

Volume - I

Tender Notification for

Rate contract for supply of various types of hardware items

CMC/BR/22-23/RB/PR/GP/1007

Due Date for Submission of Bids : 01.04.2022

BSES RAJDHANI POWER LTD (BRPL)

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Website: www.bsesdelhi.com

Section - I

REQUEST FOR QUOTATION

Tender Notification: CMC/BR/22-23/RB/PR/GP/1007
Rate contract for supply of various types of hardware items

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BOX 27

1.00 Event Information

1.01 BRPL invites Sealed tenders for supply of pole mounted distribution boxes & 1PH meter boxes from the manufacturers. The bidder must qualify the technical requirements as specified in clause 2.0 stated below. The sealed envelopes shall be duly superscribed as — **“BID OF RATE CONTRACT FOR SUPPLY OF VARIOUS TYPES OF HARDWARE ITEMS TENDER NOTICE : CMC/BR/22-23/RB/PR/GP/1007 DUE FOR SUBMISSION ON DT. 01.04.2022”**.

Sl. No	Item Description	Specification	UOM	Requirement (Total Qty)	Estimated Cost (Rs)
BRPL,DELHI					
1	BRKT,ANG,MS	SECTION V	NOS	10,000	3.5 CR
2	BRKT,ANG,L		NOS	7700	
3	ANG,SLT,GI ANG;MS;P END		NOS	8000	
4	CLMP,ELEC,SVC DEAD END CLMP		NOS	2,00,000	
5	CLMP,SUSPN,25 TO 125SQ MM		NOS	15,000	
6	CLMP,ELEC,DEAD END CLMP;35 to 70SQ MM		NOS	5000	
7	CLMP,ELEC,DEAD END;95 to 125SQ MM		NOS	5500	
8	CLMP,ELEC,FDR PILLAR;4CX25SQMM CBL		NOS	4,00,000	
9	CLMP,HOLDNG,CBL;GI;A;FOR 2X10 & 2X25CBL		NOS	15,00,000	
10	SDLE,CLMP ;4X50SQMM;GI;SVC CBL		NOS	4000	
11	SDLE,CLMP;4X150SQMM;GI;SVC CBL		NOS	1000	
12	SDLE,CLMP;4X300SQMM;GI;SVC CBL		NOS	1000	
13	HOK,EYE HOK FOR PCC P;MS GALVANIZED		NOS	24,000	
14	CLMP,MNTG FOR PCC P;EYE HOK		NOS	18,000	
15	RD,ANC,MS GALVANIZED		NOS	1400	
16	HOK,RND;EXPAN SCRW CLOSED HOK ANC BLT		NOS	10,000	
17	HOK,RND;EXPAN SCRW CLOSD HOK ANC BLT SMAL		NOS	65,000	
18	FSTNR,ANC;M8X 60MM		NOS	45,000	
19	SCRW,16MM;600MM;TENSION		NOS	600	
20	SCRW,20MM;750MM;TENSION		NOS	1200	
21	BRKT,ANG,2LNE CRSS ARM;GALVANIZED MS		NOS	12,000	
22	CLLR,STAY;GALVANIZED MS;FOR PCC POLES		NOS	1500	

Note: Quantity may vary to any extent of +/- 30% of above mentioned total quantity.

- 1.02** The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft/Pay Order of **Rs.1180/ with GST-**, drawn in favour of **BSES RAJDHANI POWER LTD**, payable at New Delhi. The sale of tender documents will be issued from **12.03.2022** onwards on all working days upto **01.04.2022**. The tender documents can also be downloaded from the website "**www.bsedelhi.com**".

In case tender papers are downloaded from the above website, then the bidder has to enclose a demand draft covering the cost of bid documents as stated above in a separate envelope with suitable superscription —"Cost of Bid Documents: Tender **Notice Ref: CMC/BR/22-23/RB/PR/GP/1007**". This envelope should accompany the bid Documents.

- 1.03** Offers will be received upto **1500 Hrs. on dt. 01.04.2022** as indicated earlier and will be opened at the address given below dt **01.04.2022 at 1645 Hrs.** in the presence of authorized representatives of the bidders.. The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the due date.

**HEAD OF THE DEPARTMENT, 1st FLOOR, 'C' BLOCK,
CONTRACTS & MATERIALS DEPARTMENT, BSES RAJDHANI POWER LTD,
BSES BHAWAN, NEHRU PLACE, NEW DELHI-110019.**

- 1.04** BRPL reserves the right to accept/reject any or all Tenders without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. Tender will be summarily rejected if:

- i) Earnest Money Deposit (EMD) @ 2% (Two percent) of the Tender value i.e **Rs 7,00,000/-** is not deposited in shape of Bank Draft in favour of BSES RAJDHANI POWER LTD, payable at New Delhi or Bank Guarantee executed on favour of BSES RAJDHANI POWER LTD.
- ii) The offer does not contain "FOR, NEW DELHI price indicating break-up towards all taxes & duties".
- iii) Complete Technical details are not enclosed.
- iv) Tender is received after due time due to any reason.

1.05 BRPL reserves the right to reject any or all bids or cancel/withdraw the invitation for bids without assigning any reason whatsoever and in such case no bidder/intending bidder shall have any claim arising out of such action.time of placing purchase orders.

2.0 Qualification Criteria:-

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding . Bidders who meet following requirements will be considered as successful bidder and management has a right to disqualify those bidders who do not meet these requirements.

1. Bidder should have Average Annual Sales Turnover of Rs 50 Lakh or more in last 3 years FY. Copy of audited P&L account / CA certified statement to be submitted along with the bid.
2. The bidder should have own manufacturing / fabricating facilities (A self undertaking with complete address of manufacturing facility has to be submitted along with the bid)
3. The bidder should have executed purchase orders for supply of similar hardware items worth Rs 50 lakhs or more during last 03 years from the tender due date . (Copy of POs / completion certificate to be submitted in this regards).
4. The bidder must have in house testing facilities for acceptance tests as per BRPL specifications or must have arrangement of getting materials tested from NABL accredited lab prior to deliveries. (Bidders have to submit the undertaking in this regard).
5. In case of new bidders (not enlisted in BSES), Factory Inspection & evaluation shall be carried out to ascertain bidders manufacturing capabilities and quality procedures. BRPL reserves the right to assess the capabilities /installed capacity.
6. The bidder must submit an undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any major utilities/SEB's/other reputed companies.
7. The Bidder shall submit an undertaking "**No Litigation**" is pending with the BRPL and Group Companies.
8. The bidder must have valid PAN No., GST Registration Number, in addition to other statutory compliances. The bidder must submit the copy of registrations and submit an undertaking that the bidder shall comply all the statutory compliances as per the laws/rules etc. before the start of the work.

The manufacturer should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about **No Objection** to verify his manufacturing facility as a part of tender process.

3.00 Bidding and Award Process

Bidders are requested to submit their questions regarding the RFQ or the bidding process after review of this RFQ. BRPL response to the questions raised by various bidders will be distributed to all participating bidders through website .

a. Time schedule of the bidding process

The bidders on this RFQ package should complete the following within the dates specified as under:

S. No.	Steps	Activity description	Due date
1	Technical Queries	All Queries related to RFQ	On or before 01.04.2022 1500 Hrs
2	Technical Offer	Documentary evidence in support of qualifying criteria. Technical Literature/GTP/Draw ings/Type test report if any etc Testing facilities Any other relevant document Acceptance to commercial terms & conditions viz delivery Schedule/ Period , Payment terms , BG etc. Quality assurance plan , Deviation from the specs , list of plant & machinery and testing equipments Unpriced items	01.04.2022, 1500 HRS
3	Commercial Officer	Prices for pole mounted distribution boxes and. Break up regarding basic price and taxes. Delivery commitment	01.04.2022, 1500 HRS
4	Performance Guarantee Quality System Report	As per RFQ	Only for successful bidders
6	Opening of technical bid	As per RFQ	01.04.2022, 1645 HRS

This is a two part bid process. Bidders are to submit the bids a) Technical Bid b) Price Bid. Both these parts should be furnished in separate sealed covers superscripting specification no. validity etc, with particulars as **Part-I Technical Particulars & Commercial Terms & Conditions** and **Part-II "Financial bid"** and these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.

Bidders are requested to submit the bid in one original plus one copy in duplicate.

The Part Technical Bid-I Eligibility and Technical Bid should not contain any cost information whatsoever. In case of Bids where the qualification requirements, technical suitability and other requirements are found to be inadequate, Part-II "Financial Bid" will be returned unopened.

The Part Financial Bid-II. Qualified bidders will be intimated after technical evaluation of all the bids is completed. The date and time of same shall be intimated in due course to the qualified bidders. Notwithstanding anything stated above, the Purchaser reserves the right to assess bidders capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

4.00 Award Decision

Purchaser intends to award the business on a lowest bid basis, so suppliers are encouraged to bid competitively. The decision to place purchase order / letter of acceptance solely depends on purchaser on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that Purchaser may deem relevant.

The purchaser reserves all the rights to award the contract to one or more bidders so as to meet the delivery requirement or nullify the award decision without any reason.

BSES reserves the right to split the tender quantity amongst techno commercially qualified bidders on account of delivery requirement in tender, quantity under procurement etc.

Splitting of tender quantity amongst more than one bidder shall be governed by below mentioned guidelines:

- If the quantity is to be split among 2 bidders, it will be done in the ratio of 70:30 on L1 price.
- If the quantity is to be split among 3 bidders, it will be done in the ratio of 60:25:15 on L1 price.
- In case quantity needs to be distributed and order splitting is required, distribution of quantity shall be maximum among three (3) bidders.

In the event of your bid being selected by purchaser (and / or its affiliates) and your subsequent DEFAULT on your bid; you will be required to pay purchaser (and / or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in RFQ.

In case any supplier is found unsatisfactory during the delivery process, the award will be cancelled and BRPL reserves the right to award other suppliers who are found fit.

Quantity Variation: The purchaser reserves the rights to vary the quantity by +/- 30% of the tender quantity.

Repeat Order : BRPL reserves the right to place repeat order at the same rates & terms and conditions as per this tender against additional requirement subject to mutual agreement between BRPL & supplier.

5.00 Market Integrity:

We have a fair and competitive marketplace. The rules for bidders are outlined in the Terms & Conditions. Bidders must agree to these rules prior to participating. In addition to other remedies available, we reserve the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the Terms & Condition. Bidders who violate the marketplace rules or engage in behavior that disrupts the fair execution of the marketplace restricts a bidder to length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace.
- Breach of the terms of the published in Request For Quotation.

6.00 Supplier Confidentiality

All information contained in this RFQ is confidential and may not be disclosed, published or advertised in any manner without written authorization from BRPL. This includes all bidding information submitted.

All RFQ documents remain the property of BRPL and all suppliers are required to return these documents to BRPL upon request.

Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

7.0 Contact Information

All communication as regards this RFQ shall be made (i) in English, (ii) in writing and (iii) sent by mail, facsimile to

	Technical	Commercial
Contact Name	Mr. Sheshadri Krishnapura Copy to Mr. Rakesh Bansal	Mr. Rakesh Bansal
Address	BSES RAJDHANI POWER LTD, 2 nd Floor, B Block, Nehru Place, New Delhi - 110019	C&M Dept 1 st floor, D Block, BSES Rajdhani Power Limited, BSES Bhawan, Nehru Place, New Delhi -110019
Email-ID	sheshadri.krishnapura@relianceada.com	rakesh.bansal@relianceada.com

SECTION – II

INSTRUCTION TO BIDDERS (ITB)

Rate contract for supply of various types of hardware items

CMC/BR/22-23/RB/PR/GP/1007

A. GENERAL

1.00 BSES Rajdhani power Ltd , hereinafter referred to as the Purchaser" are desirous of implementing the various Systems Improvement/Repair & Maintenance works at their respective licensed area in Delhi The Purchaser has now floated this tender for procurement of pole mounted distribution boxes as notified earlier in this bid document

2.00 SCOPE OF WORK

The scope shall include Design, Manufacture, Testing at works conforming to the Technical Specifications enclosed along with Packing, Forwarding, Freight and Unloading and proper stacking at Purchaser's stores.

