR SUITABLE FOR SINGLE ZEBRA	0	NO	4.0000		REFER ENCLOSED APPROVED DRG. NO. NIM-PYD 03 GA-112 R0
3	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CT CONNECTOR SUITABLE FOR SINGLE ZEBRA	0	NO	4.0000		REFER ENCLOSED APPROVED DRG. NO. DEW-ST-3028 R1
4	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A ST BUSHING CONNECTOR SUITABLE FOR SINGLE ZEBRA	0	NO	3.0000		REFER ENCLOSED APPROVE DRG. NO. DEW-RT-3028C R1
5	SUPPLY- CLAMPS & CONNECTORS : 132KV BPI CONNECTOR SUITABLE FOR SINGLE ZEBRA	0	NO	4.0000		REFER ENCLOSED APPROVED DRG. NO. DEW-BPI-28 R1
6	SUPPLY- CLAMPS & CONNECTORS : 132KV BPI CONNECTOR SUITABLE FOR TWIN ZEBRA	0	NO	6.0000		REFER ENCLOSED APPROVED DRG. NO. DEW-BPI-2-28 R0
7	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CT CONNECTOR SUITABLE FOR SINGLE ZEBRA (THROUGH TYPE)	0	NO	5.0000		REFER ENCLOSED APPROVED DRG. NO. DEW-ST-3028A R1
8	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR TWIN ZEBRA TO TWIN CONDUCTOR AS PER TS	0	NO	3.0000		TEE CONNECTOR FOR TWIN ZEBRA TO TWIN ZEBRA AS PER ENCLOSED DRG. NO. DEW-RT-2828 R1
9	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR TWIN ZEBRA TO SINGLE CONDUCTOR AS PER TS	0	NO	10.0000		TEE CONNECTOR FOR TWIN ZEBRA TO SINGLE ZEBRA AS PER ENCLOSED DRG. NO. DEW-TT-2828 R0
10	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR SINGLE ZEBRA TO SINGLE CONDUCTOR AS PER TS	0	NO	1.0000		TEE CONNECTOR FOR SINGLE ZEBRA TO SINGLE ZEBRA AS PER ENCLOSED DRG. NO. DEW-RT-2828 R1

(1/3)

21-4
14.08.2019
प्रबंधक (सि. ए. ए. ए.)
पारेषण
Rajeev Kumar Roy
Manager (T.B.M.)
Transmission Business Group
Bharat Heavy Electricals Limited
New Delhi

SN	Equipment	HSN Code	Phy Unit	Qty	Plan Dt	Comments
11	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR CONDUCTOR AS PER TS TO CONDUCTOR AS PER TS	0	NO	6.0000		TEE CONNECTOR FOR SINGLE ZEBRA TO SINGLE PANTHER AS PER ENCLOSED DRG. NO. DEW-RT-2821 R1

You are requested to submit your most competitive offer so as to reach us positively by the tender opening date & time. THE TENDERS NOT RECEIVED WITHIN SCHEDULED DATE AND TIME ARE LIKELY TO BE IGNORED. BHEL shall not be responsible for any postal delay.

In your own interest, you are advised to carefully read "the instructions to bidders". Incomplete bids and/or bids not complying with tender conditions shall be treated as non-responsive and are likely to be ignored.

In case Tender Documents are not received within 7 days of this E-mail message, intimate BHEL accordingly. If no intimation is received, it will be considered that you have received tender enquiry and delay in submission offer due to late receipt of tender documents will not be entertained.

You are requested to submit your most competitive offer as stated in Terms & conditions.

BHEL reserves the right to opt for reverse auction for obtaining best prices.

Offers Through E-MAIL / FAX / E-Procurement Portal:

WHOSOEVER DESIRES TO SEND OFFERS ON THEIR OWN RISK (COMPLETE IN ALL RESPECTS) VIA E-MAIL or FAX HAVE TO SEND THE OFFERS TO THE COMMON E-MAIL ADDRESS tenderbox@bhel.in or 0120-6748581 FAX or bhel.abc.procure.com as instructed.

THE RECEIVED EMAIL OFFERS WILL BE PRINTED BY PURCHASE COORDINATOR AND PUT THEM INTO COVERS AS PER CONVENTIONAL METHOD FOR TENDER OPENING I.E., TECHNO COMMERCIAL & PRICE OFFER SHALL BE PUT INTO TWO SEPARATE COVERS AND BOTH THE COVERS ARE KEPT IN THIRD COVER DULY SUPERSCRIBING ENQY. NO. AND DUE DATE.

OFFERS SENT TO ANY OTHER E-MAIL ID or FAX NO AND INCOMPLETE OFFERS SHALL NOT BE CONSIDERED FOR EVALUATION PURPOSE.

It is suggested that the bidders are advised to send the files with 'password protection'.

The venders who has sent offers with password, the passwords are to be forwarded to another email id: tenderbox@bhel.in

Please acknowledge the receipt of tender enquiry and fax back this letter by ticking the appropriate item below.

भारत हेवी इलेक्ट्रिकल्स लिमिटेड के लिए / for BHARAT HEAVY ELECTRICALS LTD

We acknowledge the receipt of tender.

- The offer against subject enquiry shall be submitted by the scheduled date and time.
- We regret to quote. The item in reference is out of our manufacturing range.
- We regret because of our prior commitments.
- Any other reason.

To
A K Chowdhary
Sr Dy General Manager
BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP
TOWER-A, 5th Floor,
Advant Navis IT Business Park,
Plot No-7, Sector-142, Expressway Noida
Noida-201305
Distt. Gautam BudhNagar, U.P

हस्ताक्षर और निविदाकार की सील / Signature and Seal of Tenderer

Ph: 0120-6748129
Fax: 0120-6748581

(2/2)

21-7
14.08.19

BRIDGE
5th Floor
Plot No. 142, Expressway, P.O. 201302, 01-19

SPECIAL TERMS & CONDITIONS
FOR CLAMPS & CONNECTORS FOR NHPC NIMO-BAZGO PROJECT
Enquiry No:, Dated.....

1. In case any discrepancy between the requirements mentioned under special terms & conditions and general terms & conditions, special terms and conditions shall prevail.
2. For any technical clarification, kindly contact **Mr. Akhilesh Kumar, Dy Mgr (TBEM) / Mr. Vivek Kapil, DGM (TBEM)**
 BHEL, Transmission Business Group
 Tower-A, 5th Floor, Advant Navis IT Business Park
 Plot-7, Sector-142, Expressway Noida, Noida-201305, UP, India
 Phone: +91 (0) 0120- 6748528/8517
 Fax: +91 (0) 0120 – 6748580.
 e-mail : akhilesh/vivekk@bhel.in
3. For any commercial clarification, kindly contact **Rajeev Kumar Roy, Manager (TBMM);**
 BHEL, Transmission Business Group
 Tower-A, 5th Floor, Advant Navis IT Business Park
 Plot-7, Sector-142, Expressway Noida, Noida-201305, UP, India
 Phone: +91 (0) 0120- 6748484
 Fax: +91 (0) 0120 – 6748580.
 Contact No. 0120 6748484; e-mail: rajeevroy@bhel.in.
4. **Bidder to submit offer directly through E-PROCUREMENT MODE ONLY.** Bidder may visit <https://bhel.abccprocure.com>. No other mode for submission of tender is acceptable. Note: Both bids (Techno-commercial Bid & Price Bid) will be opened immediate after receipt of offer.
5. **Proposed delivery plan: IMMEDIATE.** However, vendor has to examine their best possible delivery plan & mentioned in **ACTIVITY SCHEDULE** to meet the tender delivery requirement. In case, BHEL's delivery requirement is not met by vendor(s), then a chance may be given to all such vendors to review their quoted delivery schedule in line with BHEL's delivery requirement. However, if vendor fails to meet the requisite delivery plan, then BHEL reserves the right not to consider the offer of such vendor(s).
6. **Technical specification No:** BHEL technical specification no: TB-317-316-022A, REV-00 is applicable. No permissible Technical Deviation has been envisaged.
7. **PERFORMANCE BG (Refer Clause no-7 of General Terms and condition): NOT APPLICABLE.**
8. **7. Clause No. 2.1 of general Terms & Conditions for tender Enquiry / Contract should be as follows:**

PRICES: A. all prices shall be FIRM & Ex-works price including packing & forwarding charges. No enhancement of rate for whatsoever reasons unless and until asked by BHEL shall be allowed.

PROJECT STATUS: Domestic in nature. GST is applicable as per prevalent law.

9. **Clause No. 33 for Reverse Auction of NIT shall be as follows:**

SPECIAL TERMS & CONDITIONS
FOR CLAMPS & CONNECTORS FOR NHPC NIMO-BAZGO PROJECT
Enquiry No:, Dated.....

"BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer.

The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).

As a reminder to the bidders, system will flash following message (in RED Color) during the course of 'online sealed bid': *"Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL.*

In addition to above RA guidelines, bidder note that

(A) In case where RA is conducted successfully Reverse auction shall be conducted as per existing procedure of BHEL. Ranking of bids shall be based on final price fed by respective bidder (including H1 bidder) in reverse auction process. If L1 bid is from a 'Local Supplier', L-1 bidder may be considered for further award of work. No other Bidder shall be invited to match price of L-1 Bidder

If L1 bid is not from a 'Local Supplier', the lowest evaluated bidder among the 'Local Suppliers' based on the ranking of the price after RA, will be invited to match the L1 price provided 'Local Supplier's price is within the Margin of Purchase Preference i.e. +20% of L1 price. In case such local supplier agrees to match the price of L-1 Bidder, such local supplier may be considered for further award of work. In case such lowest eligible 'Local Supplier' fails to match the L1 price, the eligible 'Local Supplier' with the next higher bid within the Margin of Purchase Preference(i.e 20% of L-1 Price) as above shall be invited to match the L1 price, and so on, and may be

SPECIAL TERMS & CONDITIONS
FOR CLAMPS & CONNECTORS FOR NHPC NIMO-BAZGO PROJECT
Enquiry No:, Dated.....

considered for award of work accordingly. In case none of the 'Local Suppliers' within the Margin of Purchase Preference (i.e 20% of L-1 price) matches the L1 price, then the L1 bidder may be considered for award of work.

(B) In case where RA is failed, Price bid shall be opened as per reverse auction procedure of BHEL and based on the same make in India policy shall be implemented.

10. **PRICE BID FORMAT:** Vendor to quote as per specified price format of NIT, otherwise their offer shall be liable to be rejected.
11. **IMPORTANT INSTRUCTION:**
- Final acceptance of technical qualified vendor for placement of order is subject to approval of CUSTOMER.
 - Bidder who are not approved by customer, needs to submit complete credential for approval from CUSTOMER & placement of order is subject to approval of CUSTOMER.
 - All boxes / Containers are to be distinctly marked with boldly written "TBG" mark on it.
 - PO/LOI shall be placed to L1 bidder project wise. However evaluation shall be done based on overall quantity as per NIT.
12. **Promotion of MAKE IN INDIA:** For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Preference to Make in India will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following link:

http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf

http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf

For this procurement, Public Procurement (Preference to Make in India) Order, 2017" dated 15/06/2017 & 28/05/2018 and subsequent orders issued by respective nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract /PO/WO against this NIT.

In the event of any nodal ministry prescribing higher and lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable.

Note: Bidder to submit FORMAT duly filled & signed and stamped by their authorized persons. It is mandatory against this NIT. Minimum Local content is 91% (being Thermal Package).

13. Following confirmation to be provided by vendor:
"We confirm that we have quoted as per specified price format provided along with this tender".

Item Name :	CLAMPS & CONNECTROS
Enquiry No. :	
Project :	NHPC NIMOO- BAZGO HYDROELECTRIC PROJECT, J & K
Type of project	Transmission / Thermal (Coal or Gas) / Hydro
Applicable percentage of Local Content	91 % (Minimum)

Format for Affidavit of Self certification regarding Minimum Local Content in line with PPP-MII order, 2017 if applicable, to be provided on a non-judicial stamp paper of Rs. 100/-.

Date: / /2019

I _____ S/o, _____ D/o, _____ W/o, _____ Resident of _____ hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Order, 2017 (*hereinafter PPP-MII order*) of Government of India issued vide Notification No:P-45021/2/2017 -BE-II dated 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/ Amendments, if any and

That the information furnished hereinafter is correct to the best of my knowledge and belief and I undertake to produce relevant records before the procuring entity/BIEEEI or any other Government authority for the purpose of assessing the local content of goods/services/works supplied by me for (*Enter the name of the Equipment/Item for Project*).

That the local content for all inputs which constitute the said goods/services/works has been verified by me and I am responsible for the correctness of the claims made therein.

That the goods/services/works supplied by me for (*Enter the name of the Equipment/Item for Project*) meets the 'Minimum Local Content' as defined in the PPP-MII order.

That the value addition for the purpose of meeting the 'Minimum Local Content' has been made by me at (*Enter the details of the location(s) at which value addition is made*).

That in the event of the local content of the goods/services/works mentioned herein is found to be incorrect and not meeting the prescribed Minimum Local Content criteria, based on the assessment of procuring agency (ies)/BIEEEI./Government Authorities for the purpose of assessing the local content, action shall be taken against me in line with the PPP-MII order and provisions of the Integrity pact/ Bidding Documents.

I agree to maintain the following information in the Company's record for a period of 8 years and shall make this available for verification to any statutory authority.

x _____

- i. Name and details of the Local Supplier
(Registered Office, Manufacturing unit location, nature of legal entity)
- ii. Date on which this certificate is issued
- iii. Goods/services/works for which the certificate is produced
- iv. Procuring entity to whom the certificate is furnished
- v. Percentage of local content claimed and whether it meets the Minimum Local Content prescribed
- vi. Name and contact details of the unit of the Local Supplier (s)
- vii. Sale Price of the product
- viii. Ex-Factory Price of the product
- ix. Freight, insurance and handling
- x. Total Bill of Material
- xi. List and total cost value of input used to manufacture the Goods/to provide services/in construction of works
- xii. List and total cost of input which are domestically sourced. Value addition certificates from suppliers, if the input is not in-house to be attached
- xiii. List and cost of inputs which are imported, directly or indirectly

For and on behalf of..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

**BHARAT HEAVY ELECTRICALS LTD.
(TRANSMISSION BUSINESS GROUP)**

GENERAL TERMS AND CONDITIONS FOR TENDER ENQUIRY / CONTRACT

This is to be submitted duly signed by bidder in original. Clause-wise deviations and / or additional conditions / clarifications, if any, are to be brought out clearly in "Schedule of Commercial Deviation". Deviations and / or additional conditions / clarifications, if any, mentioned elsewhere in the bid / offer, shall not be considered.

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1.	INSTRUCTION TO BIDDERS : 1.1 Sealed bids are invited for the items mentioned in the tender enquiry conforming to the NIT including Technical Specifications. Bids should be typed and free from overwriting and erasures. Corrections or additions / deletions, if any, must be clearly written and attested, otherwise offer may be rejected. 1.2 Bidder must ensure that their bid is submitted / dropped in the tender box on or before 14-00 Hrs. IST on the due date of opening, unless otherwise specified in the NIT, at the address as follows :- Tender Box, Materials Management, Transmission Business Group, Bharat Heavy Electricals Limited, 5th Floor, Tower-A, Advant Navis IT Business Park, Plot-7, Sector-142, Noida Expressway, Noida, Dist. G. B. Nagar, U. P. – 201305 1.3 In case tender enquiry is floated through the e-procurement system, offer / bid has to be submitted through the e-procurement system ONLY as per instructions given in the e-procurement portal (https://bheleps.buyjunction.in). 1.4 The bids shall be opened at 14-30 Hrs. IST on the due date of opening, in the presence of participating bidders who may like to be present, unless otherwise specified in the NIT. Bids received late are liable for rejection. Bidders sending bids by courier or post will have to ensure that it is timely delivered at the above address. 1.5 Bids are to be submitted duly signed with seal in two parts :- a) Techno-commercial Bid (Part-I) – To be submitted in 2 sets (original + copy). A copy of Price Bid (Part-II) clearly mentioning all the necessary information as per format without prices "Un-Priced Bid" is also to be enclosed in Part-I Bid. b) Price Bid (Part-II) – To be submitted only in one set in a separate sealed envelope. This should not contain any Technical and / or Commercial Terms and Conditions. The rates should be quoted both in figures and words. 1.6 The Part-I and Part-II Bids are to be sealed in separate envelopes and

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	marked as "Techno-commercial Bid (Part-I)" and "Price Bid (Part-II)" respectively. Both the envelopes are to be kept in another common envelope and marked as "BID". Each envelope should be sealed and superscribed with tender enquiry no., item / package name, project name and due date of opening. Bidder's name and address shall also be mentioned on each envelope. 1.7 For any technical clarification, please contact official mentioned in the tender enquiry / NIT. 1.8 For any commercial clarification please contact official issuing tender enquiry / NIT. 1.9 Price bid (Part-II) should not contain any additional information / description other than given in "Un-Priced Bid" submitted with "Techno-commercial Bid (Part-I)" except prices, otherwise bid is liable for rejection. 1.10 Price Bid submitted along with the bid shall remain valid up to validity of offer. Any discount / revised offer submitted by the bidder on its own shall be accepted provided it is received before the due date and time of offer submission (i.e. Part-I Bid). The discount shall be applied on pro-rata basis to all items including optional items, if any, unless specified otherwise by the bidder. Discount offered shall be valid for full duration of validity of the offer including extension of validity, if any. Unsolicited Supplementary / Revised Price Bid submitted after the due date and time of offer submission (i.e. Part-I Bid), during validity period of offer, unless asked by BHEL, shall not be considered. Withdrawal of quotation by the bidder, at any stage after its opening, may entail suitable action against such bidder by BHEL. 1.11 The consultants / firm (and any of its affiliates) shall not be eligible to participate against tender enquiry for the related goods or works or services for the same project, if they were engaged by BHEL-TBG for the consultancy services. 1.12 In case any Foreign OEM / Foreign Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer / supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer / supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from the manufacturer / supplier and the agent, bid received from the agent shall be ignored. 1.13 Non-conformities / errors / discrepancies in quoted prices in price bids shall be dealt as follows :- a) If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

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	c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above. d) If there is such discrepancy in an offer as mentioned in (a), (b) & (c) above, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the BHEL, the bid is liable to be ignored. 1.14 In case the scope of the successful bidder / supplier against this tender enquiry includes Erection, Testing and Commissioning (ETC) of the equipment / material at site in addition to Supply, Purchase Order shall be placed for Supply Portion and Contract shall be separately awarded for ETC at Site Portion. General Terms and Conditions for Tender Enquiry / Contract mentioned herein shall be applicable for both Supply & ETC at Site. Additional Terms and Conditions for Tender Enquiry / Contract for Erection, Testing and Commissioning at Site "BHEL/TBG/GTC-ETC/2016 REV01" shall be applicable for ETC at Site only which is to be read in conjunction with General Terms and Conditions for Tender Enquiry / Contract mentioned herein. However, any breach of either the Purchase Order or the Contract shall be deemed to be breach of the other. 1.15 Taxes and Duties payable extra as per Clause No. 2.3 in NIT, if not specified/quoted clearly as extra shall be considered as included in Ex-works Price and therefore shall not be reimbursed. Taxes and duties not payable extra as per NIT shall be deemed to be included in Ex-works Price. 1.16 If the rates for taxes and duties in respect of the quoted materials and / or services assumed by the Supplier are less than the tariff prevailing at the time of tendering, Supplier will be responsible for such under quotations. However if the rates assumed are higher than the correct rates prevailing at the time tendering, the difference will be to the credit of BHEL. Note : Representative / official deputed by the bidder to witness tender opening must produce authorization letter for the same.
2.	PRICES : 2.1 Unless specifically indicated in the NIT, all prices shall be FIRM. No enhancement of rate for whatsoever reasons unless and until asked by BHEL shall be allowed. 2.2 Unless specifically indicated in the NIT, the prices shall be on INR basis. 2.3 Unless specifically indicated in the NIT, the prices are to be quoted on FOR (Site / Destination) basis excluding GST. The break-up of prices shall be as under :- a) Ex-works Price: Ex-works price including packing & forwarding charges.

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	b) Freight: Freight for door delivery up to destination / site / store are to be quoted separately. c) Insurance: Insurance for door delivery up to destination / site / store are to be quoted separately. d) Type Test Charges: If asked in the technical specification, it is to be quoted separately for each test. e) Charges for Supervision of Erection, Testing & Commissioning (ETC) at Site: To be quoted separately if specified in NIT/Price Schedule. f) Charges for Testing & Commissioning at Site: To be quoted separately if specified in NIT/Price Schedule. g) Charges for Erection, Testing & Commissioning at Site: To be quoted separately if specified in NIT/Price Schedule. h) Training Charges: To be quoted separately if specified in NIT/Price Schedule. 2.4 GST rates along with HSN/SAC code as applicable on Sr No (a) to (h) above is to be mentioned separately in percentage in both un-priced bid and price bid. Note : i) Unless otherwise specified in the NIT, the purchase order shall be placed on Ex-works basis for Indian bidders. ii) Prices quoted by Indian bidders shall be in Indian Rupees only. iii) In case Supervision of Erection, Testing & Commissioning (ETC) at Site or Testing & Commissioning at Site or Erection, Testing & Commissioning at Site is also in scope of the bidder along with supply, bidder has to ensure that prices quoted for such services also are in line with special terms & conditions of the NIT, if any. iv) Unless otherwise specified in the NIT, Unloading at Site / Destination shall not be in the scope of the supplier. v) Prices in respect of Sr No (a) to Sr No (h) of Clause 2.3 above are to be quoted inclusive of all taxes & Duties, charges, Levies , royalty etc if any, excluding GST.
3.	TERMS OF PAYMENT : 3.1 For Supply only in scope of the supplier 100% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows : · LR / GR duly endorsed by BHEL Site Official. · Material Receipt Certificate issued by BHEL Site Official. · GST Compliant Tax Invoice · Packing List (Case-wise) · Copy of Transit Insurance Certificate from underwriters. · Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management · Guarantee Certificate · Copy of Performance Bank Guarantee (PBG) · Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order.

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	3.2 For Supply where Supervision of Erection, Testing & Commissioning (ETC) at Site is in scope of the supplier or Supply where Testing & Commissioning at Site is in scope of the supplier a) 95% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows : · LR / GR duly endorsed by BHEL Site Official. · Material Receipt Certificate issued by BHEL Site Official. · GST Compliant Tax Invoice · Packing List (Case-wise) · Copy of Transit Insurance Certificate from underwriters. · Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management · Guarantee Certificate · Copy of Performance Bank Guarantee (PBG) · Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order. b) 5% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows : · Certificate of successful completion of Supervision of Erection, Testing & Commissioning at Site if it is in the scope of the supplier or Certificate of successful completion of Testing & Commissioning at Site if it is in the scope of the supplier. · Certificate of completion of final documentation as per Purchase Order / Technical Specification issued by BHEL Engineering Management 3.3 For Supply where Erection, Testing & Commissioning (ETC) at Site is in scope of the supplier a) 90% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows : · LR / GR duly endorsed by BHEL Site Official. · Material Receipt Certificate issued by BHEL Site Official. · GST Compliant Tax Invoice · Packing List (Case-wise) · Copy of Transit Insurance Certificate from underwriters. · Material Inspection Clearance Certificate (MICC) issued by BHEL Quality Management · Guarantee Certificate · Copy of Performance Bank Guarantee (PBG) · Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management wherever specifically mentioned in the Purchase Order b) 10% of payment within 60 days from the date of receipt of complete invoice along with documents in 3 sets (original + 2 copies) as follows : · Certificate of successful completion of Erection, Testing & Commissioning at Site issued by BHEL Site Official / Construction Management · Certificate of completion of final documentation as per Purchase Order / Technical Specification issued by BHEL Engineering Management 3.4 For Type Test Charges 100% payment along with applicable GST within 60 days from the date of receipt

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	of complete GST compliant Tax invoice along with copy of Certificate of acceptance of Type Test Reports issued by BHEL Engineering Management in 3 sets (original + 2 copies) on completion of delivery (at site, if F&I is in scope of supplier) of main supplies (excluding spares) for which Type Tests are applicable. List of main supplies (excluding spares) for which Type Tests are applicable shall be certified by BHEL Engineering Management. 3.5 For Charges for Supervision of Erection, Testing & Commissioning at Site 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of successful completion of Supervision of Erection, Testing & Commissioning at Site issued by BHEL Site Official / Construction Management in 3 sets (Original + 2 copies). 3.6 For Charges for Testing & Commissioning at Site 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of successful completion of Testing & Commissioning at Site issued by BHEL Site Official / Construction Management in 3 sets (Original + 2 copies). 3.7 For Training Charges 100% payment along with applicable GST within 60 days from the date of receipt of complete GST compliant Tax invoice along with certificate of completion of training issued by BHEL Engineering Management in 3 sets (original + 2 copies). Note : i) Supplier has to submit invoice(s) as per PO or approved billing break-up of prices (if applicable as per NIT). ii) In case of supplies for overseas project, Material Receipt Certificate issued by BHEL Authorized Representative shall also be acceptable. iii) In case of Transit Insurance under Open Insurance Policy, Intimation / Declaration of Transit Insurance as per terms of the relevant Open Insurance Policy along with copy of Open Insurance Policy from underwriters shall also be acceptable. iv) Supplier has to ensure commencement of transit insurance from the date not later than LR / GR date. v) Supplier has to submit Tax Invoice(s). Supplier should ensure that Tax Invoice should comply all statutory requirements under GST Law to enable BHEL to avail input credit vi) MSMED Act, 2006 and the rules made thereunder as amended from time to time shall be applicable for release of payment to suppliers qualified & registered as Micro & Small Enterprises based on documents mentioned in the NIT for MSME. vii) Supplier has to submit PBG (as per BHEL format) & Guarantee Certificate as per

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	PO terms. viii) In case any shortages and / or damages in supplies, an amount calculated based on comments against Material Receipt Certificate issued by the BHEL Site Official shall be withheld from the supply payment against 3.1(a) or 3.2(a) above to be deemed fit by BHEL subject to a minimum of 10% of the total ex-works value of the invoice corresponding to the LR / GR against which any shortages and / or damages are reported. The withheld amount shall be released after the shortages and / or damages in supplies are supplied / replenished against Certification by BHEL Site Official. ix) Payment of GST component shall be made only if vendor has deposited the Tax and credit for the same is reflected in GSTN (GST Network). In case credit of the same is not reflected in GSTN , vendor may alternatively furnish BG of GST Amount for a period valid for not less than 1 month .In case of disallowance of credit /non reflection of credit in GSTN , amount will be recovered from supplier along with applicable Interest , penalty etc from any of his dues. x) If GST is payable by BHEL on reverse Charge Mechanism basis, vendor should ensure the submission of GST compliant Tax invoice immediately on dispatch/ performance of service. In case of non-compliance any additional charges towards interest , penalty etc , will be to vendors account. xi) TDS under GST Act, if applicable, shall be deducted unless Exemption Certificate If applicable, from the appropriate authority is furnished to BHEL along with Invoice.
4.	INTEREST LIABILITY : In case of any delay in payment due to any reason, BHEL shall not pay any interest on delayed payment. Also, no interest shall be payable by BHEL on the bank guarantee / deposit amount or balance payment or any other money which may become due owing to difference or misunderstanding or any dispute before any quasi judicial authority between BHEL and the Supplier / Contractor.
5.	GUARANTEE : The equipment / material supplied and services rendered (if applicable) shall be guaranteed to be free from all defects and faults in design & engineering, material, workmanship & manufacture and in full conformity with the Purchase Order / Contract, Technical Specifications & approved drawings / data sheets, if any, for 18 months from the date of last delivery or 12 months from the date of commissioning, whichever is earlier. Wherever Erection, Testing & Commissioning at Site are also in the scope of the Supplier, the guarantee period shall be 18 months from the date of last delivery or 12 months from the date of commissioning, whichever is later. The defective equipment / material / component shall be replaced free of cost at site. Freight & Insurance during transit shall also be in the scope of the supplier / contractor. Any expenditure for dismantling and re-erection of the replaced equipment / material / component shall be to supplier's / contractor's account. All replacements during the guarantee period shall be delivered at site promptly and satisfactorily within a period not more than 45 days from the date of reporting the defect / rejection etc. In the event of the supplier / contractor failing to replace the defective equipment / material / component within the time period mentioned above, BHEL may proceed to

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	undertake the replacement of such defective equipment / material / component at the risk and cost of the supplier / contractor without prejudice to any other rights under the contract and recover the same from PBG / other dues of this Purchase Order / Contract or any other Purchase Order / Contract executed by the supplier / contractor. Note : i) In case of Illumination System, items viz. Lamps, Tubes, Ballast, Starters, Capacitors & Fuses will not be under Guarantee after commissioning. ii) In addition to the above guarantee period, Extended Guarantee / Warranty, if any, shall be as per NIT / Technical Specifications. iii) In case offer of agent of Foreign OEM / Foreign Principal is considered, as per Clause No. 1.12 above, Guarantee as mentioned above has to be provided by the Foreign OEM / Foreign Principal also.
6.	LATENT DEFECT : Liability for latent defects shall be for defects inherently lying within material or arising out of design deficiency which does not manifest itself during guarantee period but later and shall be limited to five years from the expiry of the guarantee period.
7.	PERFORMANCE BANK GUARANTEE (PBG) : Supplier shall arrange to submit Performance BG / deposit on a non-judicial stamp paper of appropriate value along with first invoice or within 60 days from placement of Purchase Order (PO) whichever is earlier, in line with one of the applicable options as follows :- <u>Option "A"</u> A single rolling PBG for Rs. 50 Lakhs initially valid for 18 months with claim period of 3 months extra over and above 18 months for all the Purchase Orders being executed for Transmission Business Group, BHEL. However, validity of the PBG shall be extended till 18 months from the date of last delivery with 3 months claim period extra over and above 18 months. Single Rolling PBG option shall not be applicable in case Ex-works value of the PO at the time of placement of PO exceeds Rs. One Crore. <u>Option "B"</u> PBG for 10% of the total Ex-works PO value, valid for 18 months from the date of last delivery with claim period of 3 months extra over and above 18 months. Ex-works PO value at the time of placement of PO shall be considered for calculation of the PBG amount. <u>Option "C"</u> In case the total Ex-works PO value at the time of placement of PO does not exceed Rs. Ten Lakhs, interest free Deposit of 10% of the total Ex-works PO value at the time of placement of PO in form of Demand Draft favouring "Bharat Heavy Electricals Limited" and payable at New Delhi / Delhi / Noida shall also be acceptable to BHEL in lieu of PBG, which shall be released after expiry of 21 months from the date of last delivery after deduction, if any, within 60 days from receipt of invoice in 3 sets (original + 2 copies) to be submitted by the supplier. Note : i) The Bank Guarantee shall be from any bank as per Annexure for List of Banks (32 Nos.). The original PBG should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida. ii) Extension of validity of the PBG in original, as per above clause, should be sent by issuing Bank directly to AGM (Finance), TBG, BHEL, Noida at least 45 days