3.00 DISCLAIMER

- 3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/Bidding Consortium should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.
- 3.02 Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise arising in anyway from the selection process for the Supply.
- 3.03 Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy itself that Documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.
- 3.04 This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

4 COST OF BIDDING

The Bidder shall bear all cost associated with the preparation and submission of its Bid and Purchaser will in no case be responsible or liable for those costs. **Further the purchaser has the right to get sample of distribution box tested by any reputed independent test lab (approved by BRPL) at the cost of bidder.**

B. BIDDING DOCUMENTS

5.0 BIDDING DOCUMENTS

5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

Volume -I

- | | |
|--------------------------------------|-----------------|
| a) Request for Quotation (RFQ) | - Section – I |
| b) Instructions to Bidders (ITB) | - Section – II |
| c) General Conditions of Contract | - Section - III |
| d) Quantity and delivery requirement | - Section –IV |
| e) Technical Specifications (TS) | - Section –V |

Volume - II

- | | |
|----------------------------------|-----------------|
| a) Bid Form | - Annexure –I |
| b) Bid Format | - Annexure –II |
| c) Price Schedule | - Annexure –III |
| d) Commercial Terms & Conditions | - Annexure - IV |
| e) No Deviation Sheet | - Annexure V |
| f) Qualification Criterion | - Annexure VI |

5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and specifications. Failure to furnish all information required by the Bidding documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will may result in the rejection of the Bid.

6.0 AMENDMENT OF BIDDING DOCUMENTS

6.01 At any time prior to the deadline for submission of Bids, the Purchaser may for any reasons, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by Amendment.

6.02 The Amendment shall be part of the Bidding Documents, pursuant to Clause 5.01, and it will be notified in writing by Fax/e-mail to all the Bidders who have received the Bidding Documents and confirmed their participation to Bid, and will be binding on them .

6.03 In order to afford prospective Bidders reasonable time in which to take the Amendment into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids.

C. PREPARATION OF BIDS

7.0 LANGUAGE OF BID

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

8.0 DOCUMENTS COMPRISING THE BID

The Bid prepared and submitted by the Bidder shall comprise the following components:

- a) Bid Form ,Price & other Schedules (STRICTLY AS PER FORMAT) and Technical Data Sheets completed in accordance with Clause 9.0, 10.0, 11.0 and Technical Specification;
- b) All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.
- c) **Power of Attorney or Authorization letter indicating that the person(s) signing the Bid have the authority to sign the Bid and thus that the Bid is binding upon the Bidder during the full period of its validity, in accordance with clause 12.0.**

9.0 BID FORM

9.01 The Bidder shall complete an "Original" and another one "Copy" of the Bid Form and the appropriate Price & Other Schedules and Technical Data Sheets.

9.02 EMD

Pursuant to Clause 8.0(b) above, the bidder shall furnish, as part of its bid, a EMD amounting to 2% of the total bid value (FOR Destination) i.e **Rs 7,00,000/-**. The EMD is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture.

The EMD shall be denominated in the currency of the bid, and shall be in the following form :

- a) A bank guarantee issued by any scheduled bank strictly as per the form at enclosed and shall be valid for a period of thirty (30) days beyond the validity of the bid
- b) Bank Draft in favour of BSES RAJDHANI POWER LTD, payable at New Delhi.

Unsuccessful bidders' EMD will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity.

The successful bidder's EMD will be discharged upon furnishing the performance security. The EMD may be forfeited :

- a) if the Bidder:
 - i) withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form ; or
- b) in the case of a successful Bidder, if the Bidder fails:
 - i) to sign the Contract, or
 - ii) to furnish the required performance security.

10.0 BID PRICES

- 10.01 Bidders shall quote for the entire Scope of Supply with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, Transportation to site, all in accordance with the requirement of Bidding Documents. The Bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total Price.
- 10.02 The prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during execution of the supply work, breakup of price constituents, should be there.

Prices quoted by the Bidder shall be—Firm "and not subject to any price adjustment during the performance of the Contract. A Bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.

11.0 BID CURRENCIES

Prices shall be quoted in **Indian Rupees (INR) only.**

12.0 PERIOD OF VALIDITY OF BIDS

- 12.01 Bids shall remain valid for **120 days** post bid date.

- 12.02 Notwithstanding Clause 12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing by Fax/e-mail.

13.0 ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions of Clause 22.03 & 22.04 regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Documents.

14.0 FORMAT AND SIGNING OF BID

- 14.01 The original Bid Form and accompanying documents (as specified in Clause 9.0), clearly marked "Original Bid", plus one copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0. In the event of any discrepancy between the original and the copies, the original shall govern.
- 14.02 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid.
- 14.03 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D SUBMISSION OF BIDS

15.0 SEALING AND MARKING OF BIDS

- 15.01 Bid submission: One original & one Copy (hard copies) of all the Bid Documents shall be sealed and submitted to the Purchaser before the closing time for submission of the bid.
- 15.02 The Technical Documents and the EMD shall be enclosed in a sealed envelope and the said envelope shall be superscribed with —**Technical & EMD**". The Financial bid shall be inside another sealed envelope with superscription — **Financial Bid** ". Both these envelopes shall be sealed inside another big envelope. All the envelopes should bear the Name and Address of the Bidder and marking for the Original and Copy. The envelopes should be superscribed with —**Tender Notice No, Due date of submission, Tender opening date.**
- 15.03 The Bidder has the option of sending the Bids in person. Bids submitted by Telex/Telegram /Fax will not be accepted. No request from any Bidder to the Purchaser to collect the proposals from Airlines/Cargo Agents etc shall be entertained by the Purchaser.
- 15.04 The bidder, along with the bid documents has to submit **Two samples along with detailed GTP & Drawings**. The sample should clearly indicate (i) Name of the bidder (ii) Tender No. (iii) Group & Item Sr. No etc. The samples shall be submitted at BRPL 33 KV Grid Substation, Nizamuddin (West), Near Nizamuddin Dargah New Delhi-110013

16.0 DEADLINE FOR SUBMISSION OF BIDS

- 16.01 The original Bid, together with the required copies, must be received by the Purchaser at the address specified not **later than 1530 HRS on 01.04.2022**
- 16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 9.0, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended

17.0 ONE BID PER BIDDER

Each Bidder shall submit only one Bid either by itself, or as a partner in a Joint Venture. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.0 LATE BIDS

Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0, will be declared "Late" and rejected and returned unopened to the Bidder.

19.0 MODIFICATIONS AND WITHDRAWAL OF BIDS

19.01 The Bidder is not allowed to modify or withdraw its Bid after the Bid's submission.

E. EVALUATION OF BID

20.0 PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Purchaser's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

21.0 CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of Bids, the Purchaser may, at its discretion, ask the bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

22.0 PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

22.01 Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.

22.02 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

22.03 Prior to the detailed evaluation, Purchaser will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

22.04 Bid determined as not substantially responsive will be rejected by the Purchaser and/or the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

23.0 EVALUATION AND COMPARISON OF BIDS

23.01 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.

23.02 The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes: In the first stage, the Bids would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would be evaluated. Subsequently, the Financial Proposals along with supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation .

23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner

and to the extent indicated in this Clause:

(a) Supply Schedule

(b) Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents.

The cost of all quantifiable deviations and omissions from the specification , terms and conditions specified in Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

23.04 Any adjustments in price, which result from the above procedures shall be added for the purposes of comparative evaluation only to arrive at an "Evaluated Bid Price". Bid Prices quoted by Bidders shall remain unaltered.

F. AWARD OF CONTRACT

24.0 CONTACTING THE PURCHASER

24.01 From the time of Bid submission to the time of contract award, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, it should do so in writing.

24.02 Any effort by a Bidder to influence the Purchaser and/or in the Purchaser's decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder's Bid.

25.0 THE PURCHASER 'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at anytime prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

26.0 AWARD OF CONTRACT

The Purchaser will award the Contract to the successful Bidder whose Bid has been Determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

27.0 THE PURCHASER 'S RIGHT TO VARY QUANTITIES

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the numbers/quantities without any change in terms and conditions during the execution of the Order.

28.0 LETTER OF INTENT/ NOTIFICATION OF AWARD

The letter of intent/ Notification of Award shall be issued to the successful Bidder whose bids have been considered responsive, techno-commercially acceptable and evaluated to be the lowest (L1). The successful Bidder shall be required to furnish a letter of acceptance within 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 PERFORMANCE BANK GUARANTEE

The successful Bidder shall furnish the Performance Bank Guarantee for an amount of 5% (Five percent) of the Contract Price in accordance with the format provided. The Performance Bond shall be valid for a period of eighteen months (12) from the date of the commissioning or twenty four months (18) from the date of receipt of material (last consignment) at site/stores whichever is earlier plus 3 months towards claim period. Upon submission of the performance security, the EMD shall be released.

30.0 CORRUPT OR FRAUDULENT PRACTICES

30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:

(a) Defines, for the purposes of this provision , the terms set forth below as follows:

- i) "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them ,or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
- ii) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders(prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition .

(b) Will reject a proposal forward if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question ;

(c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for,or in executing, a contract.

30.02 Furthermore, Bidders shall be aware of the provision stated in the General Conditions of Contract.

SECTION – III
GENERAL CONDITIONS OF CONTRACT (GCC)

Rate contract for supply of various types of hardware items

CMC/BR/22-23/RB/PR/GP/1007

1.0 General Instructions

- 1.01 All the Bids shall be prepared and submitted in accordance with these instructions.
- 1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.
- 1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/sold to the other party.
- 1.04 The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.
- 1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition Of Terms

- 2.01 "Purchaser" shall mean BRPL Limited, on whose behalf this bid enquiry is issued by its authorized representative / officers.
- 2.02 "Bidder" shall mean the firm who quotes against this bid enquiry issued by the Purchaser. "Supplier" or "Supplier" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of Acceptance" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.
- 2.03 "Supply" and " " shall mean the Scope of Contract as described.
- 2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Condition, Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.
- 2.05 "Letter of Acceptance" shall mean the official notice issued by the Purchaser notifying the Supplier that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Acceptance" issued by the Purchaser shall be binding on the "Supplier" The date of Letter of Acceptance shall be taken as the effective date of the commencement of contract.
- 2.06 "Month" shall mean the calendar month and "Day" shall mean the calendar day.
- 2.07 "Codes and Standards" shall mean all the applicable codes and standards as indicated in the Specification.
- 2.08 "Offer Sheet" shall mean Bidder's firm offer submitted to BRPL in accordance with the specification.
- 2.09 "Contract" shall mean the "Letter of Acceptance" issued by the Purchaser.
- 2.10 "Contract Price" shall mean the price referred to in the "Letter of Acceptance".
- 2.11 "Contract Period" shall mean the period during which the "Contract" shall be executed as agreed between the Supplier and the Purchaser in the Contract inclusive of extended contract period for reason beyond the control of the Supplier and/or Purchaser due to force majeure.

2.12 "Acceptance" shall mean and deemed to include one or more of the following as will be stipulated in the specification:

- a) The written acceptance of material by the inspector at suppliers works to ship the materials.
- b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
- c) Where the scope of the contract includes supply, acceptance shall mean issue of necessary equipment / material takeover receipt after installation & commissioning and final acceptance.

3.0 Contract Documents & Priority

- 3.01 Contract Documents: The terms and conditions of the contract shall consist solely of these RFQ conditions and the offer sheet.
- 3.02 Priority: Should there be any discrepancy between any term hereof and any term of the Offer Sheet, the terms of these RFQ shall prevail.

4.0 Scope Of Supply -General

- 4.01 The "Scope of Supply" shall be on the basis of Bidder's responsibility, completely covering the obligations, responsibility and supplies provided in this Bid enquiry whether implicit or explicit.
- 4.02 Bidder shall have to quote for the Bill of quantities as listed in Section – IV of this RFQ.
- 4.03 Quantity variation and additional requirement if any shall be communicated to successful bidder during project execution.
- 4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

- 5.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in house inspection department which are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.
- 5.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the supplier is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The supplier to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from BRPL.
- 5.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the supplier of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.
- 5.04 On completion of manufacturing the items can be dispatched only after issue of shipping release by the Purchaser.

5.05 All testing and inspection shall be done without any extra cost.

5.06 Purchaser reserve the right to send any material out of the supply to any recognized laboratory for testing and the cost of testing shall be borne by the Purchaser. In case the material is found not in order with the technical requirement / specification, the charges along with any other penalty which may be levied is to be borne by the bidder. To avoid any complaint the supplier is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidders representative.

5.07 Bidder has to sign quality agreement before supply of the material.

6.0 Packing, Packing List & Marking

6.01 Packing: Supplier shall pack or shall cause to be packed all Commodities in boxes and containers and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BRPL without undue risk of damage in transit.

6.02 Packing List: The contents of each package shall be itemized on a detailed list showing the exact weight and the extreme outside dimensions (length, width and height) of each container or box. One copy of the packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list identifying each individual package, which is part of the shipment. On any packaging where it is not feasible to place the packing list inside the container, all pertinent information shall be stenciled on the outside and will thus constitute a packing list.

7.01 Prices basis for supply of materials

Bidder to quote their prices on Landed Cost Basis and separate price for each items.
For Supply to BRPL Delhi the price shall be inclusive of packing, forwarding, GST and freights.

The above supply prices shall also include unloading at site stores.
Transit and storage insurance will be arranged by BRPL, however bidder to furnish required details in advance for arranging the same by BRPL.

8.0 Variation in taxes, duties & levies:

8.01 The total order value shall be adjusted on account of any variations in Statutory Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period only. However, in case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.

8.02 No other Taxes, Duties & Levies other than those specified above will be payable by BUYER except in case of new Levies, Taxes & Duties imposed by the Competent Authorities by way of fresh notification(s) subsequent to the issue of PURCHASE ORDER but within the stipulated delivery period.

8.03 Notwithstanding what is stated above, changes in Taxes, Duties & Levies shall apply only to that portion of PURCHASE ORDER not executed on the date of notification by Competent Authority. Further, changes in Taxes, Duties & Levies after due date of Delivery shall not affect PURCHASE ORDER Terms and Value.

8.04 PURCHASE ORDER value shall not be subject to any variation on account of variation in Exchange rate(s).

9.0 Taxes & Duties on raw materials & bought out components:

9.01 Taxes & Duties on raw materials & bought out components are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

9.02 Taxes & Duties on raw materials & bought out components procured indigenously are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

10.0 Terms of payment and billing

10.01 For Supply of Equipments:

- 100% payment shall be made within 30 days from the date of receipt of material at store/ site against submission of 5 % performance bank guarantee. (Refer 10.01)

10.02 Bidder to submit the following documents against dispatch of each consignment:

- i) Consignee copy of LR
- ii) Supplier detailed invoice showing commodity description, quantity, unit price, total price and basis of delivery.
- iii) Original certificate issued by BRPL confirming receipt of material at site and acceptance of the same.
- iv) Dispatch clearance / inspection report in original issued by the inspection authority
- v) Packing List.
- vi) Test Reports
- vii) Guarantee Certificate.
- viii) Insurance policy to be obtained by supplier

11.0 Price Validity

11.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BRPL Delhi for 120 days post bid-date. For awarded suppliers, the prices shall remain valid and firm till contract completion.

12.0 Performance Guarantee

12.01 Supplier shall establish a performance bond in favor of BRPL in an amount not less than five percent (5%) of the total price of the Contract (the "Performance Bond"). The Performance Bond shall be valid for a period of eighteen months (12) from the date of the commissioning or twenty four months (18) from the date of receipt of material (last Consignment) at site/stores whichever is earlier plus 3 months towards claim period. It shall be in accordance with one of the following terms:

- a) Depositing pay order /demand draft of the relevant amount directly with BRPL at the address listed above or as otherwise specified by BRPL, either of which shall constitute the Performance Bond hereunder; or
- b) Bank guarantee from any nationalized bank in favour of BSES RAJDHANI POWER LTD (BRPL). The performance Bank guarantee shall be in the format as specified by BRPL.

13.0 Forfeiture

13.01 Each Performance Bond established under Clause 10.0 shall contain a statement that it shall be automatically and unconditionally forfeited without recourse and payable against the presentation by BRPL of this Performance Bond to the ICICI Bank at Mumbai, or to the relevant company/ correspondent bank referred to above, as the case may be, together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

13.02 Each Performance Bond established under will be automatically and unconditionally forfeited without recourse if BRPL in its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

14.0 Release

All Performance Bonds will be released without interest within seven (7) days from the last date up to which the Performance Bond has to be kept valid (as defined in Clause 10.0) except for the case set forth in Clause 21.0.

15.0 Defects Liability Period

15.01 The bidder to Guarantee the materials / items supplied against any defect of failure, which arise due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 12 months from the date of commissioning or 18 months from the date of delivery whichever is earlier. If during the defects liability period any materials / items are found to be defective, these shall be replaced or rectified by the bidder at his own cost within 30 days from the date of receipt of intimation.

16.0 Return, Replacement or Substitution.

BRPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BRPL may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BRPL, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BRPL shall furnish proof to Supplier of the cost of such substitute purchase. In either case, all costs of any replacement, substitution, shipping, labour and other related expenses incurred in connection with the return and replacement or for the substitute purchase of a Commodity hereunder should be for the account of Supplier. BRPL may set off such costs against any amounts payable by BRPL to Supplier. Supplier shall reimburse BRPL for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid.

17.0 Effective Date of Commencement of Contract:

17.01 The date of the issue of the Letter of Acceptance shall be treated as the effective date of the commencement of Contract.

18.0 Time – The Essence Of Contract

18.01 The time and the date of completion of the "Supply" as stipulated in the Letter Of Acceptance / Purchase order issued to the Supplier shall be deemed to be the essence of the "Contract". The Supply has to be completed not later than the aforesaid Schedule and date of completion of supply .

19.0 The Laws and Jurisdiction of Contract:

19.01 The laws applicable to this Contract shall be the Laws in force in India.

19.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The venue of arbitration shall be at Mumbai in India

20.0 Events of Default

20.01 Events of Default. Each of the following events or occurrences shall constitute an event of default ("Event of Default") under the Contract:

- a) Supplier fails or refuses to pay any amounts due under the Contract;
- b) Supplier fails or refuses to deliver Commodities conforming to this RFQ/ specifications, or fails to deliver Commodities within the period specified in P.O. or any extension thereof
- c) Supplier becomes insolvent or unable to pay its debts when due, or commits any act of bankruptcy, such as filing any petition in any bankruptcy, winding-up or reorganization proceeding, or acknowledges in writing its insolvency or inability to pay its debts; or the Supplier's creditors file any petition relating to bankruptcy of Supplier;
- d) Supplier otherwise fails or refuses to perform or observe any term or condition of the Contract and such failure is not remediable or, if remediable, continues for a period of 30 days after receipt by the Supplier of notice of such failure from BRPL

21.0 Consequences of Default.

- a) If an Event of Default shall occur and be continuing, BRPL may forthwith terminate the Contract by written notice.
- b) In the event of an Event of Default, BRPL may, without prejudice to any other right granted to it by law, or the Contract, take any or all of the following actions;
- i) present for payment to the relevant bank the Performance Bond;
 - ii) purchase the same or similar Commodities from any third party; and/or
 - iii) recover any losses and/or additional expenses BRPL may incur as a result of Supplier's default.

22.0 Penalty for Delay

- 22.01 If supply of items / equipments is delayed beyond the supply schedule as stipulated in purchase order then the Supplier shall be liable to pay to the Purchaser as penalty for delay, a sum of 1% (one percent) of the contract price for every week delay or part thereof for undelivered quantities.
- 22.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the contract price for undelivered quantities.
- 22.03 The Purchaser may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the Supplier or from the Performance Bond or file a claim against the supplier.

23.0 Force Majeure

23.01 General

An "Event of Force Majeure" shall mean any event or circumstance not within the reasonable control directly or indirectly, of the Party affected, but only if and to the extent that:

- i) Such event or circumstance materially and adversely affects the ability of the affected Party to perform its obligations under this Contract, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to prevent or avoid the effect of such event on the affected party's ability to perform its obligations under this Contract and to mitigate the consequences thereof.
- ii) For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force majeure.
- iii) Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Contract.
- iv) Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply with above clause.

- 23.02 Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements:

23.03 Mitigation of Events of Force Majeure Each Party shall:

- i) Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure including recourse to alternate methods of satisfying its obligations under the Contract;
- ii) Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between

the Parties; and

- iii) Keep the other Party informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.

- 23.04 Burden of Proof In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this Agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.
- 23.05 Termination for Certain Events of Force Majeure. If any obligation of any Party under the Contract is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 3 months, the Parties shall promptly discuss in good faith how to proceed with a view to reaching a solution on mutually agreed basis. If a solution on mutually agreed basis cannot be arrived at within a period of 30 days after the expiry of the period of three months, the Contract shall be terminated after the said period of 30 days and neither Party shall be liable to the other for any consequences arising on account of such termination.
- 23.06 Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.
- 23.07 Extension of Contract Period due to Force Majeure event The Contract period may be extended by mutual agreement of Parties by way of an adjustment on account of any period during which an obligation of either Party is suspended due to a Force Majeure event.
- 23.08 Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in

default in respect of any obligations hereunder, for so long as failure to perform such obligations shall be due to and event of Force Majeure."

24.0 Transfer And Sub-Letting

24.01 The Supplier shall not sublet, transfer, assign or otherwise part with the Contract or any part thereof, either directly or indirectly, without prior written permission of the Purchaser.

25.0 Recoveries

25.01 Whenever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by detecting any sum due to which any time thereafter may become due from the supplier in this or any other contract. Should the sum be not sufficient to cover the full amount recoverable the bidder shall pay to the purchaser on demand the remaining balance.

26.0 Waiver

26.01 Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

27.0 Indemnification

27.01 Notwithstanding contrary to anything contained in this RFQ, Supplier shall at his costs and risks make good any loss or damage to the property of the Purchaser and/or the other Supplier engaged by the Purchaser and/or the employees of the Purchaser and/or employees of the other Supplier engaged by the Purchaser whatsoever arising out of the negligence of the Supplier while performing the obligations under this contract.