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	before expiry of validity of the PBG. iii) Unless otherwise specified in the NIT, deviation taken for non-submission of PBG / Deposit, as applicable, shall not be accepted. iv) Supplier has to confirm one of the applicable options for submission of PBG / Deposit before placement of PO. v) In case of non-submission PBG / Deposit, as applicable, BHEL reserve the right for Risk Purchase as per terms of the NIT and impose Suspension of Business Dealings with the Supplier / Contractor. vi) BHEL reserve the right to encash the Bank Guarantee and forfeit the amount in the event of any default, failure or neglect on part of the Supplier in fulfilment of performance of the Purchase Order. vii) Value of the Bank Guarantee (at the time of submission) shall remain unchanged for any subsequent variations in Purchase Order value up to $\pm 20\%$. Beyond this variation of $\pm 20\%$, the Supplier shall arrange to enhance or may reduce the value of the Bank Guarantee accordingly for the total variation promptly. viii) Vendor to ensure submission of Certificate of Final Documentation /Confirmation regarding Non applicability of Final Documentation, as the case may be, as referred in clause No 9 regarding Final Documentation. BG shall be released only after submission of the same to BHEL TBMM.
8.	SUBMISSION OF DRAWINGS / DOCUMENTS FOR APPROVAL : Supplier shall submit the master document list within 7 days from date of Purchase Order / Contract, unless otherwise specified in the NIT, with planned dates for submission which shall be in line with activity schedule as per Purchase Order / Contract and shall be finalized with BHEL Engineering Management. Date of first submission of drawings / documents shall be certified by BHEL Engineering Management after the receipt of applicable drawings / documents (e.g. project specific cover sheet, GTP, OGA drawings, schemes, type test reports etc.) by BHEL. During detailed engineering stage, necessary hard copies of the engineering drawings / documents shall also be submitted by the supplier as per the Purchase Order / Contract requirement. The supplier shall also submit the packing drawings as per technical specifications. In case item(s) offered require any interface details of other item (not in the scope of supplier & required for operating the equipment), the supplier has to submit interfaces schedule along with submission of engineering drawings / documents. It shall be responsibility of the supplier to get the details of the interfaced item from BHEL before manufacturing to avoid any mismatch at site.
9.	FINAL DOCUMENTATION : Final documentation as called in the Technical /contract specification is to be submitted within 3 months from the date of first delivery of respective equipment, item/material. After submission of Final Documentation, BHEL Engineering Management (TBEM) will issue a Certificate of Completion of Final Documentation. Wherever Final Documentation is not applicable, BHEL Engineering Management (TBEM) will issue confirmation regarding the same, Vendor to submit the Certificate of Final Documentation /Confirmation regarding Non applicability of Final Documentation, as the case may be, to BHEL TBMM. In case of Non Submission of Certificate of Final Documentation /Confirmation regarding Non applicability of Final Documentation, BG will be liable for encashment.
10.	INSPECTION : BHEL / customer / third party shall inspect equipment / material before despatch. Stage inspection during manufacturing may also be carried out. Material to be despatched only after getting Material Despatch Clearance Certificate (MDCC) / MICC issued by BHEL. Supplier shall send inspection call on prescribed format / web site only, with an

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	advance notice of 15 days. Supplier to ensure submission of all routine / acceptance test reports, inspection reports and all other documents related to inspection, immediately to BHEL. BHEL representative is authorised to carry out audits along with Third Party Inspection Agency at vendor's / supplier's works before clearing the items for despatch.
11.	DESPATCH DOCUMENTS : Despatch documents to be immediately sent to BHEL on despatch are as follows :- • Copy of Invoice • Copy of LR / GR in case of Indian suppliers or BL / AWB in case of foreign suppliers • Copy of Packing List (Case-wise) • Copy of Transit Insurance Certificate from underwriters • Copy of Guarantee Certificate
12.	DELIVERY PERIOD : Delivery / Completion requirement shall be mentioned in the NIT. Bidder to specify best delivery / completion period possible in weeks from the date of LOI / PO as per activity schedule for consideration by BHEL. Time required for type test, if applicable, is to be separately indicated. Note : LR / GR date or invoice date (whichever is later) for indigenous supplies and BL / AWB date for FOB / CIF (if applicable) contracts shall be considered as delivery date.
13.	LIQUIDATED DAMAGES FOR DELAYED DELIVERY: In case of delay in execution of Purchase Order beyond the contractual delivery time, an amount of 0.5% of the total Purchase Order value for supply (incl. taxes and duties, freight & insurance as applicable) per week of delay or part thereof subject to a maximum of 10% of the total Purchase Order value for supply (incl. taxes and duties, freight & insurance as applicable) shall be deducted as Liquidated Damages (LD) along with applicable GST (if any) on LD. However, in case of staggered (lot-wise) contractual delivery schedule, an amount of 0.5% of the total Purchase Order value for supply (incl. taxes, duties, freight & insurance as applicable) of delayed lot per week of delay or part thereof subject to maximum of 10% of the total Purchase Order value.(Incl taxes, duties, Freight & Insurance as applicable) shall be deducted as Liquidated Damages (LD) along with applicable GST (if any) on LD. Note : - In case of any amendment / revision in P.O./WO, the LD shall be linked to the amended / revised Purchase Order / Contract value and delivery / completion time / schedule, if applicable. - LR / GR date or invoice date (whichever is later) for indigenous supplies and BL / AWB date for FOB / CIF (if applicable) for imported supplies shall be treated as the date of dispatch for levying LD as above. - However, for indigenous supply, if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 30 days, where distance from place of despatch as per LR / GR is upto 1000 Kms or if time period between date of receipt of material at site / destination by Site Official & the date of LR / GR or invoice (whichever is later) is more than 45 days, where distance from place of despatch as per LR / GR is more than 1000 Kms, such excess period shall also be considered for LD

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	purpose. iv) If, as per supplier, delay is not attributable to the supplier, delay analysis with documentary evidence may be submitted by the supplier at the earliest but not later than six months from the end of the financial year in which the payment is withheld. Based on the above details / documents submitted by the supplier, BHEL shall take final decision and if considered appropriate by BHEL, withheld amount (full or part as the case may be) shall be released, otherwise, full or balance withheld amount shall be treated as deduction of Liquidated Damages (LD) towards delayed delivery.
14.	VALIDITY OF OFFER : The offer shall be valid for 120 days from the due date of opening of tender (i.e. techno-commercial bid unless otherwise specified in the NIT). Prices of Spares, wherever they optional items, shall be valid till two years from the date of placement of PO.
15.	ACCEPTANCE / REJECTION OF TENDER : BHEL reserve the right to reject in full or part, any or all tender without assigning any reason thereof. BHEL also reserve right to vary the quantities as mentioned in the NIT. Acceptance of offer is subject to vendor approval by customer before opening of price bid. BHEL shall not be bound by any power of attorney granted by tenderer or by changes in composition of the firm made subsequent to award of order / contract. BHEL may however recognize such power of attorney and changes after obtaining proper legal advice, cost of which will be chargeable to the seller / contractor concerned. If the tenderer deliberately gives wrong information, BHEL reserves the right to reject such an offer at any stage or cancel the order / contract, if awarded, and forfeit the security deposit and bank guarantee.
16.	DEVIATION : The bids having deviation(s) w.r.t. tender are liable for rejection. However, BHEL, at its discretion, may load the prices for evaluation of offer with prior intimation to bidder.
17.	TENDER EVALUATION : Comparative statement shall be prepared and evaluated on total cost basis at destination/site (as per terms of NIT) considering overall quantity indicated in NIT unless contrary to same is specifically mentioned in the tender enquiry / NIT. Total cost for this purpose shall include cost of scope of work as mentioned in NIT along with applicable taxes & duties, and other services etc. (if applicable). GST input credit available to BHEL shall be reduced from prices while determining L1 status. In case all bidders are foreign & Port of Import (destination port) is same for all the bidders, evaluation of offers shall be done on CIF (Port of Import) basis. Otherwise, evaluation of offers shall be done on the basis of delivered cost at site /destination to BHEL. Further, in case of foreign bidders, marine freight & insurance are to be quoted separately & the purchase order may be placed on FOB basis with an option for delivery on CIF / CFR basis, if required, later. In case of foreign bidders, Exchange Rate (TT selling rate of State Bank of India) as on date of tender opening (Part-I Bid in case of two part bid) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken for tender evaluation.
18.	LOADING CRITERIA : List of permissible deviations & loading criteria thereof are as follows :- a) Payment Terms Base rate of SBI (as applicable on the date of bid opening / techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the

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	period of relaxation sought by bidder(s) against terms of payment in the NIT. b) Liquidated Damages (LD) for Delayed Delivery Loading on LD clause shall be to the extent to which it is not agreed to by the bidder (at offered value). c) In case of foreign bidders, if the quoted prices is on CIF basis only, it shall be loaded to arrive at total FOR (Site / Destination) price, as applicable, by factors as follows :- i) Port handling / clearing charges: @ 1% of CIF value to arrive at Customs Assessable Value. ii) Custom Duty (including CVD & SAD) as per NIT prevailing on date of price bid opening. iii) Inland Freight & Transit Insurance: @ 5% of CIF value where distance between site / destination and Port of Discharge is upto 1000 Kms or @ 7% of CIF value where distance between site / destination and Port of Discharge is more than 1000 Kms. Note : Additional deviations (if considered acceptable by BHEL) & the loading criteria shall be communicated to all the qualified bidders before price bid opening.
19.	ARBITRATION : In the event of any dispute emanating from and relating to this contract, the matter shall be referred to the sole arbitration of the person appointed by the competent authority of BHEL. Subject to aforesaid, the provisions of "The Arbitration and Conciliation Act, 1996" and the rules made thereunder as amended from time to time in India shall apply to the arbitration proceedings. The venue of arbitration shall be in New Delhi. Further there shall be no claim for any pre-reference or pendente-lite interest on the claims and any claim for such interest made shall be void. However, in case of contract with Public Sector Enterprise / Undertaking (PSE/PSU) or Govt. Dept., the extant guidelines of Govt. of India shall be followed.
20.	LEGAL SETTLEMENT : Indian Courts at New Delhi / Delhi shall have exclusive jurisdiction to decide the dispute, if any, arising out of or in respect of the contract(s) to which these conditions are applicable. Contract, including all matters connected with contract, shall be governed by the Indian Law, both substantive and procedural, for the time being in force including modification thereto.
21.	SUB-CONTRACTING : In case further subcontracting of BHEL Purchase Order / Contract or part thereof is envisaged by supplier, the same can be done after written permission is obtained from BHEL. However it shall not absolve the Supplier / Contractor of the responsibility of fulfilling BHEL Purchase Order / Contract requirements. In case of subcontracting of Purchase Order / Contract awarded by BHEL or part thereof without such permission, BHEL reserve the right to cancel the Purchase Order / Contract and source such material / component / equipment / system from any other agency at the risk and cost of the Supplier / Contractor. If Supplier / Contractor is an individual or proprietary concern and the individual or the proprietor dies or the partnership is dissolved or substantially affected, then unless BHEL is satisfied that legal representative of individual Supplier / Contractor or proprietor of proprietary concern and surviving partners of partnership firm are capable of carrying out and completing the Purchase Order / Contract, BHEL shall be entitled to cancel the Purchase Order / Contract as to its incomplete portion and without being in any way liable to payment of any compensation to legal

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	representative of Supplier / Contractor and / or to surviving partners of Supplier's / Contractor's firm on account of cancellation of the Purchase Order / Contract. Decision of BHEL that legal representatives of deceased Supplier / Contractor or surviving partners of the Supplier's / Contractor's firm cannot carry out and complete the Purchase Order / Contract shall be final and binding on the parties hereto. Terms and Conditions shall not get affected in case of de-merger / amalgamation / taking-over / re-constitution etc.
22.	RISK PURCHASE : In case the Supplier / Contractor fails to supply or fails to comply with terms & conditions of the Purchase Order / Contract or delivers equipment / material not of the contracted quality or fails to adhere to the contract specifications or 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, BHEL reserve the right to cancel the Purchase Order / Contract either in whole or in part thereof without compensation to Supplier / Contractor and if BHEL so desires, may procure such equipment / material / items not delivered or others of similar description where equipment / material / items exactly complying with particulars are not readily procurable in the opinion of BHEL which is final and in such manner as deemed appropriate, at the risk and cost of the Supplier / Contractor and the Supplier / Contractor shall be liable to BHEL for any excess cost to BHEL. However, the Supplier / Contractor shall continue execution of the Purchase Order / Contract to the extent not cancelled under the provisions of this clause. Recovery amount on account of purchases made by BHEL at the risk and cost of Supplier / Contractor shall be the difference of total value of new Purchase Order (PO) value and total value of old Purchase Order for applicable items, where the total value of new PO is more than total value of old PO for applicable items, plus additional 15% of the total ex-works value of new PO as overheads. The Supplier / Contractor shall on no account be entitled to any gain on such risk & cost purchase. In case the purchase order (PO) value of the new PO is less than the PO value of the old PO, 15% of the total ex-works value of the new PO shall be recovered as overheads and the difference between the PO value of the old PO and the new PO shall not be considered for calculation of the recovery amount.
23.	ADJUSTMENT OF RECOVERY : Any amount payable by the Supplier / Contractor under any of the condition of this contract shall be liable to be adjusted against any amount payable to the Supplier / Contractor under any other Purchase Order / Contract awarded to him by any BHEL unit. This is without prejudice to any other action, as may be deemed fit, by BHEL.
24.	FORCE MAJEURE CONDITION : If by reason of war, civil commotion, act of god, Government restrictions, strike, lockout which are not in control of Supplier / Contractor the deliveries / services are delayed, Supplier / Contractor shall not be held responsible. If at any time during the continuance of the Purchase Order / Contract, the performance in whole or in part by either party of any obligations under the Purchase Order / Contract is prevented or delayed by reason of any war hostilities, acts of the public enemy, restrictions by Govt. of India, civil commotion, sabotage, fires, floods, explosion, epidemics, quarantine restrictions, strike, lock-outs or acts of God (hereinafter referred to as "event"), which are not in control of Supplier / Contractor or BHEL, then provided notice of the happening of such event is given by either party to the other within fifteen (15) days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate the Purchase Order /

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	Contract nor shall have any claim for damages against each other in respect of such non-performance and delay in performance. Performance under the Purchase Order / Contract shall be resumed immediately after such event has come to an end or ceased to exist and decision of BHEL as to whether the deliveries have to be resumed or not shall be final, conclusive and binding on the parties hereto. In the event of the parties hereto not able to agree that a force majeure event has occurred, the parties shall submit the disputes for resolution pursuant to the provisions hereunder, provided that the burden of proof as to whether a force majeure event has occurred shall be upon the party claiming such an event. Notwithstanding above provisions, BHEL shall reserve the right to cancel the Purchase Order / Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of delivery and other schedules.
25.	MANUFACTURING QUALITY PLAN (MQP) : Supplier to submit approved MQP in line with requirement of BHEL/customer.
26.	SUPPLIER PERFORMANCE MONITORING AND RATING SYSTEM : BHEL reserve the right for evaluation of Supplier Performance Rating as per Supplier Performance Monitoring and Rating System of BHEL for necessary action. Details are available at BHEL Website www.bhel.com for reference.
27.	DEALING WITH BANNED SUPPLIERS / CONTRACTORS IN BHEL : Offers of the bidders, who are on the banned list, as also the offers of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com for reference.
28.	ORDER OF PRECEDENCE : The order of precedence shall be as follows :- a) Special Terms & Conditions (STC) for Tender Enquiry / Contract, if any b) General Terms & Conditions (GTC) for Tender Enquiry / Contract & Additional General Terms & Conditions (GTC) for Tender Enquiry / Contract for Erection Testing & Commissioning (ETC) at Site, if applicable Provisions in (a) above shall prevail over (b). In case of conflict, between Technical Specifications and STC / GTC, bidder to seek necessary clarifications from BHEL concerned official as specified in NIT.
29.	PACKING : Packing shall be in conformity with specifications and shall be such as to ensure prevention of damages, corrosion, deterioration, shortages, pilferage and loss in transit or storage. In case of shipment by sea or air, the packing shall be sea-worthy or air-worthy respectively and of international standards. Different types of spares i.e. start-up / commissioning spares and initial spares (mandatory spares and recommended O&M spares) are to be packed separately. Packing List shall be submitted as per standard format along with advance set of documents for claiming payment which shall also indicate :- a) Case / Packing size (as applicable). b) Gross weight and net weight of each package. c) Detailed contents of the package with quantity of each item separately. Project, Item / Package Description, BHEL's PO No. with date & Case / Packing Mark should also be clearly mentioned on the Case / Packing and Packing List for identification. Also, Packing List must be duly signed & should include respective Invoice No. & LR No. Note : Foreign suppliers to furnish details to arrange inland transportation by BHEL, if applicable, as follows :-

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	i) No. of Packages ii) Size with Weight (Gross & Net) of each Package iii) No. of Containers with type & size required for inland transportation iv) Type of Cargo (Break Bulk / LCL / FCL) v) Customs Tariff No.
30.	COLOUR CODING : Aluminium stickers are required to be attached to large components but plastic sheet tags should be tied with small components, giving details like purchase order, description of the component, quantity etc. Tags should be of the colour as follows :- a) Main equipment : Yellow or White tag b) Start-up / Commissioning spares : Blue tag c) Mandatory spares : Pink or Red tag d) Recommended / O&M spares : Green tag
31.	MICRO, SMALL & MEDIUM ENTERPRISES (MSME) : MSME Act 2006 as amended from time to time & extant regulations of Govt. of India for MSME will be applicable. Micro & Small Enterprises (MSE) can avail the intended benefits only if they submit along with the offer / bid, attested copies of either Acknowledgement of Entrepreneur Memorandum Part-II (EM-II certificate) having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with attested copy of a CA certificate (As per BHEL format where deemed validity of EM-II certificate of five years have expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of opening (for Techno-commercial Bid : Part-I in case of two part bid). Non-submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. 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 (in original) by a Gazetted officer. Copy of Udyog Aadhaar Memorandum with Acknowledgement of Ministry of Micro, Small & Medium Enterprises should also be furnished.
32.	BUSINESS ETHICS / SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS : If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution, indulges in malpractices cheating, bribery, fraud or other misconduct or formation of cartel so as to influence the bidding process or influences the price or fails to perform or is in default without any reasonable cause etc or performs any act considered objectionable as per extant guidelines, action may be taken against such bidders/supplier/contractor as per extant "Guidelines for Suspension of Business Dealings with Suppliers/Contractors". Abridged version of same is available at BHEL website (www.bhel.com) on "Supplier Registration" Page.
33.	REVERSE AUCTION : BHEL reserve the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder or price bid submitted by the bidder through e-procurement system. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA. In case BHEL decides to go for Reverse Auction, only those bidders who have given their unconditional acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit "online sealed bid" in the Reverse Auction. Non-submission of "online sealed bid" by the bidder will be

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	considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue. General Terms and Conditions of RA are available at Annexure. Business Rules for RA shall be sent to the bidders before conducting RA. Abridged Version of "Common Guidelines for Conducting Reverse Auction" may also be seen at BHEL website (www.bhel.com) on "Supplier Registration" Page & "Tender Notifications" Page.
34.	INTEGRITY PACT : Bidders shall have to enter into Integrity Pact with BHEL, duly signed with seal in original, if specified in NIT / RFQ failing which bidder's offer shall be liable for rejection.
35.	TERMINATION OF CONTRACT : BHEL shall have the right to cancel the Purchase Order / Contract without any financial implication to BHEL if vendor approval by end user / customer is withdrawn or in case of Suspension of Business Dealings with the Suppliers / Contractors by BHEL. BHEL shall have the right to cancel Purchase Order / Contract, wholly or in part, in case they are obliged to do so on account of any decline, diminution, curtailment or stoppage of their business and in that event, the Supplier's / Contractor's compensation claim shall be settled mutually. In case of cancellation of Purchase Order / Contract for main supply, all other associated Purchase Orders / Contracts like those for Mandatory Spares / Recommended Spares / Erection, Testing & Commissioning (ETC) / Supervision of ETC, if any, would also get cancelled.
36.	SHELF LIFE : Supplier has to inform the list of the items / sub-items which have limited shelf life like consumables or those required for the first fill and shall indicate the corresponding shelf life period in the offer. Such items / sub-items shall be manufactured / despatched only after getting formal clearance from BHEL.
37.	LIMITATION OF LIABILITY : Notwithstanding any other provisions, except in cases of wilful misconduct and / or criminal negligence / acts, a) Neither the Supplier / Contractor nor BHEL shall be liable to the other, whether in Purchase Order / Contract, tort, or otherwise, for any consequential loss or damage, loss of use, loss of production or loss of profits or interest costs, provided however that this exclusion shall not apply to any obligation of the Supplier / Contractor to pay Liquidated Damages to the BHEL and b) Notwithstanding any other provisions incorporated elsewhere in the contract, the aggregate liability of the Contractor in respect of this contract, whether under the Contract, in tort or otherwise, shall not exceed total Contract Price, provided however that this limitation shall not apply to any obligation of the Vendor to indemnify BHEL with respect to Patent Infringement or Intellectual Property Rights.
38.	SHORTAGES / DAMAGES : a) Against Supply only or Supply where Supervision of Erection, Testing & Commissioning (ETC) at Site or Supply where Testing & Commissioning at Site is in scope of the supplier : Any shortages and / or damages in supplies shall be supplied / replenished free of cost by the supplier as early as possible but not later than 30 days from the date of intimation by BHEL to the supplier.

Sr. No.	
	b) Against Supply where Erection, Testing & Commissioning (ETC) at Site is in scope of the supplier : Any shortages and / or damages in supplies and during handling / storage, erection, testing and commissioning at site shall be supplied / replenished free of cost by the Supplier / Contractor, as early as possible, to meet the contractual completion time / schedule. Note: There shall not be any extension in the contractual delivery time / schedule due to any shortages and / or damages in supplies.
39.	VARIATION OF CONTRACT VALUE / QUANTITY VARIATION : BHEL shall have the right to variation in quantities of items within $\pm 30\%$ of the total Purchase Order / Contract value at the time of placement of PO or award of Contract on overall basis for all amendments together within two years from the date of original Purchase Order / Contract or completion of execution of the Purchase Order / Contract whichever is earlier but quantities of individual items may vary to any extent or may get deleted unless otherwise specified in the technical specifications. No compensation is payable due to variation in the quantities and the Supplier / Contractor shall be bound to accept the same the contracted prices / rates without any escalation. However, if the Purchase Order / Contract is on "Lumpsum" basis, no variation of Purchase Order / Contract value shall be admissible to the Supplier / Contractor within the scope of Purchase Order / Contract, as long as the inputs remain unchanged.
40.	STATUTORY VARIATION : GST rates prevailing at the time of dispatch of goods/ completion of services shall be payable by BHEL. All other taxes, duties, charges, royalty, cess, other levies shall be deemed to be included in the Ex Works Prices / Charges quoted by bidders and no variations shall be payable in respect thereof. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the BHEL. Notwithstanding anything above, where the actual completion of the supply / services occurs beyond the period stipulated in the Purchase Order / Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Supplier / Contractor alone shall bear the impact for the upward revisions and for downward revisions BHEL shall be given the benefit of reduction in applicable taxes / GST. This will be without prejudice to the levy of liquidated damages for delay in delivery / completion. If new tax is introduced by Central/ State Govt/ Municipality becomes directly applicable on items specified in Bill of Quantities/Purchase Order/Contract, full reimbursements shall be made provided it becomes applicable on items specified in Bill of Quantities. However, any additional tax implication due to delay in delivery, beyond the Contractual Delivery, attributable to supplier shall be borne by supplier.
41.	MODE OF PAYMENT : Payment shall be made directly to the Supplier / Contractor by BHEL through NEFT / RTGS.
42.	CONFIDENTIALITY : Supplier / Contractor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents etc. belonging to BHEL and also of systems, procedures, reports, input documents, manuals, results and any other BHEL documents discussed and / or finalized during the course of execution of Purchase Order / Contract.

Sr. No.	
43.	INDEMNIFICATION : The Supplier / Contractor shall indemnify and keep indemnified and hold harmless BHEL and its employees and officers from and against any and all claims, suits, actions or administrative proceedings, demands, losses, damages, costs and expenses and any other claim of whatsoever nature in respect of the death or injury of any person or loss of or damage to any property arising during the course and out of the execution of the Purchase Order / Contract.
44.	TITLE OF GOODS : a) Ownership of the equipment / material procured in India, shall be transferred to BHEL upon loading on to the mode of transport to be used for transportation of the said equipment / material from the works to the site / destination and upon endorsement of the dispatch documents in favour of BHEL. b) Ownership of the equipment / material to be imported into the country where the site is located, if not procured in India, shall be transferred to BHEL upon loading on the mode of transport to be used for transportation of the equipment / material from the country of origin to that country / destination and upon endorsement of despatch document in favour of BHEL. c) Notwithstanding the transfer of ownership of the equipment / material, the responsibility for care and safe custody thereof together with the risk of loss or damage thereto for whatsoever reason shall remain with the Supplier.
45.	COMPLIANCE OF STATUTORY REQUIREMENTS : The vendor shall comply with all State and Central Laws / Acts, Statutory Rules, Regulations etc., as may be enacted by the Government during the tenure of the Purchase Order / Contract and having in force and applicable to the Purchase Order / Contract and nothing shall be done by the Supplier / Contractor in contravention of any Law / Act and / or Rules / Regulations, thereunder or any amendment thereof. The Supplier / Contractor shall pay all taxes, fees, licence charges / deposits, duties, tolls, royalty, commissions or other charges which may be levied on account of any of his operations connected with the Purchase Order / Contract. In case BHEL is constrained to make any of such payments, BHEL shall recover the same from the Supplier / Contractor either from moneys due to him or otherwise as deemed fit.
46.	ACCEPTANCE OF ORDER : Supplier should acknowledge and accept the Letter of Award / Purchase Order issued by BHEL within 7 days of the issue of Letter of Award / Purchase Order. In case of any discrepancy / typographical error in issue of Purchase Order / Contract, the agreed terms & conditions, scope of work, rates / prices for placement of PO / award of contract shall be applicable and BHEL reserves the right to issue amendment(s) to PO / Contract for correction of discrepancies / typographical errors in the PO / Contract at a later date.
47.	FRAUD PREVENTION POLICY : The 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.

Signature of Bidder (Authorized Signatory) with Date & Seal

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SCHEDULE OF COMMERCIAL DEVIATION

This Format is to be submitted in original duly signed by bidder.
The following are the deviations/variations/exceptions from the Terms and Conditions :-

S N	CLAUSE NO. OF TERMS AND CONDITIONS	STATEMENT OF DEVIATION

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the Terms and Conditions.

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

Place :
Date :

Signature of the authorised representative of

Bidder's name :
Designation:.....
Company Seal:.....

SCHEDULE OF TECHNICAL DEVIATION

This Format is to be submitted in original duly signed by bidder.
The following are the deviations/variations/exceptions from the Terms and Conditions :-

S N	CLAUSE NO. OF TERMS AND CONDITIONS	STATEMENT OF DEVIATION

In case, this schedule is not submitted, it will be presumed that the equipment /material to be supplied under this contract is deemed to be in compliance with the Terms and Conditions.

If there is NIL deviation,even then the format to be filled as NIL DEVIATION.

Note : Continuation Sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.

Place :
Date :

Signature of the authorised representative of

Bidder's name :
Designation:
Company Seal:.....

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ACTIVITY SCHEDULE FOR CLAMPS & CONNECTORS

ENQUIRY NO:....., Dated.....

SN	ACTIVITY	TIME ALLOTTED [in weeks]	CUMULATIVE TIME FROM RECEIPT OF INPUTS FROM BHEL [in weeks]	SCOPE
1.	Submission of Documents necessary for getting manufacturing clearance like drawings, Data sheet.	2	2	BY SUPPLIER
2.	Review and Approval of documents from BHEL/Customer and issue of manufacturing clearance.	2	4	BHEL SCOPE
3.	Manufacturing Time	6	10	BY SUPPLIER
4.	Inspection call	1	11	BY SUPPLIER
5.	Inspection by BHEL/Customer	1	12	BHEL SCOPE
6.	Issue of Dispatch clearance	2	14	BHEL SCOPE
7.	Dispatch	2	16	BY SUPPLIER

1. Inspection call to be issued 2 weeks in advance.
2. Supplier must ensure the completeness and correctness of the requisite documents before submission for approval. Delay in approval on account of incomplete / inadequate information shall be the responsibility of supplier.
3. Inspection call should be given in the prescribed format only. Inspection calls not in the prescribed format shall not be entertained.
4. Qty to be offered for inspection should be in accordance within Delivery-schedule – lot. BHEL reserves the right not to entertain multiple inspection calls for a Delivery – lot and delay on this account shall be the responsibility of Supplier.