SECTION – IV: QUANTITY AND DELIVERY REQUIREMENT

Sl. No	Item Description	Specification	UOM	Requirement (Total Qty)	Estimated Cost (Rs)
BRPL,DELHI					
1	BRKT,ANG,MS	SECTION V	NOS	10,000	3.5 CR
2	BRKT,ANG,L		NOS	7700	
3	ANG,SLT,GI ANG;MS;P END		NOS	8000	
4	CLMP,ELEC,SVC DEAD END CLMP		NOS	2,00,000	
5	CLMP,SUSPN,25 TO 125SQ MM		NOS	15,000	
6	CLMP,ELEC,DEAD END CLMP;35 to 70SQ MM		NOS	5000	
7	CLMP,ELEC,DEAD END;95 to 125SQ MM		NOS	5500	
8	CLMP,ELEC,FDR PILLAR;4CX25SQMM CBL		NOS	4,00,000	
9	CLMP,HOLDNG,CBL;GI;A;FOR 2X10 & 2X25CBL		NOS	15,00,000	
10	SDLE,CLMP ;4X50SQMM;GI;SVC CBL		NOS	4000	
11	SDLE,CLMP;4X150SQMM;GI;SVC CBL		NOS	1000	
12	SDLE,CLMP;4X300SQMM;GI;SVC CBL		NOS	1000	
13	HOK,EYE HOK FOR PCC P;MS GALVANIZED		NOS	24,000	
14	CLMP,MNTG FOR PCC P;EYE HOK		NOS	18,000	
15	RD,ANC,MS GALVANIZED		NOS	1400	
16	HOK,RND;EXPEN SCRW CLOSED HOK ANC BLT		NOS	10,000	
17	HOK,RND;EXPEN SCRW CIOSED HOK ANC BLT SMAL		NOS	65,000	
18	FSTNR,ANC;M8X 60MM		NOS	45,000	
19	SCRW,16MM;600MM;TENSION		NOS	600	
20	SCRW,20MM;750MM;TENSION		NOS	1200	
21	BRKT,ANG,2LNE CRSS ARM;GALVANIZED MS		NOS	12,000	
22	CLLR,STAY;GALVANIZED MS;FOR PCC POLES		NOS	1500	

Annexure -I

BID FORM

Rate contract for supply of various types of hardware items

To
Head of the Department Contracts & Materials BSES Rajdhani Power Ltd BSES Bhawan, Nehru Place New Delhi- 110019
Sir,

We understand that BRPL is desirous of procuring "Pole Mounted distribution boxes ` in it's licensed distribution network area in Delhi.

Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Drawings, Conditions of Contract and specifications for the sum of AS PER PRICE BID ENCLOSED or such other sums as may be determined in accordance with the terms and conditions of the contract .The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

If our Bid is accepted, we under take to deliver the entire goods as per delivery schedule given by you from the date of award of purchase order/letter of intent

If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 10% (Ten) percent of the total contract value for due performance of the Contract in accordance with the General Conditions of Contract.

We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 9.0 of GCC, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We declare that we have studied the provision of Indian Income Tax Law and other Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.

Unless and until Letter of Intent is issued, this Bid, together with your written acceptance there of, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest, or any bid you may receive.

There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract, Clause 19 of GCC .

Dated this..... day of..... 20

Signature..... In the capacity of

.....duly authorized to sign for and on behalf of (IN BLOCK CAPITALS).....

Annexure -II

FORMAT FOR EMD BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs.50/-purchased in the name of the bank)

Whereas [name of the Bidder](hereinafter called the Bidder") has submitted its bid dated [date of submission of bid] for the supply of [name and/or description of the goods] (hereafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE [name of bank]at[Branch Name and address],having our registered office at[address of the registered office of the bank](herein after called —the Bank"),are bound unto BSES Rajdhani Power Ltd., with it's Corporate Office at BSES Bhawan Nehru Place, New Delhi -110019

,(herein after called —the Purchaser")in the sum of _____for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ____day of _20_.

THE CONDITIONS of this obligation are:

If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form ;or

If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:

fails or refuses to execute the Contract Form ,if required; or

fails or refuses to furnish the performance security, In accordance with the Instructions to Bidders/GENERAL CONDITIONS.;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or condition s.

This guarantee will remain in force up to and including thirty (30) days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(signature of the bank)

Signature of the witness

Annexure-III

PRICE FORMAT

ENQUIRY NO & DATE : NIT: CMC/BR/22-23/RB/PR/GP/1007

PRICE SCHEDULE

MAT Code	ITEM DESCRIPTION	QTY AS PER RFQ	UOM	EX-WORKS RATE/UNIT	CGST (%)	CGST AMOUNT (Rs)	SGST (%)	SGST AMOUNT (Rs)	IGST (%)	IGST AMOUNT (Rs)	FREIGHT (Rs)	LAND ED RATE /UNIT (Rs)	TOTAL AMOUNT (Rs)
2100058212	BRKT,ANG,MS	10,000	NOS										
2100058113	BRKT,ANG,L	7700	NOS										
2100074245	ANG,SLT,GI ANG;MS;P END	8000	NOS										
2100074250	CLMP,ELEC,SVC DEAD END CLMP	2,00,000	NOS										
2100073741	CLMP,SUSPN,25 TO 125SQ MM	15,000	NOS										
2100015901	CLMP,ELEC,DEA D END CLMP;35 to 70SQ MM	5000	NOS										
2100015902	CLMP,ELEC,DE AD END;95 to 125SQ MM	5500	NOS										
2100047976	CLMP,ELEC,FD R PILLAR;4CX25 SQMM CBL	4,00,000	NOS										
2100183822	CLMP,HOLDN G,CBL;GI;A;FO R 2X10 & 2X25CBL	15,00,000	NOS										
2100239512	SDLE,CLMP ;4X50SQMM; GI;SVC CBL	4000	NOS										
2100239513	SDLE,CLMP;4X 150SQMM;GI; SVC CBL	1000	NOS										

2100239515	SDLE,CLMP;4X 300SQMM;GI; SVC CBL	1000	NOS										
2100069982	HOK,EYE HOK FOR PCC P;MS GALVANIZED	24,000	NOS										
2100063343	CLMP,MNTG FOR PCC P;EYE HOK	18,000	NOS										
2100015702	RD,ANC,MS GALVANIZED	1400	NOS										
2100242223	HOK,RND;EXP N SCRW CLOSED HOK ANC BLT	10,000	NOS										
2100242224	HOK,RND;EXP N SCRW CLOSD HOK ANC BLT SMAL	65,000	NOS										
2100035826	FSTNR,ANC;M 8X 60MM	45,000	NOS										
2100063347	SCRW,16MM; 600MM;TENSI ON	600	NOS										
2100063345	SCRW,20MM; 750MM;TENSI ON	1200	NOS										
2100063344	BRKT,ANG,2L NE CRSS ARM;GALVANI ZED MS	12,000	NOS										
2100018597	CLLR,STAY;GA LVANIZED MS;FOR PCC POLES	1500	NOS										

Note: 1.Prices shall be Firm

The prices received without break up of ex works, Freight, GST are liable for rejection

Pls Indicate the exact percentage of taxes in figures and words

If there is a discrepancy between the unit price and the total price THE UNIT PRICE shall prevail.

Bidders are requested to attach the covering letter head alongwith the price bid indicating reference no and date.

Bidder's seal & signature

Enquiry No. & Date : **CMC/BR/22-23/RB/PR/GP/1007**

COMMERCIAL TERMS AND CONDITIONS

S/NO	ITEM DESCRIPTION	AS PER BRPL	CONFIRMATION OF BIDDER
1	Validity of prices	120 days from the date of offer	
2	Price basis	Firm, FOR Delhi store basis. Prices shall be inclusive of all taxes & duties, freight up to Delhi stores. Unloading at stores shall be in vendor's scope Transit insurance in BRPL scope	
3	Payment terms	100% payment within 30 days after receipt of material at stores	
4	Delivery schedule	As per our requirement	
5	Defect Liability period	12 months after commissioning or 18 months from the last date of supply ,whichever is earlier	
6	Penalty for delay	1% per week of delay of undelivered units or part thereof subject to maximum of 10% of total PO value of undelivered units	
7	Performance Bank Guarantee	5% of total PO value valid for 12 months after commissioning or 18 months from the last date of supply, whichever is earlier plus 3 months towards claim period	



Annexure -A

ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed & stamped by the bidder along-with bid)

BSES Rajdhani Power Ltd (BRPL) intends to use reverse auction through SAP-SRM tool as an integral part of entire tendering process. All bidders who are techno-commercially qualified on the basis of tender requirements shall participate in the reverse auction.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid:-

1. In case of bidding through Internet medium, bidders are advised to ensure availability of all associated infrastructure as required to participate in the reverse auction event. Inability to bid due to telephone glitch, internet response issues, software & hardware hangs/failures, power failures or any other reason shall not be the responsibility of BRPL.
2. In case bidder fails to participate in the reverse auction event due to any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid submitted by them as a part of tender shall be considered as bidder's Final No Regret offer. Any off-line price bids received from a bidder in lieu of non-participation in the reverse auction event shall be rejected by BRPL.
3. The bidder is advised to understand the auto bid process & safeguard themselves against any possibility of non-participation in the reverse auction event.
4. The bidder shall be prepared with competitive price quotes during the day of reverse auction event.
5. The prices quoted by bidder in reverse auction event shall be on FOR Landed cost BRPL Store/site basis inclusive of all relevant taxes, duties, levies, transportation charges etc.
6. The prices submitted by the bidder during reverse auction event shall be binding on the bidder.
7. The bidder agrees to non-disclosure of trade information regarding bid details e.g. purchase, identity, bid process/technology, bid documentation etc.
8. BRPL will make every effort to make the bid process transparent. However award decision of BRPL will be final and binding on the bidder.
9. The prices submitted during reverse auction event shall be binding on the bidder.
10. No request for Time extension of the reverse auction event shall be considered by BRPL.

ANNEXURE V

ENQUIRY NO & DATE : **CMC/BR/22-23/RB/PR/GP/1007**

NO DEVIATION SHEET

SL NO	SL NO OF TECHNICAL SPECIFICATION	DEVIATIONS,IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

Annexure – VI

S.No	Qualification Criteria	Declaration by bidder with qualifying the fulfillment	Documentary Evidence attached page no. details
1	Bidder should have Average Annual Sales Turnover of Rs 50 Lakh or more in last 3 years FY. Copy of audited P&L account / CA certified statement to be submitted along with the bid		
2	The bidder should have own manufacturing / fabricating facilities (A self undertaking with complete address of manufacturing facility has to be submitted along with the bid)		
3	The bidder should have executed purchase orders for supply of similar hardware items worth Rs 50 lakhs or more during last 03 years from the tender due date . (Copy of POs / completion certificate to be submitted in this regards)		
4	The bidder must have in house testing facilities for acceptance tests as per BRPL specifications or must have arrangement of getting materials tested from NABL accredited lab prior to deliveries. (Bidders have to submit the undertaking in this regard).		
5	In case of new bidders (not enlisted in BSES), Factory Inspection & evaluation shall be carried out to ascertain bidders manufacturing capabilities and quality procedures. BRPL reserves the right to assess the capabilities /installed capacity		
6	The bidder must submit an undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any major utilities/SEB's/other reputed companies		
7	The Bidder shall submit an undertaking "No Litigation" is pending with the BRPL and Group Companies.		
8	The bidder must have valid PAN No., GST Registration Number, in addition to other statutory compliances. The bidder must submit the copy of registrations and submit an undertaking that the bidder shall comply all the statutory compliances as per the laws/rules etc. before the start of the work		
<i>The manufacturer should send the compliance of above mentioned parameters in technical offer and has to give an undertaking about <u>No Objection</u> to verify his manufacturing facility as a part of tender process.</i>			

CHECK LIST

Sl No	Item Description	YES/NO
1	INDEX	YES/NO
2	COVERING LETTER	YES/NO
3	BID FORM (UNPRICED) DULY SIGNED	YES/NO
4	BILL OF MATERIAL (UNPRICED)	YES/NO
5	TECHNICAL BID	YES/NO
6	ACCEPTANCE TO COMMERCIAL TERMS AND CONDITIONS	YES/NO
7	FINANCIAL BID (IN SEALED ENVELOPE)	YES/NO
8	EMD IN PRESCRIBED FORMAT	YES/NO
9	DEMAND DRAFT OF RS 1180/- DRAWN IN FAVOUR OF	BSES RAJDHANI POWER LTD
10	POWER OF ATTORNEY/AUTHORISATION LETTER FOR SIGNING THE BID	YES/NO

SECTION – V
TECHNICAL SPECIFICATIONS (TS)

Rate contract for supply of various types of hardware items

CMC/BR/22-23/RB/PR/GP/1007

The detailed technical specifications of supply of various types of hardware items

BSES

BSES Rajdhani Power Ltd

GN101-03-SP-158-00

TECHNICAL SPECIFICATION OF SADDLE CLAMP**TECHNICAL SPECIFICATIONS****OF****SADDLE CLAMP****(For 1.1 kV Upto 2C X 25 mm² LT Cable -20mm Dia.)****AND****(For 1.1 kV 4C X 25 mm² LT Cable -25mm Dia.)****BSES RAJDHANI POWER LTD.**

Prepared by	Naved Ahmad	<i>Naved Ahmad</i> 16/01/19	Date:16/01/2019
Reviewed by	Amit Tomar	<i>Amit Tomar</i> 16/01/19	Revision-02
Approved by	K. Sheshadri	<i>K. Sheshadri</i> 16/01/19	No of Pages: 5

TECHNICAL SPECIFICATION OF SADDLE CLAMP

INDEX

1. Scope of Supply.....	3
2. Codes & Standards.....	3
3. Service conditions.....	3
4. Marking & labeling on Box.....	3
5. Testing Requirements.....	4
6. Tests Description.....	4
7. Deviation.....	4
8. GTP.....	5
9. Sample Drawing of Saddle.....	5

TECHNICAL SPECIFICATION OF SADDLE CLAMP**1.0 Scope of Supply**

This specification include design, manufacture, testing at manufacturer works before dispatch packing, delivery of material to BSES stores and submission of documents to purchaser.

2.0 Codes & Standards

The equipment shall confirm to this specification & latest revision of following codes with all amendments:

Title	Indian Standard
IS 5082	Wrought Aluminum & Al alloy plates & sheets for electrical applications
IS 277	Specification for Galvanized Steel Sheets, (Plain and Corrugated)
IS 4759	Hot-dip zinc coatings on structural steel and other allied products

3.0 Service conditions

The Equipment shall be designed to work satisfactorily under following service conditions:

S.no	Title	Indian Standard
1	Operating temperature	0 deg C to 50 deg C
2	Average grade of atmosphere	Heavily polluted, dry
3	Relative Humidity	90%

4.0 Marking & labeling on Box

S.no	Parameters	Description
1	Packing of box	Packing should be 100 no's
		a. Purchaser name
		b. P.O. nos and date
		c. Month and year of manufacturing
		d. Name of manufacturer

TECHNICAL SPECIFICATION OF SADDLE CLAMP

5.0 Testing Requirements

The equipment shall have all the following features:

S.no	Tests	Description
i)	Acceptance and Routine test	Acceptance and Routine test certificates in accordance with relevant IS.
ii)	Inspection	Acceptance tests for lot offered shall be carried out in presence of BSES representative. Vendor shall give inspection call fifteen days in advance.

6.0 Tests Description

S. no	Name of Test	Standard	Clause No.
For Enclosure (Box)			
1	Visual examination	As Per GTP/ approved drawing	
2	Verification of dimensions & Marking	As Per Spec/GTP/approved drawing	
3	Mechanical Strength / Impact Resistance	IS:14772	13
4	Resistance to heat	IS:14772	14
5	Resistance to Rusting	IS:14772	16

Note: The above tests should be carried out on the samples in the order mentioned in relevant IS.

7.0 Deviation

Deviation from specification to be submitted in writing with reference to the specification clause by vendor. In absence of such a statement, requirements of the Specification shall be met without exception.

Technical Bid shall comprise of

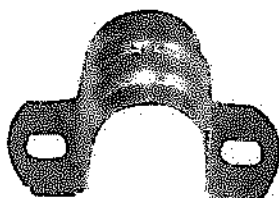
- Dully filled Guaranteed Technical Particulars as per GTP format in Annexure A
- Type test report
- Sample of offered material

TECHNICAL SPECIFICATION OF SADDLE CLAMP

8.0 GTP for Saddle Clamp

S.no	Parameters	Description	Vendor Data
1	Material Type	Galvanized Iron	
2	Sheet Thickness	0.7 MM(min)	
3	Width of Clamp	19 mm (min)	
4	Corrosive property	Anti corrosive	
5	Diameter of Saddle		
a)	For 2C X 10 & 2C X 25 mm ² cable (BRPL Material Code- 2100183822)	20mm	
b)	For 4C X 25 mm ² Cable (BRPL Material Code- 2100047976)	25mm	
6	Pitch	Slotted type	
7	Mounting Holes	02 nos slotted	
8	Mounting Accessories	Gitti & screw(02 No's of 35x8mm)	
9	Durability	High durability	
10	Resistant	Resistant to oxidation	
11	Galvanized	Required	
12	Strength	high	
13	Flute	2 Layer	

9.0 Sample Drawing of saddle



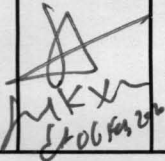

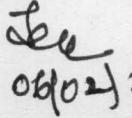


Technical Specification

for

Closed Hook Anchor Bolt

Specification No.: GN101-03-SP-206-00

Prepared by:		Checked by :		Approved by:		Rev	Date
Name	Sign	Name	Sign	Name	Sign		
Sunil Kumar Yadav		Amit Tomar	 06.02.2020	K. Sheshadri	 06/02/2020	00	06.02.2020

Contents

1. SCOPE OF SUPPLY	3
2. SERVICE CONDITION	3
3. DESIGN REQUIREMENTS	3
4. TECHNICAL PARAMETERS FOR CLOSED HOOK ANCHORE BOLT	3
5. TESTSING & INSPECTION	4
6. TEST CERTIFICATES	4
7. INSPECTION AFTER RECEIPT AT STORE	4
8. PACKING & DELIVERY	4
9. DEVIATION	4
10. DRAWING SUBMISSIONS	5
11. DRAWING	5



1. SCOPE OF SUPPLY

This specification covers the design, manufacturing, testing & supply of closed hook Anchor Bolt in BRPL area.

2. SERVICE CONDITION

The closed hook Anchor Bolt to be supplied against this specification shall be suitable for satisfactory continuous operation under the following service condition.

2.1	Maximum ambient temperature(deg. C)	50
2.2	Minimum ambient temperature(deg C)	0
2.3	Relative Humidity (%)	100
2.4	Maximum annual rainfall(mm)	1450
2.5	Maximum wind pressure (Kg/Sq.m)	150
2.6	Maximum altitude above sea level (Meters)	1000
2.7	Climate Condition:	Moderately hot and humid tropical climate conducive to rust and fungus growth.

3. DESIGN REQUIREMENTS

- Closed hook anchor Bolt shall be suitable for temporary or permanent anchorage.
- Closed hook anchor Bolt shall be suitable for use in concrete, brickwork & Stone wall.
- Closed hook anchor Bolt shall be classified for use in both indoor and outdoor environment.

4. TECHNICAL PARAMETERS FOR CLOSED HOOK ANCHORE BOLT

S. no.	Description	Application	Data to be filled by bidder
1	Screw closed hook anchor bolt (size 10mm , weight 0.10kg,Hole dia – 26mm, length 123mm) Accessories: Plain washer(20mm) Nut (12mm) Fastener length (48mm)	To use in 2x10mm2 & 2x25mm2 cable	
2	Screw closed hook anchor bolt (size 12mm , weight 0.20kg, hole dia –30mm , length 155mm) Accessories: Plain washer(22mm)	To use in 4x25mm2 & 4x50mm2 cable	

	Nut (22mm) Fastener length (57mm)		
3	Type of material	Mild Steel	
4	Surface finishing	Galvanized	

5. TESTSING & INSPECTION

All type of tests including routine and acceptance tests shall be carried out in accordance to IS: 1367-1967 or its latest amendment in vendor's lab

Routine & Acceptance test:

- Physical dimension test
- Raw material test
- Ultimate tensile strength test (Min lot size is 10% of PO qty)

Additional tests shall be conducted from any NABL accredited lab as below

- Ultimate tensile strength test at 12kN (Min lot size is 10% of PO qty)
- Chemical composition test

6. TEST CERTIFICATES

The supplier shall supply one set of test certificates from any NABL accredited lab in respect of quality

7. INSPECTION AFTER RECEIPT AT STORE

BRPL inspector will inspect the material received at BRPL Store and shall have right to reject whole lot, if found different from the reports of pre-dispatch inspection.