Signature & Seal of

Supplier

Date:

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SCHEDULE OF PRICE BID

Enquiry No:

Date:

(BIDDERS TO STRICTLY ENSURE SUBMITTING THE PRICE BIDS IN THIS FORMAT)

PROJECT: NHPC NIMDO- BAZGO HYDROELECTRIC PROJECT

SN	DESCRIPTION OF ITEM (As per Tech Spec. TB-317-316-022A)	UNIT	QTY	HSN CODE	UNIT PRICE EX. WORKS (Rs.)	TOTAL EX. WORKS (Rs.)	UNIT FREIGHT & INSURANCE UP TO SITE (Rs.)	TOTAL FREIGHT & INSURANCE UP TO SITE (Rs.)	GST @ % OF TOTAL EX- WORKS (Rs.)	GST @ % OF (TOTAL FREIGHT & INSURANCE UP TO SITE)	TOTAL F.O.R. DESTINATION PRICE
1	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A ST BUSHING CONNECTOR SUITABLE FOR SINGLE ZEBRA	NO	3								
2	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CT CONNECTOR SUITABLE FOR SINGLE ZEBRA (THROUGH TYPE)	NO	5								
3	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CT CONNECTOR SUITABLE FOR SINGLE ZEBRA	NO	4								
4	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S 1250A CB CONNECTOR SUITABLE FOR SINGLE ZEBRA	NO	4								
5	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR TWIN ZEBRA TO TWIN CONDUCTOR AS PER TS	NO	3								
6	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR TWIN ZEBRA TO SINGLE CONDUCTOR AS PER TS	NO	10								
	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR SINGLE ZEBRA TO SINGLE CONDUCTOR AS PER TS	NO	1								
8	SUPPLY- CLAMPS & CONNECTORS : 132KV 31.5KA FOR 1S TEE CONNECTOR SUITABLE FOR CONDUCTOR AS PER TS TO CONDUCTOR AS PER TS	NO	6								
9	SUPPLY- CLAMPS & CONNECTORS : 132KV BPI CONNECTOR SUITABLE FOR TWIN ZEBRA	NO	6								
10	SUPPLY- CLAMPS & CONNECTORS : 132KV BPI CONNECTOR SUITABLE FOR SINGLE ZEBRA	NO	4								
11	CLAMPS & CONNECTORS PG CLAMP FOR SHIELD WIRES OF DIA 10.98MM	NO	7								
A	TOTAL DELIVERED COST TO BHEL=										

NOTE:

- PLEASE NOTE THAT UNPRICED COPY OF PRICE BID (i.e. WITH ALL PRICES BLANKED) SHALL BE FURNISHED ALONG WITH TECHNO-COMMERCIAL BID.
- REQUIRED COPIES OF FORMAT BE MADE & DETAILS MAY BE ANNEXED.
- THE PRICES MUST BE QUOTED IN THE PRESCRIBED UNIT ONLY.
- BHEL STANDARD SPECIFICATION NO:TB-317-316-022A IS APPLICABLE

SIGNATURE & SEAL OF TENDERER

BHARAT HEAVY ELECTRICALS LIMITED

TRANSMISSION PROJECTS ENGINEERING MANAGEMENT

DOCUMENT No.	TB-317-316-022A	Rev. No.	00		Prepared	Checked	Approved
TYPE OF DOC.	TECHNICAL SPECIFICATION			NAME	AK	AK	VK
TITLE 132kV Clamps & Connectors				SIGN			
				DATE	23.07.19	23.07.19	23.07.19
				GROUP	TBEM	W.O. No	87011
CUSTOMER	NHPC LIMITED, Faridabad						
PROJECT	3X15 MW NIMOO-BAZGO (ALCHI) HYDROELECTRIC PROJECT, J&K						

CONTENTS

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S/N	Description	No. of Sheets
1.	SCOPE, SPECIFIC TECHNICAL REQUIREMENTS, QUANTITIES & PROJECT DETAILS	2
2.	ANNEXURE-1: BOQ OF CONNECTORS	1
3.	ANNEXURE-2: DRAWINGS OF CONNECTORS	11

Rev No.	Date	Altered	Checked	Approved	REVISION DETAILS	
Distribution				To	TBCM	OFFICE COPY
				Copies	01	01

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PROJECT: 3X15 MW NIMOO-BAZGO (ALCHI) HYDROELECTRIC PROJECT, J&K	
CUSTOMER: NHPC LIMITED, Faridabad	
Technical Specification of Clamps & Connectors	TB-317-316-022A
Scope, Specific Technical Requirements & Quantities	REV.00

1.0 SCOPE, SPECIFIC TECHNICAL REQUIREMENTS AND QUANTITIES.

1.1 SCOPE

This technical specification covers the requirements of design, manufacture, testing at works, packing and dispatch of 132kV Clamps & Connectors complete with hardware in complete.

The Clamps & Connectors are required for the following Project

CUSTOMER: NHPC LIMITED, Faridabad

PROJECT: 3X15 MW NIMOO-BAZGO (ALCHI) HYDROELECTRIC PROJECT, J&K

1.2 TECHNICAL PARTICULARS

Technical details of Clamps and Connectors shall be as per NHPC approved drawings attached as Annexure-II of this specification.

1.3 QUANTITIES

- As per Annexure-1.
- Corresponding applicable drawing no. of each type of connector already approved by NHPC for this project is mentioned in the Annexure-1.
- Quantity may vary at Contract stage by -30% to +30 % for overall value of contract. However, quantity of individual items can vary upto any extent during detailed engineering stage.
- All hardware required for connecting clamps/ spacers to equipment/conductor/ AI tube shall be in bidder's scope of supply.

1.4 TEST REPORTS & CERTIFICATES

Bidder should submit valid type test reports as per relevant IS/ IEC of all the required items.

Equipment to be supplied shall be of type tested design. Bidder shall furnish for Owner's approval the reports of all the type tests as listed in IS-5561 and carried out within last ten years from the date of bid opening. These reports should be for the test conducted on the equipment similar to those proposed to be supplied under this contract and the test(s) should have been either conducted at an independent laboratory or should have been witnessed by a client.

However if contractor is not able to submit report of type test(s) conducted in last ten years from the date of bid opening, or in case type test report(s) are not found to be meeting the specification requirements, the contractor shall conduct all such tests under this contract at no additional cost to the owner either at third party lab or in presence of client/owners representative and submit the reports for approval.

All acceptance and routine tests as per specification and relevant standards shall be carried out. Charges for these shall be deemed to be included in the equipment price.

1.5 MANUFACTURING QUALITY PLAN

Manufacturer shall follow NHPC Manufacturing Quality Plan.

1.6 PROJECT INFORMATION AND SYSTEM PARAMETERS

a) Customer: NHPC Limited, Faridabad

b) Project: 3x15 MW Nimoo-Bazgo (Alchi) HEP, J&K

c) Location:

Nimoo-Bazgo HE Project is located near Alchi village (Pondage on river Indus) in Leh district of Jammu & Kashmir.

d) Road head:

All whether road exists up to village Alchi from Leh-Srinagar road. It is 70 km from Leh which is 440 km from Srinagar and 475 km from Manali. Although both roads are closed during winter season from December to March due to heavy snowfall and landslides.

e) Railhead:

Nearest railhaed is Jammu/Kiratpur, which is about 740 km from Leh.

The following system parameters shall prevail:

Nominal system voltage	132 kV
Highest system voltage	145 kV
Frequency	50 Hz
Rated short time current	31.5 kA for 1 sec
Dry and wet one minute power frequency withstand voltage	275 kV
Dry and wet impulse withstand voltage positive and negative	650 kVp
Minimum total creepage	3625 mm
System Earthing	Effectively Earthed

1.7 SITE CONDITIONS

1.7.1 Ambient Temperature

a) Ambient air temp. (max.) : 40 deg C

b) Ambient air temp. (min.) : (-)30 deg C

c) Design ambient temp. : 40 deg C

1.7.2 Altitude: L 3093.0 m

1.7.3 Wind speed: 39 m/s

1.7.4 Seismic Coefficient: 0.18 g for design & Max 0.36 g (lies in Zone IV)

1.7.5 Average Annual rainfall: Up to 264 mm

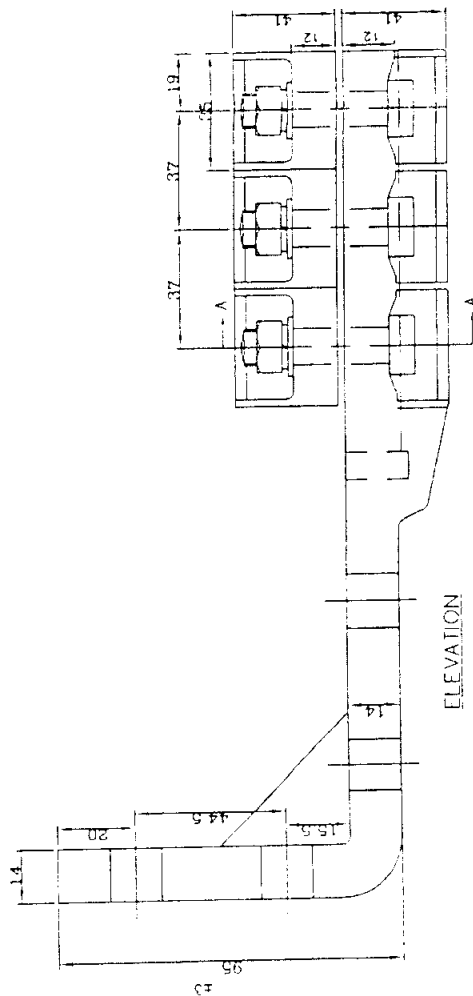
1.7.6 Ice Loading: 25 mm

NIMOO BAZGO NHPC LEH				ANNEXURE-I	
132kV CLAMPS & CONNECTORS					
Sr. No.	Description of Items	Unit	Qty	Applicable Drg. Nos. in Annexure-2	
1	Terminal connector for 132kV, 1250A, 31.5kA for 1 sec. Circuit breaker suitable for single zebra conductor	Nos.	4	NIM-PVD 03 GA-112, R0	
2	Terminal connector for 132kV, 1250A, 31.5kA for 1 sec. CT suitable for single zebra conductor, rigid, horizontal approach	Nos.	4	DEW-ST-3028, R1	
3	Terminal connector for 132kV, 1250A, 31.5kA for 1 sec. CT suitable for single zebra conductor, through type, horizontal approach	Nos.	5	DEW-ST-3028A, R1	
4	132kV, 1250A, 31.5kA for 1 sec. Terminal connector for station transformer bushing suitable for single zebra conductor, rigid, horizontal approach	Nos.	3	DEW-RT-3028C, R1	
5	132kV Terminal connector for bus post insulator suitable for single zebra conductor, through type, horizontal approach	Nos.	4	DEW-BPI-28, R1	
6	132kV Terminal connector for bus post insulator suitable for twin zebra conductor, through type, horizontal approach	Nos.	6	DEW-BPI-2-28, R0	
7	132kV Tee connector for twin zebra through, twin zebra Tee off	Nos.	3	DEW-RT-2828, R1	
8	132kV Tee connector for twin zebra through, single zebra Tee off	Nos.	10	DEW-TT-2828, R0	
9	132kV Tee connector for single zebra through, single zebra Tee off	Nos.	1	DEW-RT-2828A, R1	
10	132kV Tee connector for single panther through, single zebra Tee off	Nos.	6	DEW-RT-2821, R1	
11	PG Clamp for 7/9 SWG GI Wire	Nos.	7	DEW-PG-II, R0	

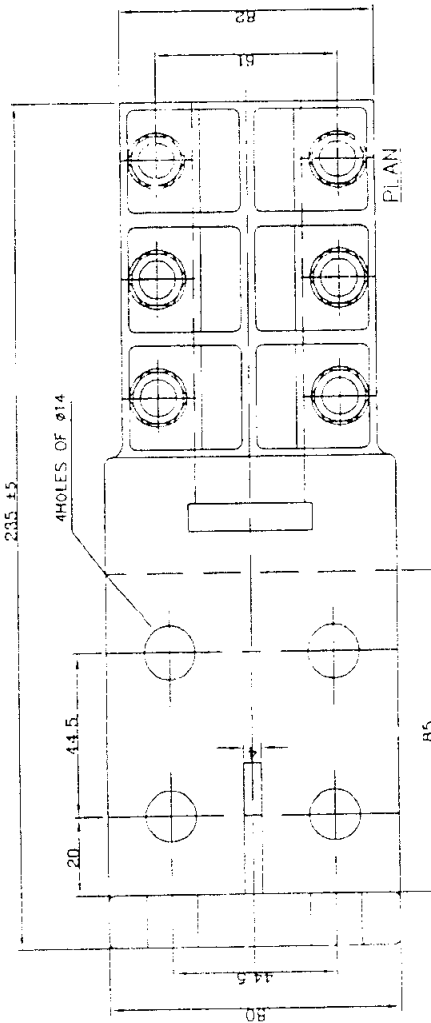
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ANNEXURE-2:

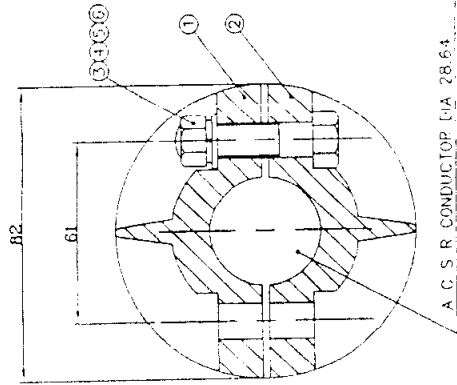
NHPC APPROVED DRAWINGS OF 132kV CONNECTORS
(11 SHEETS)



ELEVATION



PLAN



A.C.S.R. CONDUCTOR DIA 28.64

SEC. A-A

NOTE

- 1) TERMINAL CONNECTOR IS SUITABLE FOR HORIZONTAL/VERTICAL TAKL OFF

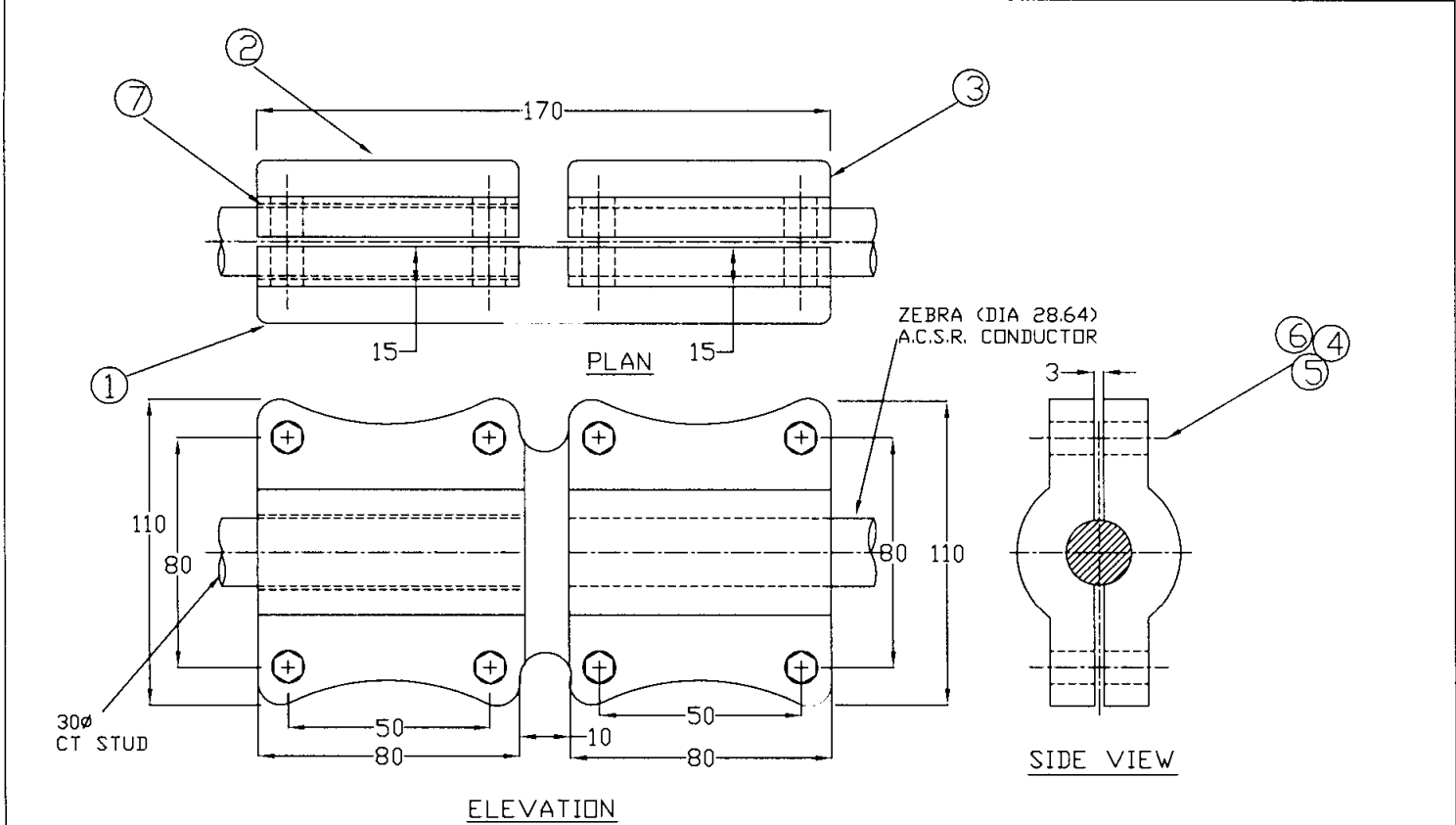
SR	DESCRIPTION	MATL	QTY	Remark
6	SPRING WASHER	SP S	6	BLACKENED
5	PLAIN WASHER	MS	6	HOG
4	HEX NUT M10	MS	6	HOG
3	HEX BOLT M10X50	MS	6	HOG
2	COVER	AL ALLOY	3	
1	CLAMP BODY	AL ALLOY	1	

WJ NO. 87011	NAME OF CUSTOMER	NHPC LIMITED
CONTRACT	PROJECT	3X15 MW NIMCO-BAZCO HEP, LEH, J&K
ORDER NO.	DATE	66 KV SWITCHYARD
REVISION	BY	DATE
1	2	3

PROJECT NO.	DATE	BY	DATE
1	2	3	4

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ALL EDGES CHAMF MAX x 45°				~ - 100 - 50	▽ - 25 - 12.5	▽▽ - 6.3 - 1.6	▽▽▽ - 0.8 - 0.4			
MACHINING DEVIATIONS WHERE NOT SPECIFIED										
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ∅	upto6	6	30	120	315	1000
upto 6	6 - 30	30-120	120-400		upto 6	6	30	120	315	1000
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2
										2000
										4000
										4000
										±2
										±3



APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 2.5 Kgs
BOLT TIGHTENING TORQUE	: 3.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO: 1-1
QTY-48 NOS

7	BI METALLIC 2MM THK	AL-CU ∅30x80 lth	1 NO
6	SPRING WASHERS	SPRING STEEL	8NDS
5	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	8NDS
4	HEX. BOLT M 10x60	M.S.H.D.G.	8NDS
3	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
2	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
1	CLAMP BODY	AL ALLOY	1 NO

REV NO	REVISION STATUS	DATE	SL.NO	DESCRIPTION	MATERIAL/SPECIFICATION	QTY
1	PROJECT: 3x15 MW NIMD BAZGD (Alchi) HEP, J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL P.O.NO: 459P313 DTD 15/10/2009		DRAWN	1-10-09	SATHE	
			CHKD	1-10-09	BABU	
			APPD	1-10-09		

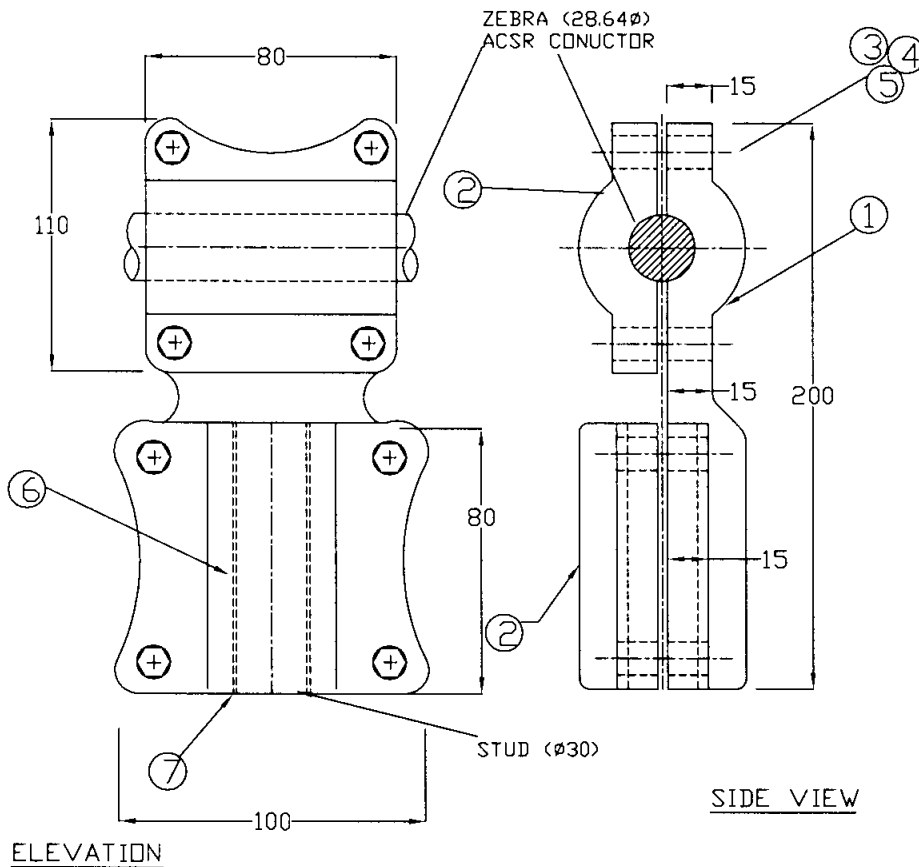
NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm
3. ALL SHARP EDGES SHALL BE ROUNDED OFF.
4. MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.

SCALE:- NTS

DRG.NO.
DEW-ST
-3028
R 1
SHEET 2 OF 7

(30)

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50	▽ - 25 - 12.5	▽▽ - 6.3 - 1.6	▽▽▽ - 0.8 - 0.4					
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto6	6 30	30 120	120 315	315 1000	1000 2000	2000 4000	4000 -
upto 6	6 - 30	30-120	120-400									
± 1°	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 2.5 Kgs
BOLT TIGHTENING TORQUE	: 3.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO: 1-2
QTY-16 NOS

			7	BI METALLIC 2MM THK	AL-CU $\phi 30 \times 80$ lth	1 NO
			6	SPRING WASHERS	SPRING STEEL	6NOS
			5	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	6NOS
			4	HEX. BOLT M 10x60	M.S.H.D.G.	6NOS
			3	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
			2	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
R 1	DRWG	12/11	1	CLAMP BODY	AL ALLOY	1 NO
REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY
PROJECT: 3x15 MW NIMOD BAZGO (Aichi) HEP, J&K. CUSTOMER: NHPC CONTRACTOR: BHEL P.D.NO: 459P313 DTD 15/10/2009			PROJECTION DRAWN: 1-10-09 SATHE CHKD: 1-10-09 BABU APPD: 1-10-09			
			DESCRIPTION:- THROUGH CONNECTOR SUITABLE FOR 30φ CT STUD/ZEBRA ACSR.			

NOTE:-

- ALL DIMENSIONS ARE IN MM.
- ASSEMBLY OVERALL DIMENSIONS ± 5 mm
- ALL SHARP EDGES SHALL BE ROUNDED OFF.
- MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.

SCALE:- NTS

DRG.NO.

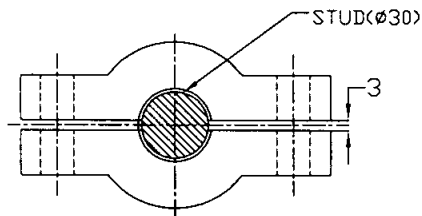
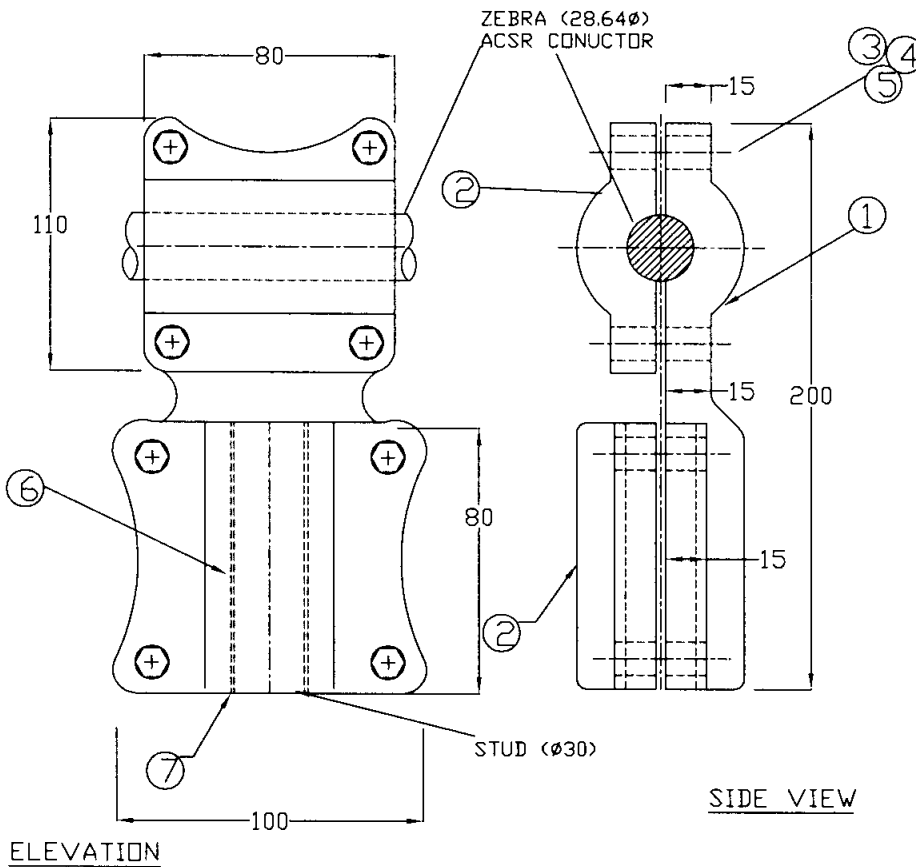
DEW-RT
-3028A

R 1

SHEET 3 OF 7

29

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50		▽ - 25 - 12.5		▽▽ - 6.3 - 1.6		▽▽▽ - 0.8 - 0.4		
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR Ø	upto6	6	30	120	315	1000	2000	4000
upto 6	6 - 30	30-120	120-400		upto 6	6	30	120	315	1000	2000	4000
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 2.5 Kgs
BOLT TIGHTENING TORQUE	: 3.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO: 1-4
QTY-13 NOS

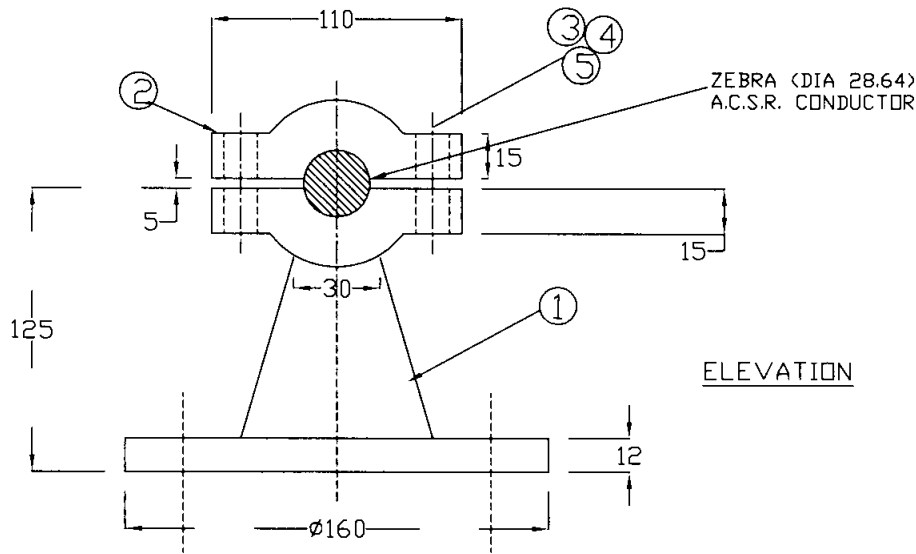
7	BI METALLIC 2MM THK	AL-CU Ø30x80 lth	1 NO
6	SPRING WASHERS	SPRING STEEL	8NDS
5	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	8NDS
4	HEX. BOLT M 10x60	M.S.H.D.G.	8NDS
3	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
2	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
1	CLAMP BODY	AL ALLOY	1 NO

REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY
1	PROJECT: 3x15 MW NIMDD BAZGO (Aichi) HEP, J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL. P.O.NO: 459P313 DTD 15/10/2009		DRAWN	1-10-09	SATHE	
			CHKD	1-10-09	BABU	
			APPD	1-10-09		

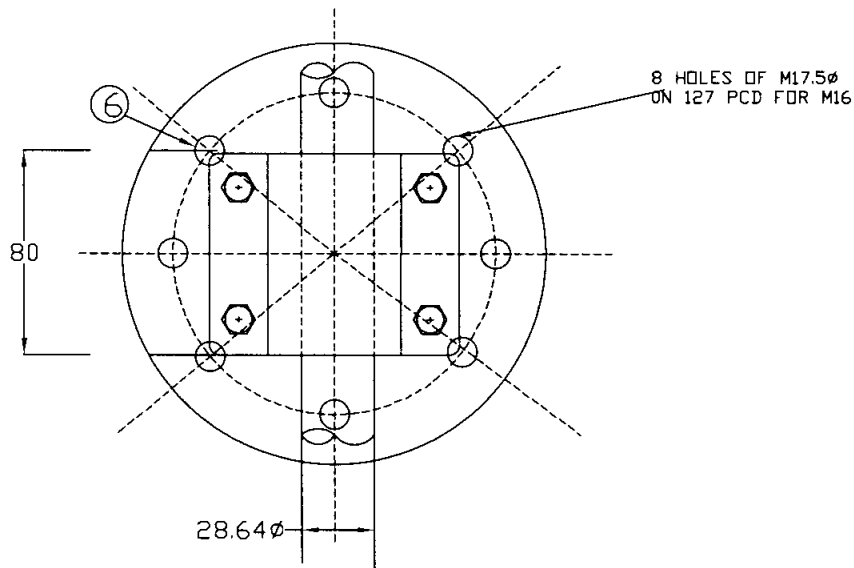
NOTE:- 1. ALL DIMENSIONS ARE IN MM. 2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm 3. ALL SHARP EDGES SHALL BE ROUNDED OFF. 4. MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.				SCALE:- NTS	
DRG.NO. DEW-RT -3028C R 1				SHEET 5 OF 7	

28

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50	▽ - 25 - 12.5	▽▽ - 6.3 - 1.6	▽▽▽ - 0.8 - 0.4					
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto6	6 30	30 120	120 315	315 1000	1000 2000	2000 4000	4000 —
upto 6	6 — 30	30—120	120—400									
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



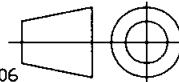
ELEVATION



PLAN

APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 3.0 Kgs
BOLT TIGHTENING TORQUE	: 2.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO.: 1-5
QTY-25 NOS

SL.NO.: 1-5 QTY-25 NOS				PLAN																						
				7																						
				6																						
				5	SPRING WASHERS	SPRING STEEL	4NOS																			
				4	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	4NOS																			
			3	HEX. BOLT M 10x60	M.S.H.D.G	4NOS																				
			2	CLAMPING PIECE	AL ALLOY Gr A6	1NOS																				
			1	CLAMP BODY	AL ALLOY	1NOS																				
REV NO	REVISION STATUS			DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY																		
 PROJECT:3x15 MW NIMOOD BAZGO (Achi) HEP,J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL. P.O.NO:4568015 DTD 21/04/2006				PROJECTION		DRAWN 1-10-09 SATHE CHKD 1-10-09 BABU APPD 1-10-09 DESCRIPTION:- POST INSULATOR SUITABLE FOR SINGLE ZEBRA ACSR.																				
																										

NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm
3. ALL SHARP EDGES SHALL BE ROUNDED OFF.
4. MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.