8. PACKING & DELIVERY

8.1	Packing protection	Against wear and tear & corrosion
8.2	Handling instruction	To be marked on packing boxes

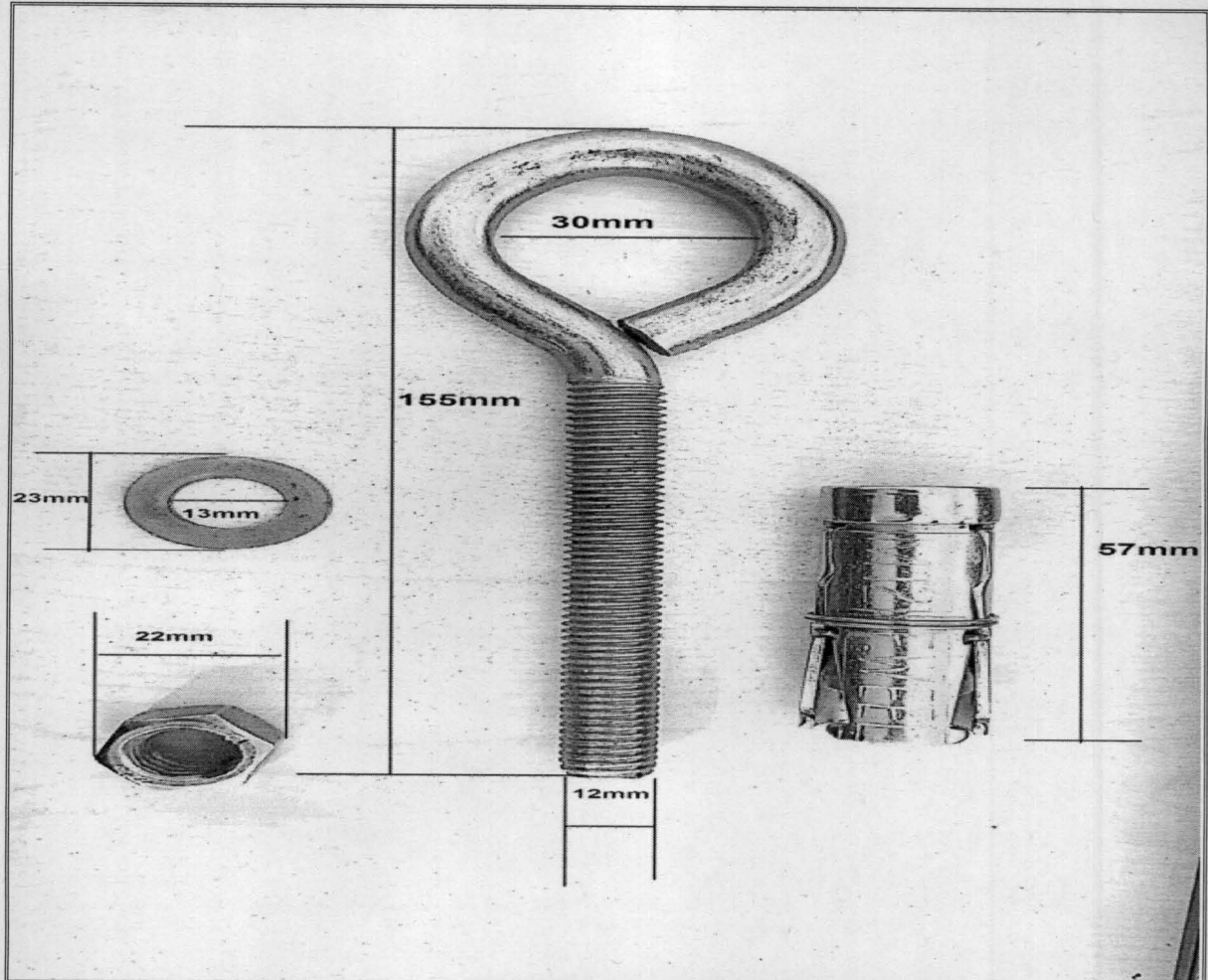
9. DEVIATION

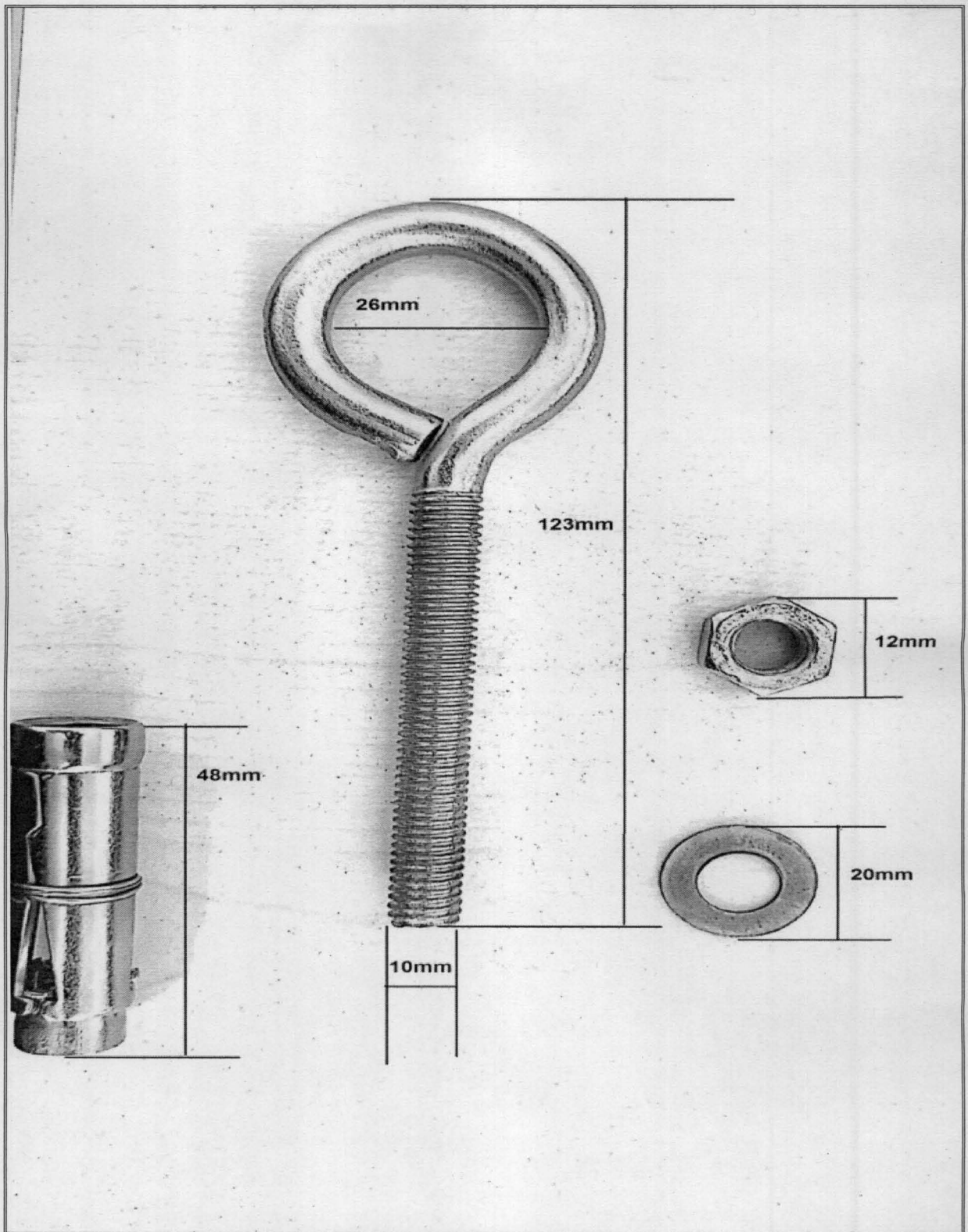
9.1	Deviation from the specification	Deviation from the specification shall be stated in writing with the tender by reference to the specification clause/GTP and a description of the alternative offer. In absence of such a statement. It will be assumed by the Buyer that the seller complies fully with this specification.
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10. DRAWING SUBMISSIONS

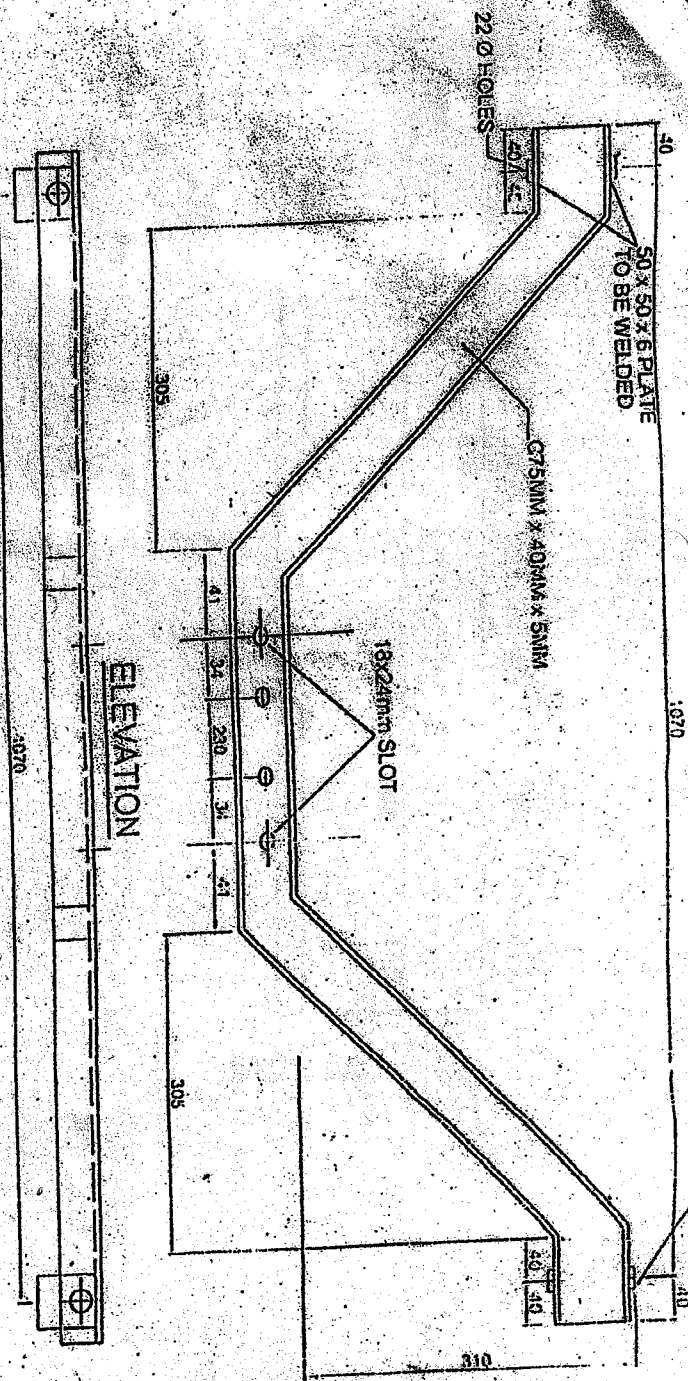
10.1	Along with the Bid	a) Guaranteed Technical Particulars(GTP duly filled-in) b) Test certificate c) Catalogue
------	--------------------	--

11. DRAWING





[Handwritten signature]



PLAN

ELEVATION

- NOTES:**
1. ALL DIMENSIONS ARE IN mm.
 2. SECTION OF ALL CLAMPS 50x6mm M.S PLATE
 3. ALL CLAMPS & STRUCTURES SHOULD BE GALVANIZED AFTER FABRICATION.
 4. HOT DIP THICKNESS SHOULD NOT BE LESS THAN 86 MICRONS.
 5. MATERIAL OF PLATE SHOULD BE AS PER IS: 2062 GRADE "A".
 6. CLAMPS, HOLE SHALL BE 18 X 24 mm.
 7. STEEL RAW MATERIAL AS PER IS: 2062 GRADE "A".
 8. THIS DRAWING INDICATES DIMENSIONS AND CLEARANCE OF VARIOUS EQUIPMENT & THE DRAWING IS TO BE USED FOR THIS PURPOSE ONLY.
 9. TOLERANCE FOR RAW MATERIALS AS PER IS: 1852/79.
 10. M.S SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

11. BOLTS NUTS AS PER IS: 1363 (PART-1) -92 CLASS 4.8 GRADE C.
12. HOT DIP GALVANIZED OF BOLTS & NUTS AS PER IS: 1367 (PART-13) PLAIN WASHERS SHALL BE OF GI & SPRING WASHER ELECTROPLATED.
13. HOT DIP GALVANIZED FOR OTHER FABRICATION IS: 4759-84.
14. HOT DIP GALVANIZED FOR THREADED PRODUCTS IS: 1367 (PART-13).
15. DIMENSION TOLERANCES: +5%.
16. PLAIN & SPRING WASHERS OF SIZE 16.0 TO BE PROVIDED WITH NUTS & BOLTS.
17. CENTRE TO CENTRE DISTANCE OF 230 MM ON CROSS ARM FOR 9 MTR. PCC POLE.
18. CENTRE TO CENTRE DISTANCE OF 297 MM ON CROSS ARM FOR 11 MTR. PCC POLE.



Dharaj Industries

[Handwritten Signature]

GL CROSS ARM

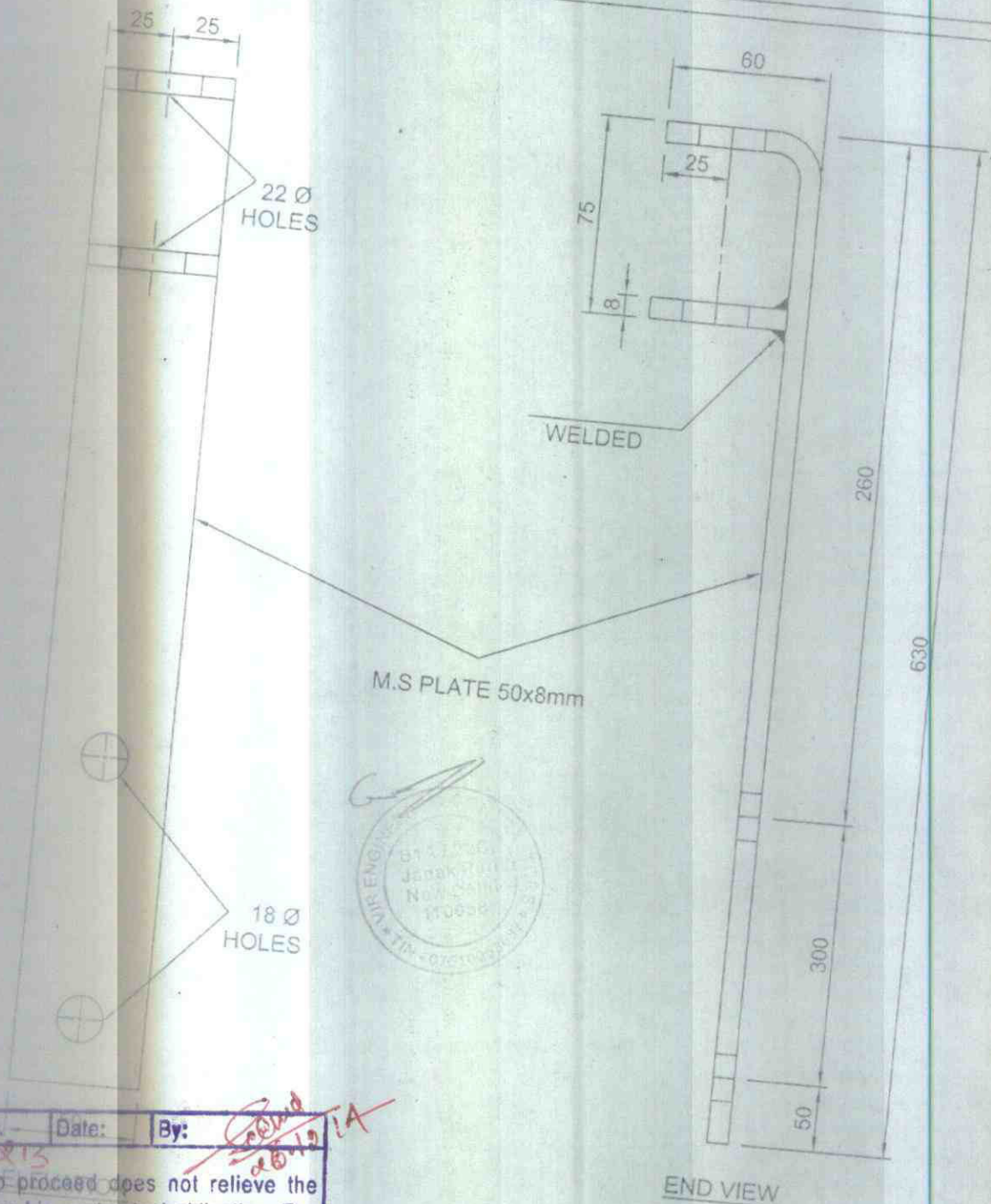
TITLE:

Scale	MTS
Drawn	RK
Checked	SC
Approved	BC
Date	15.11.04

UNIT: No. 1, PCC No. 28, Opp Gali No. 5, Anand Parbat Indl. Area, New Delhi-3.