SCALE:- NTS

DRG.NO.

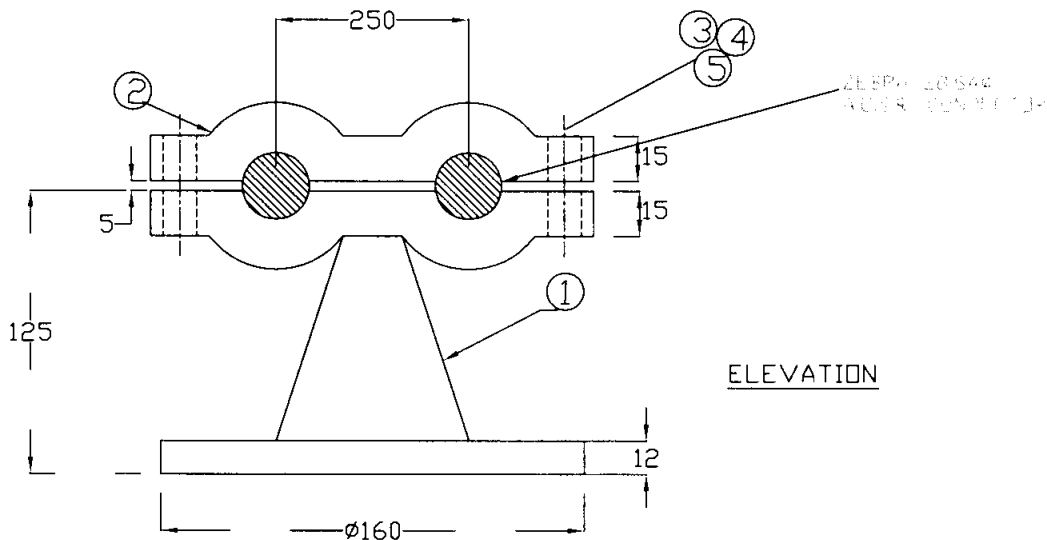
DEW-BPI-
-28

R 1

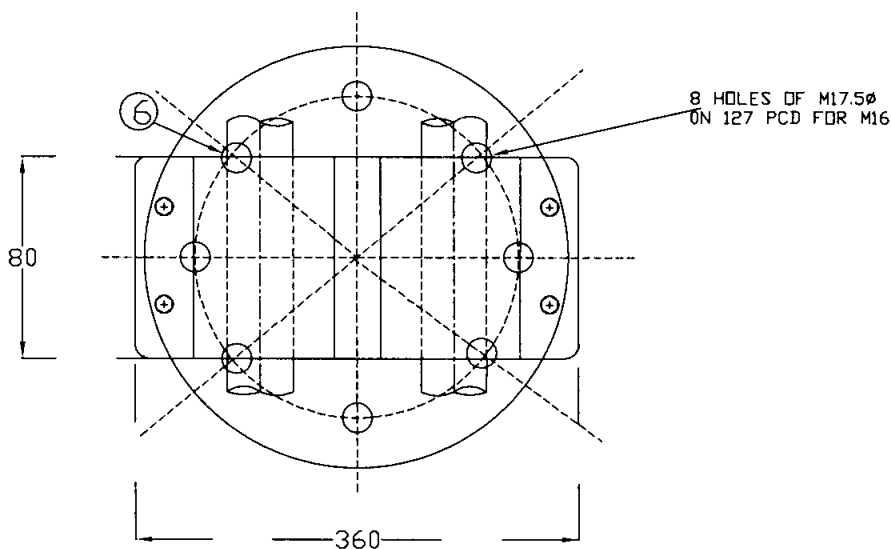
SHEET 6 OF 7

27

ALL EDGES CHAMF MAX x 45°				 - 100 - 50		 - 25 - 12.5		 - 6.3 - 1.6		 - 0.8 - 0.4		
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto6	6	30	120	315	1000	2000	4000
upto 6	6 - 30	30-120	120-400		upto 6	6	30	120	315	1000	2000	4000
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



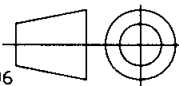
ELEVATION



PLAN

APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1200 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPRDX WEIGHT	: 4.0 Kgs
BOLT TIGHTENING TORQUE	: 2.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO.: 1-6
QTY-10 NOS

				PLAN										
SL.NO.: 1-6 QTY-10 NOS				7										
				6										
				5		SPRING WASHERS		SPRING STEEL		4NDS				
				4		HEX. NUT & PLAIN WASHERS		M.S.H.D.G.		4NDS				
				3		HEX. BOLT M 10x60		M.S.H.D.G		4NDS				
				2		CLAMPING PIECE		AL ALLOY Gr A6		1 NO				
				1		CLAMP BODY		AL ALLOY		1 NO				
REV NO		REVISION STATUS			DATE		SL.NO.		DESCRIPTION		MATERIAL/SPECIFICATION		QTY	
		PROJECT:3x15 MW NIMOD BAZGO (Alchi) HEP,J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL. P.O.NO:4568015 DTD 21/04/2006					DRAWN		1-10-09		SATHE		DESCRIPTION:-	
							CHKD		1-10-09		BABU		POST INSULATOR SUITABLE FOR TWIN ZEBRA.	
							APPD		1-10-09					

- NOTE:-
- ALL DIMENSIONS ARE IN MM.
 - ASSEMBLY OVERALL DIMENSIONS ± 5 mm
 - ALL SHARP EDGES SHALL BE ROUNDED OFF.
 - MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.

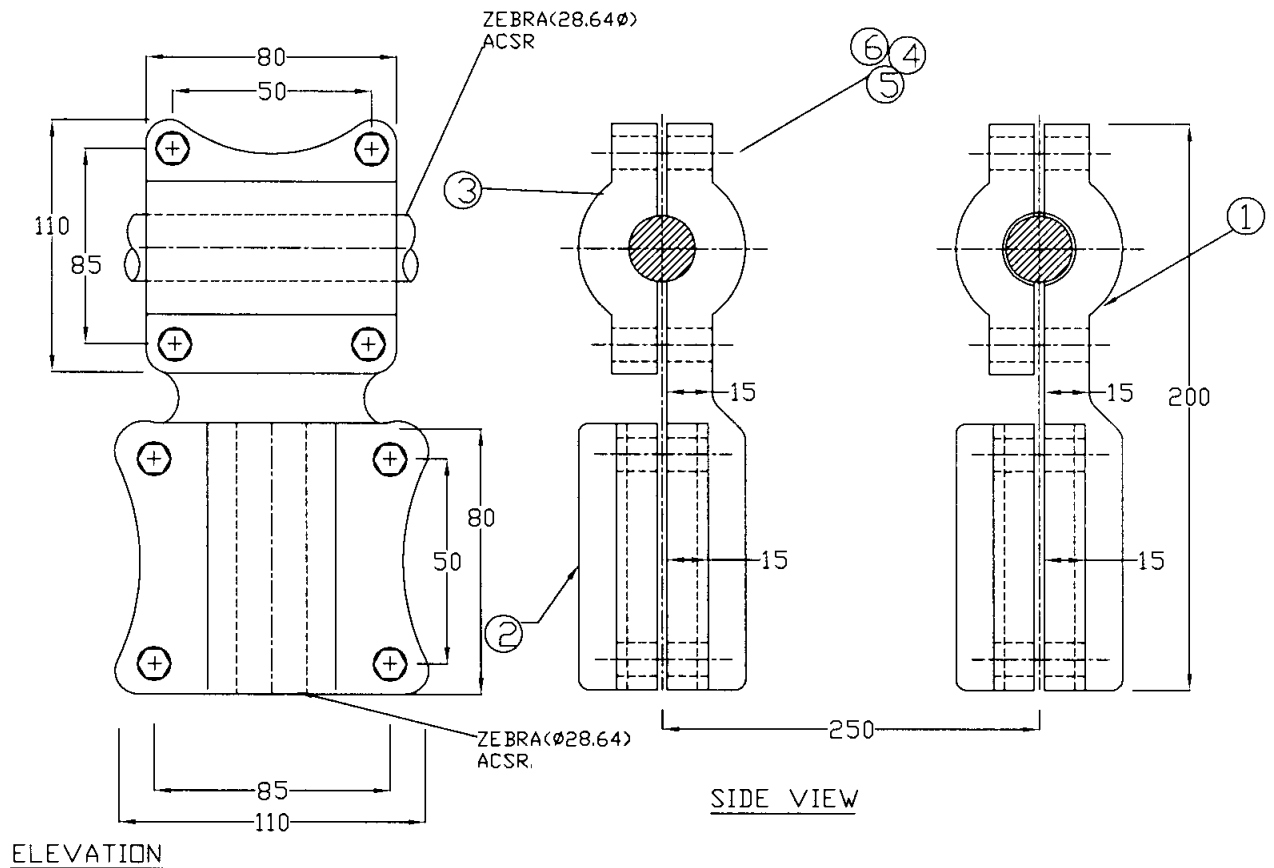
SCALE:- NTS

DRG.NO.
DEW-BPI
-2-28
R 0
BABU

ALL EDGES CHAMF MAX $\times 45^\circ$ $\sim - 100 - 50$ $\nabla - 25 - 12.5$ $\nabla\nabla - 6.3 - 1.6$ $\nabla\nabla\nabla - 0.8 - 0.4$

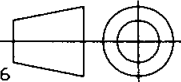
MACHINING DEVIATIONS WHERE NOT SPECIFIED

LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto 6	6	30	120	315	1000	2000	4000
upto 6	6 - 30	30-120	120-400		upto 6	6	30	120	315	1000	2000	4000
$\pm 1'$	$\pm 30'$	$\pm 20'$	$\pm 10'$		± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2	± 3



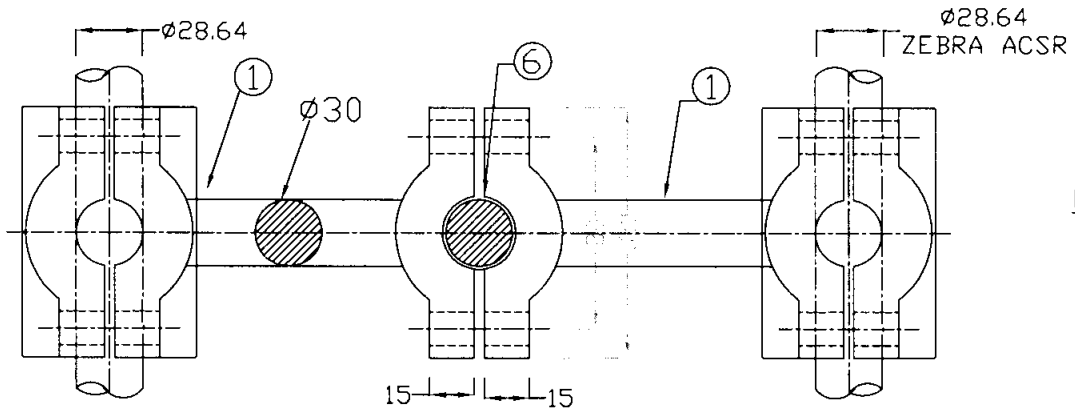
APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 4.0 Kgs
BOLT TIGHTENING TORQUE	: 2.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO: 2-1
QTY-20 NOS

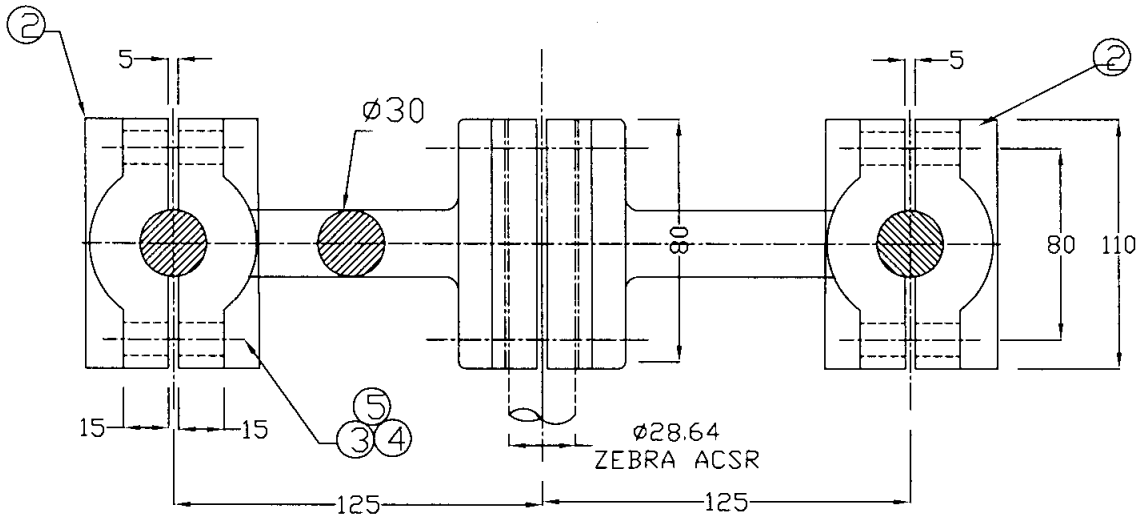
SL.NO.: 2-1 QTY-20 NOS			7				
			6	SPRING WASHERS	SPRING STEEL	16NDS	
			5	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	16NDS	
			4	HEX. BOLT M 10x60	M.S.H.D.G	16NDS	
			3	CLAMPING PIECE	AL ALLOY Gr A6	2NDS	
			2	CLAMPING PIECE	AL ALLOY Gr A6	2NDS	
			1	CLAMP BODY	AL ALLOY	2NDS	
REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY	
		PROJECT:3x15 MW NIMOD BAZGD (Alchi) HEP,J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL. P.O.NO:4568015 DTD 21/04/2006		PROJECTION 		DRAWN 1-10-09 SATHE CHKD 1-10-09 BABU APPD 1-10-09	DESCRIPTION:- TEE CONNECTOR SUITABLE FOR TWIN ZEBRA/TWIN ZEBRA.