UNIT: No. 2, Village: Firozpur Bangar, Distt Sonapat (Haryana).

DWG: DI-31-00



Transmittal No. <u>213</u>	Date: <u>20/05/06</u>	By: <u>ASHISH</u>
Permission to proceed does not relieve the Contractor from his contractual obligation. The Permission does not constitute acceptance or approval of Contractor's design or material.		
ACTION LEGEND		
1. Work to proceed		
2. Revise and Resubmit. Work to proceed subject to incorporation/resolution of indicated comments.		
3. Revise and Resubmit. Work NOT to proceed.		
Review not required. Work to proceed.		

- NOTES:-
1. ALL DIMENSIONS ARE IN mm.
 2. SECTION OF ALL CLAMPS 50x6mm M.S. PLATE.
 3. ALL CLAMPS & STRUCTURES SHALL BE GALVANIZED AFTER FABRICATION.
 4. HOT DIP THICKNESS SHALL NOT BE LESS THAN 86 microns.
 5. MATERIAL OF PLATE SHALL BE AS PER IS:2062 GRADE 'A'
 6. CLAMP SLOT SHALL BE Ø18x24mm
 7. STEEL RAW MATERIALS AS PER IS : 2062 GRADE 'A'

DRAWING OF CROSS ROOM				DRAWN ASHISH		TITLE:-		BSES BHAWAN	
DRAWING OF CROSS ROOM				CHKD. SM		DRAWING OF POLE TOP BRACKET FOR 11 KV. LINE		NEHRU PLACE, NEW DELHI - 110019	
DESCRIPTION				APPD. SGD		DATE 29/05/06		DWG. NO. GD203-DR-14-00	
DATE				PRPD. BY		SCALE NTS		REV 03	
DATE				CHKD. BY		DATE		REV	
DATE				APPR. BY		DATE		REV	



PCC POLE DETAILS:

WT-365 kg WT.
BOTTOM WIDTH-354 mm
TOP WIDTH-263 mm
DEPTH-152 mm

NOTES:

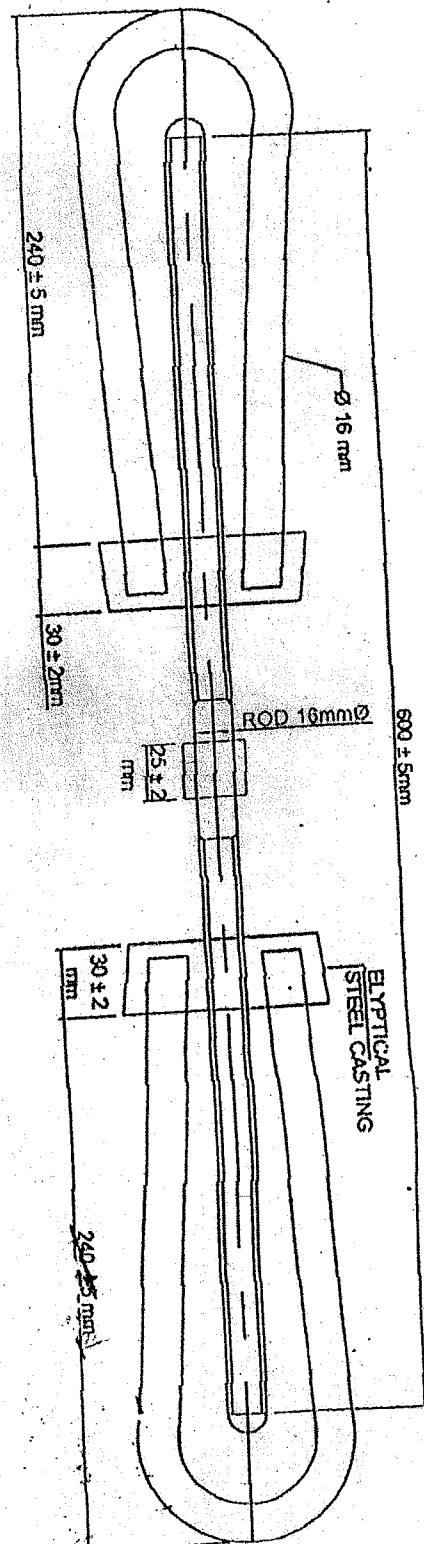
1. ALL DIMENSIONS ARE IN INCH.
2. DIMENSION TOLERANCE $\pm 5\%$.
3. HOT DIP THICKNESS SHOULD NOT BE LESS THAN ~~50~~ ⁹⁰ MICRONS.
4. SIZE OF WELD: 6mm
5. BOLTS OF SIZE: M16x75 MS FLAT & SPRING WASHER
TO BE SUPPLIED BY BIDDER

TO BE SUPPLIED BY BIDDER

BRPL / BPL, DELHI
ENGINEERS

BRPL / BPL, DELHI
CENTRAL ENGINEERING SERVICES

Bidders seal and signature



TENSION SCREW OF SIZE 600 X 16 mm

NOTE :- 1. STEEL RAW MATERIALS AS PER IS : 2062 GRADE 'A'

2. TOLERANCES FOR RAW MATERIALS AS PER IS: 1882/79.

3. M.S. SHALL BE HOT DIP GALVANISED AFTER FABRICATION.

4. HOT DIP GALVANISING AS PER IS 1367 (PART-13) BEING THREADED PRODUCTS.

5. HOT DIP GALVANISING THICKNESS SHOULD BE AS PER IS 1367 (PART-13) 54 MICRONS

6. THIS DRAWING INDICATES DIMENSIONS AND CLEARANCE OF VARIOUS

EQUIPMENT AND THE DRAWING IS TO BE USED FOR THIS PURPOSE ONLY.

7 TENSILE STRENGTH AS PER IS:2062 TABLE 2

DIMENSION TOLERANCE + _ 5% (UNLESS OTHERWISE SPECIFIED)

TITLE:

TENSION SCREW OF
SIZE 600 X 16 MM

Scale	NTS
Drawn	RK
Checked	SC
Appvd.	BC
Date	15.11.04



Dharam Industries

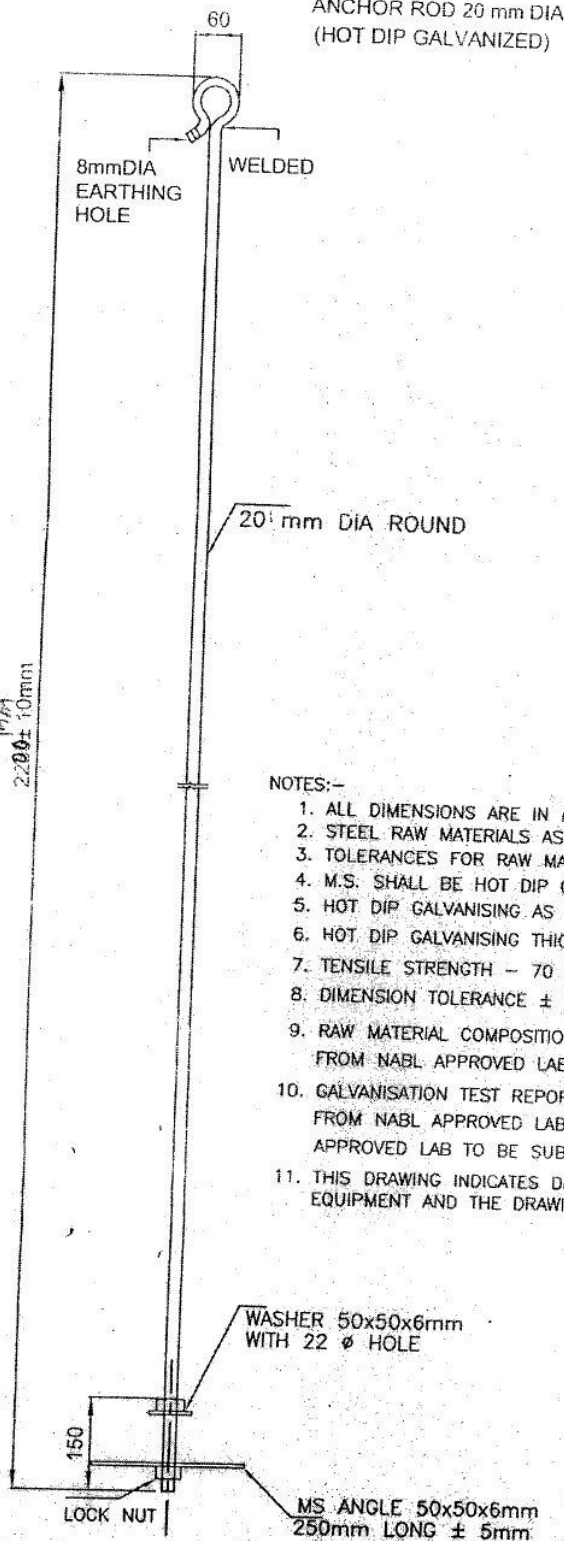
UNIT: No.: 1- Plot No. 28, Opp Gail No-6, Anand Pathal Indl. Area, New Delhi-5.
UNIT: No.: Villagdo: Firozpur Bhandar, Distt: Sonbat (Haryana).