23

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50		▽ - 25 - 12.5		∇ - 6.3 - 1.6		∇∇ - 0.8 - 0.4		
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR Ø	upto6	6	30	120	315	1000	2000	4000
upto 6	6 - 30	30-120	120-400			30	120	315	1000	2000	4000	-
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



ELEVATION



PLAN

APPLICABLE STANDARDS	IS: 5561
RATED VOLTAGE	132 K.V.
RATED CURRENT	1250 A
S.C. LEVEL	31.5 KA/1 SEC
APPROX WEIGHT	3.5 Kgs
BOLT TIGHTENING TORQUE	2.5 Kg M
TEMPERATURE RISE	35 C ABOVE 50 C AMBIENT

SL.NO: 2-2
QTY-50 NOS

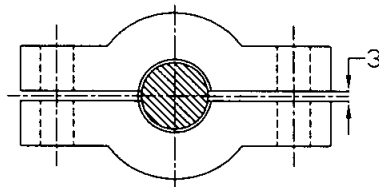
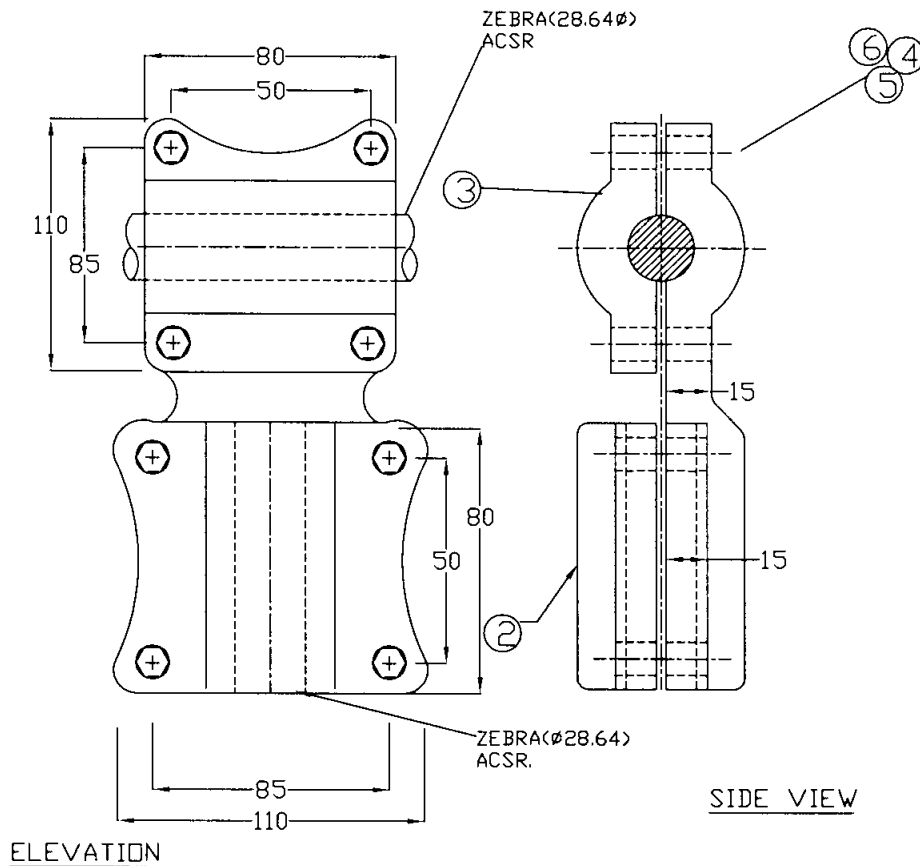
				7			
				6			
				5	SPRING WASHERS	SPRING STEEL	12NDS
				4	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	12NDS
				3	HEX. BOLT M 10x60	M.S.H.D.G.	12NDS
				2	CLAMPING PIECE	AL ALLOY Gr A6	2NDS
01	DIM	23/12	1	CLAMP BODY	AL ALLOY GR A6M	2NDS	
REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY	
 PROJECT: 3x15 MW NIMOD BAZGO (Alchi) HEP, J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL. P.O.NO: 4568015 DTD 21/04/2006				DRAWN 1-10-09 SATHE CHKD 1-10-09 BABU APPD 1-10-09	DESCRIPTION:- TEE CONNECTOR SUITABLE FOR TWIN ZEBRA/SINGLE ZEBRA		

NOTE:-
 1. ALL DIMENSIONS ARE IN MM.
 2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm
 3. ALL SHARP EDGES SHALL BE ROUNDED OFF.
 4. MINIMUM THICKNESS SHALL NOT BE LESS THAN 10 MM.
 SCALE:- NTS

DRG.NO.
 DEW-TT
 -2828
 R 0
 BABU

24

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50	▽ - 25 - 12.5	▽▽ - 6.3 - 1.6	▽▽▽ - 0.8 - 0.4					
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto6	6 30	30 120	120 315	315 1000	1000 2000	2000 4000	4000 -
upto 6	6 - 30	30-120	120-400									
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



APPLICABLE STANDARDS	: IS: 5561
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A
S.C. LEVEL	: 31.5 KA/1 SEC
APPROX WEIGHT	: 4.0 Kgs
BOLT TIGHTENING TORQUE	: 2.5 Kg M
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT

SL.NO: 2-3
QTY-22 NOS

7	BI METALLIC 2MM THK	AL-CU $\phi 30 \times 80$ lth	1 NO
6	SPRING WASHERS	SPRING STEEL	6NDS
5	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	6NDS
4	HEX. BOLT M 10x60	M.S.H.D.G.	6NDS
3	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
2	CLAMPING PIECE	AL ALLOY Gr A6	1 NO
1	CLAMP BODY	AL ALLOY	1 NO

REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY
1	PROJECT: 3x15 MW NIMOO BAZGO (Alchi) HEP, J&K. CUSTOMER: NHPCL CONTRACTOR: BHEL P.O.NO: 4568015 DTD 21/04/2006		DRAWN	1-10-09	SATHE	DESCRIPTION:- TEE CONNECTOR SUITABLE FOR SINGLE ZEBRA/SINGLE ZEBRA.
			CHKD	1-10-09	BABU	
			APPD	1-10-09		

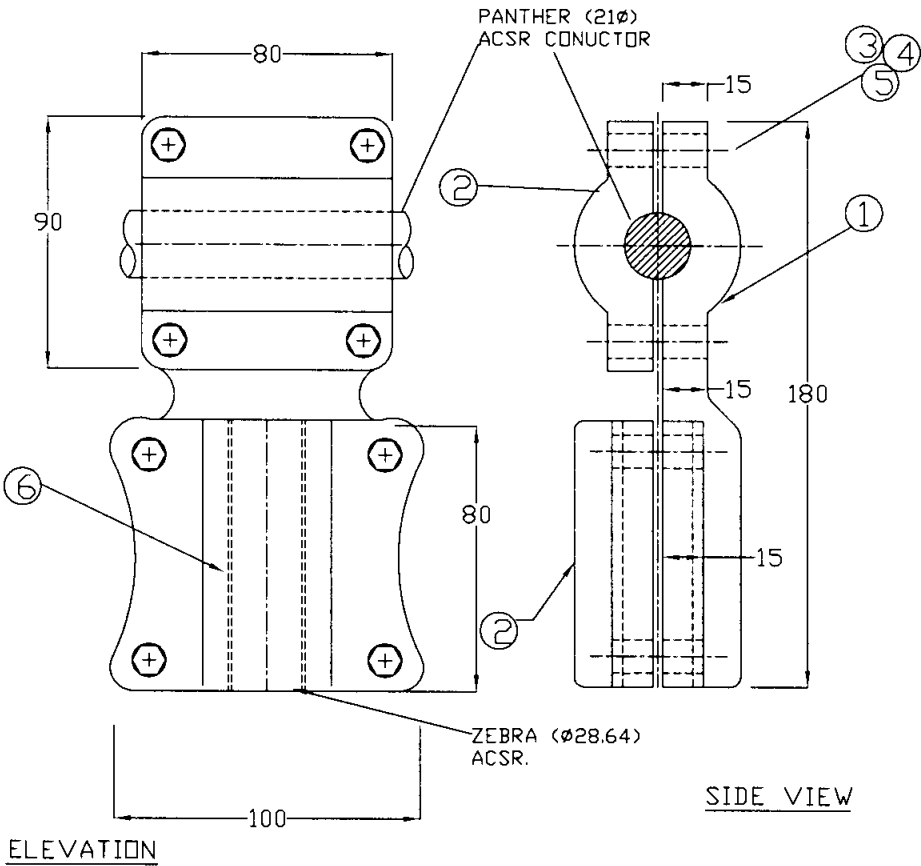
NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm
3. ALL SHARP EDGES SHALL BE ROUNDED OFF.
4. MINIMUM THICKNESS SHALL
NOT BE LESS THAN 10 MM.

SCALE:- NTS

DRG.NO.
DEW-RT
-2828A
R 1
SHEET 4 OF 11

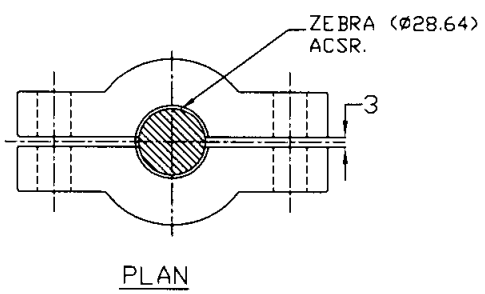
23

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50		V - 25 - 12.5		▽▽ - 6.3 - 1.6		▽▽▽ - 0.8 - 0.4		
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR Ø	upto6	6	30	120	315	1000	2000	4000
upto 6	6 - 30	30-120	120-400			30	120	315	1000	2000	4000	-
± 1'	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



ELEVATION

SIDE VIEW



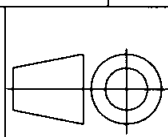
PLAN

APPLICABLE STANDARDS	: IS: 5561.
RATED VOLTAGE	: 132 K.V.
RATED CURRENT	: 1250 A.
S.C. LEVEL	: 31.5 KA/1 SEC.
APPROX WEIGHT	: 3.0 KGS.
BOLT TIGHTENING TORQUE	: 2.5 Kg M.
TEMPERATURE RISE	: 35 C ABOVE 50 C AMBIENT.

SL NO- 2-4
QTY:- 22 NOS

SL NO- 2-4 QTY:- 22 NOS			7			
			6	BI METALLIC	AL-CU 2 MM THK	1 NO
			5	SPRING WASHERS	SPRING STEEL	8NOS
			4	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	8NOS
			3	HEX. BOLT M 10x60	M.S.H.D.G.	8NOS
			2	CLAMPING PIECE	AL ALLOY A6M	2NOS
			1	CLAMP BODY	AL ALLOY A6M	1 NO
REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY

PROJECT: 132 KV S/S AT BARAMURA.
CUSTOMER: NHPC
CONTRACTOR: BHEL.
P.O.NO:439P314 DTD 15/10/2009



DRAWN	1-10-09	SATHEE
CHKD	1-10-09	BABU
APPD	1-10-09	

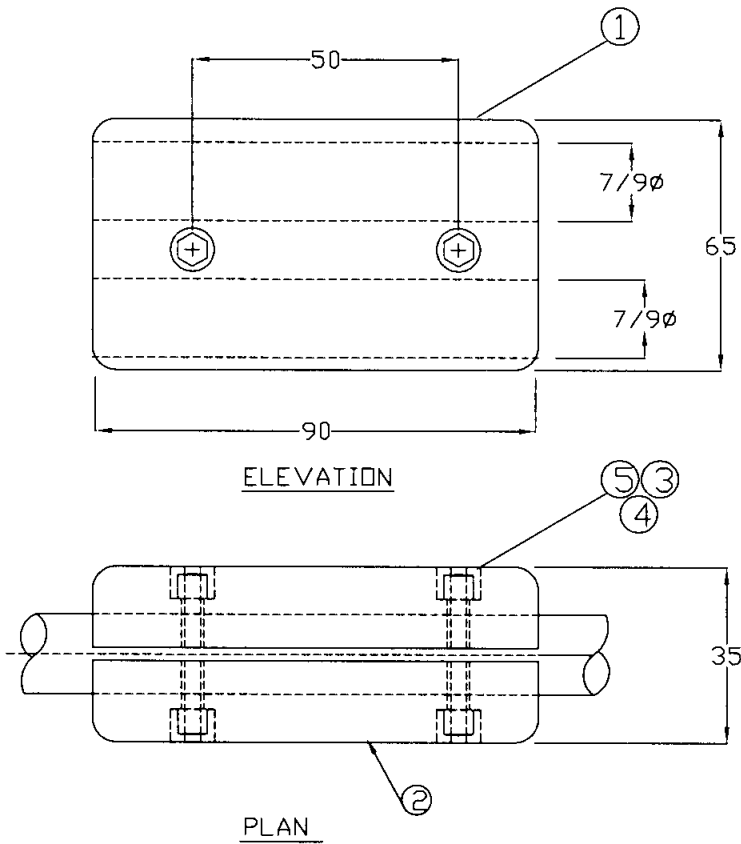
DESCRIPTION:-
TEE CONNECTOR SUITABLE FOR ZEBRA/PANTHER ACSR.

NOTE:-
1. ALL DIMENSIONS ARE IN MM.
2. ASSEMBLY OVERALL DIMENSIONS ± 5 mm
3. ALL SHARP EDGES SHALL BE ROUNDED OFF.
4. MINIMUM THICKNESS OF CURRENT CARRYING PART SHALL NOT BE LESS THAN 10MM.
SCALE: NTS.

DRG.NO.
DEW-RT
2821
R 1

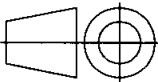
22

ALL EDGES CHAMF MAX x 45°				~ - 100 - 50	▽ - 25 - 12.5	▽▽ - 6.3 - 1.6	▽▽▽ - 0.8 - 0.4					
MACHINING DEVIATIONS WHERE NOT SPECIFIED												
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR ϕ	upto6	6 30	30 120	120 315	315 1000	1000 2000	2000 4000	4000 —
upto 6	6 - 30	30-120	120-400									
± 1°	± 30'	± 20'	± 10'		±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3



APPLICABLE STANDARDS	IS: 5561.
RATED VOLTAGE	132 K.V.
RATED CURRENT	N/A
S.C. LEVEL	N/A.
APPROX WEIGHT	0.250 KGS.

SL NO- 2-9
QTY:- 45 NOS

SL NO- 2-9 QTY:- 45 NOS			7			
			6			
			5	SPRING WASHERS	SPRING STEEL	2NDS
			4	HEX. NUT & PLAIN WASHERS	M.S.H.D.G.	2NDS
			3	HEX. BOLT M 10x60	M.S.H.D.G.	2NDS
			2	CLAMPING PIECE	M.S.H.D.G.	1 ND
		1	CLAMP BODY	M.S.H.D.G.	1 ND	
REV NO	REVISION STATUS	DATE	SL.NO.	DESCRIPTION	MATERIAL/SPECIFICATION	QTY
		PROJECT: 132 KV S/S AT BARAMURA. CUSTOMER: NHPC CONTRACTOR: BHEL. P.O.NO:439P314 DTD 15/10/2009				DESCRIPTION:- P.G CLAMP SUITABLE FOR 7/9 MM G.I. WIRE.
		PROJECTION	DRAWN	1-10-09	SATHEE	
			CHKD	1-10-09	BABU	
			APPD	1-10-09		