DWG: UNY-11-00



PROPRIETARY STATEMENT

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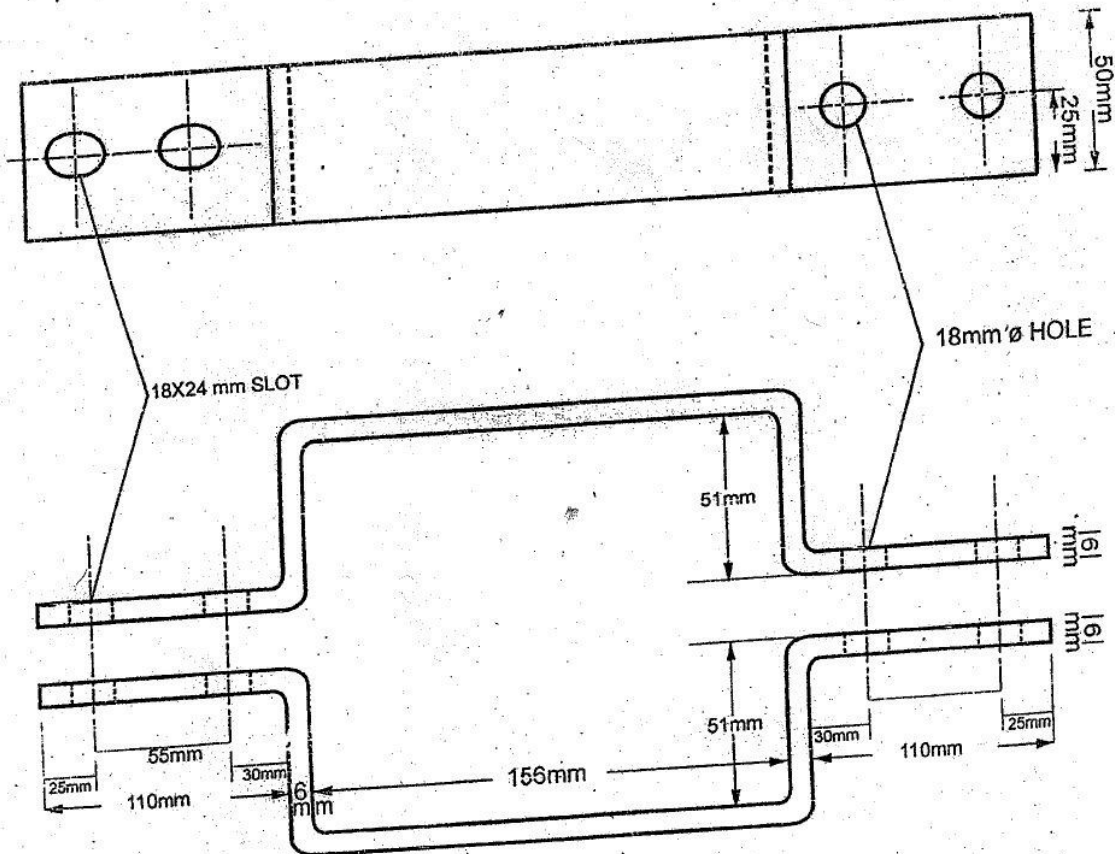
NOTES:-

1. ALL DIMENSIONS ARE IN mm.
2. STEEL RAW MATERIALS AS PER IS: 2062 GRADE 'A'.
3. TOLERANCES FOR RAW MATERIALS AS PER IS: 1852-79
4. M.S. SHALL BE HOT DIP GALVANISED AFTER FABRICATION.
5. HOT DIP GALVANISING AS PER IS 1367 (PART-13) BEING THREADED PRODUCTS.
6. HOT DIP GALVANISING THICKNESS SHOULD BE 86 MICRONS MIN.
7. TENSILE STRENGTH - 70 KN
8. DIMENSION TOLERANCE $\pm 5\%$ (UNLESS OTHERWISE SPECIFIED)
9. RAW MATERIAL COMPOSITION TEST CERTIFICATES FROM NABL APPROVED LAB TO BE SUBMITTED.
10. GALVANISATION TEST REPORTS FROM NABL FROM NABL APPROVED LAB TO BE SUBMITTED. APPROVED LAB TO BE SUBMITTED.
11. THIS DRAWING INDICATES DIMENSIONS AND CLEARANCE OF VARIOUS EQUIPMENT AND THE DRAWING IS TO BE USED FOR THIS PURPOSE ONLY.

BILL OF MATERIAL		
S.N.	ITEM	QTY.
1.	ANCHOR ROD LONG (20 ϕ x2285mm)	1 No.
2.	ANGLE(50x50x6) LONG 250mm	1 No.
3.	WASHER (50x50x6 WITH ϕ 22HOLE)	1 No.
4.	LOCK NUT 20 mm DIA	2 No.

01	ISSUED FOR TENDER PURPOSE	20.11.06	ASHISH	NR	SGD	DRAWN	ASHISH	TITLE:-	 BSES BHAWAN NEHRU PLACE, NEW DELHI - 110019 DWG. NO. GD203-DR-26-01 REV. 01
00	DRAWING FOR 20mm DIA ANCHOR ROD	20/07/06	ASHISH	NR	SGD	CHKD.	NR	DRAWING FOR 20 MM DIA ANCHOR ROD FOR STAY SET	
REV. NO.	DESCRIPTION	DATE	PRPD. BY	CHKD. BY	APPR. BY	DATE	SCALE	NTS	

EYE HOOK CLAMP FOR 9 METER PCC POLE

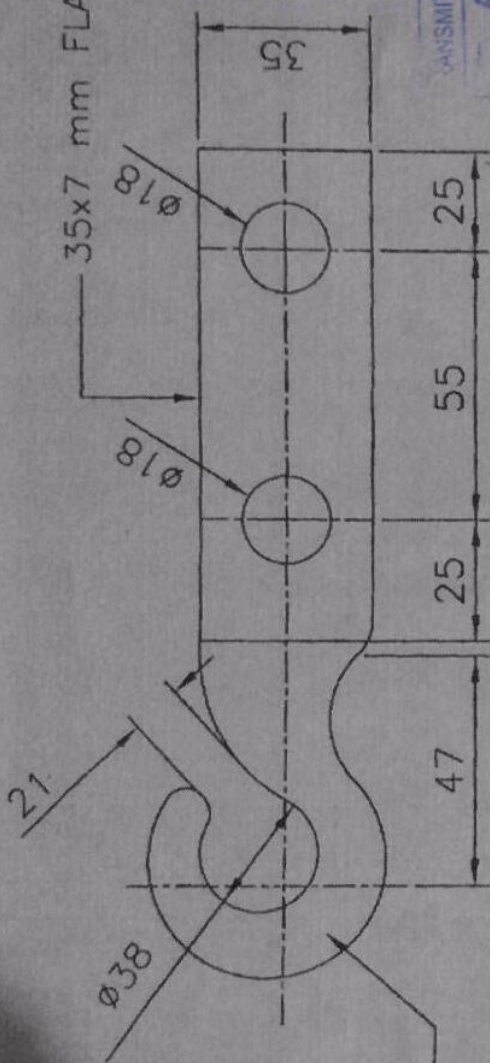


NOTES :

1. ALL DIMENSIONS ARE IN mm.
2. MATERIAL SHOULD BE AS PER IS 2062 GRADE 'A'.
3. M.S. SHALL BE HOT DIP GALVANISED AFTER FABRICATION.
4. HOT DIP GALVANISING FOR FABRICATIONS AS PER IS : 4759 - 84.
5. HOT DIP GALVANISING THICKNESS SHOULD NOT BE LESS THAN 86 MICRONS.
6. THIS DRAWING INDICATES DIMENSIONS AND CLEARANCE OF VARIOUS EQUIPMENT AND THE DRAWING IS TO BE USED FOR THIS PURPOSE
7. DIMENSION TOLERANCE $\pm 5\%$ (UNLESS OTHERWISE SPECIFIED)
8. TOLERANCE FOR RAW MATERIALS AS PER IS:1852-79.
9. TENSILE STRENGTH WILL BE AS PER IS : 2062 TABLE - 2

TITLE :

EYE HOOK CLAMP
FOR 9 MTR
PCC POLE



ROUND SECTION

ANSMITTAL No. 76	DATE: 2006	BY R.K.
------------------	------------	---------

DATE:

No. 26

AN SMITTA

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17

Z

SECTION

ROUND

ACTION LEGEND

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1

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10

EYE HOOK

NOTE:—

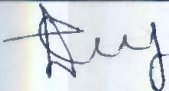


1. ALL DIMENSIONS ARE IN MM.
2. MATERIAL : MILD STEEL , GRADE-A DESIGNATION FE-410 WA(AS PER IS-2062)- CLASS 2STEEL MILD STEEL SHALL BE OF SAIL / TATA / JINDAL / APPD.MAKE ONLY.
3. GALVANISING CONFIRMING TO BS - 729/IS-2629
4. MATERIAL SHALL BE COLD PUNCHED WITH FOLLOWING DETAIL
"NAME OF MFR" , & " YEAR OF MFG"
5. GENERAL TOLERANCE $\pm 5\%$

Title:- Drawing Eye Hook



Technical Specification
for
Accessories of 1.1kv AB Cable

Specification no –GN101-03-SP-26-00

Prepared by:	Reviewed by	Approved by:	Rev	Date
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Technical specification for standard accessories for 1.1kv AB cable**1.0 Scope of supply**

This standard covers accessories used with overhead AB cables. The requirements of this standard have been made in order to create a reliable distribution system.

2.0 Applicable codes & standards

Materials, equipments and methods used in the manufacture of accessories of 1.1kv AB Cable shall conform to the latest edition of all applicable parts of following codes & standards including amendments –

	Indian electricity act & Indian Electricity Rules
	CBIP manual
	REC Specification 32/1984
IEC 60060	High voltage test techniques
IEC 60068-2-5	Test Sa: Simulated solar radiation at ground level and guidance for solar radiation testing.
IEC 60112	Method for the determination of the proof and the comparative tracking indices of solid insulating materials
IEC 60947-3	Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
IEC 60269-1,-2,-3,	Low voltage air break switches, air break disconnectors, air-break switch Disconnectors and fuse combination units
IEC 60529	Classification of degrees of protection provided by enclosures
IEC 60695-2-1	Fire hazard testing. Part 2: Test methods. Glow-wire test and guidance
IEC 61238	Compression and mechanical connectors for power cables for rated voltages up to 30 kV (Um = 36 kV) - Part 1: Test methods and requirements
IS 14255 / HD 626	LV Aerial Bunch Cable
IS 7098, Part-1	Cross linked Polyethylene Insulated PVC Sheathed Cables, Part-1, Working Voltage upto and including 1100V
IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
IS 2633	Methods for testing uniformity of coating of zinc coated articles
IS 2486, Part-1	Metal fittings of insulators for overhead power lines with nominal voltage greater than 1000 V: Part 1 General requirements and tests
IS 5561	Electric Power connector.
IS 617	IS 617 : 1994 Aluminium and aluminium alloy ingots and castings for general engineering purposes
NFC 33-020 / EN 50483	Insulating Piercing Connectors for overhead distribution and service for ABC system.
NFC 33-021	Pre insulated compression type connecting equipment for overhead distribution & services for ABC System

NFC 33-004 / EN 50483-5	Electrical Aging Test (1000 Cycle heating cooling test)
EN 50483 -1	Test requirements for low voltage aerial bundled cable accessories, Part 1: Generalities
EN 50483 -3	Test requirements for low voltage aerial bundled cable accessories - Part 3: Tension and suspension clamps for neutral messenger system.
EN 50483 -4	Test requirements for low voltage aerial bundled cable accessories - Part 4: Connectors
EN 50483 -5	Test requirements for low voltage aerial bundled cable accessories - Part 5: Electrical ageing test
EN 50483- 6	Test requirements for low voltage aerial bundled cable accessories - Part 6: Environmental testing

In the event of direct conflict between various order documents, the precedence of authority of documents shall be as follows -

- i. Guaranteed Technical Particulars (GTP)
- ii. Specification including applicable codes, standards
- iii. Approved Vendor Drawings
- iv. Other documents

3.0 Purchaser electrical system data-

3.1	LT supply system	3 phase AC, 4 wire
3.2	Rated voltage	415v +/-10%
3.3	Rated frequency	50 Hz \pm 5%
3.4	Fault level	35MVA – 50kA

4.0 Cable construction.

Constructional features of standard sizes of LT AB cable & Service cables being used in BSES distribution system are given below.

Main / Branch AB Cable:-

- i) 3CX150 (Ph) + 1CX150 (N) + 1CX125 (M) + 1CX16 (SL)
- ii) 3CX95 (Ph) + 1CX95 (N) + 1CX70 (M) + 1CX16 (SL)
- iii) 3CX50 (Ph) + 1CX50 (N) + 1CX35 (M) + 1CX16 (SL)

Service cable –

- i. 2CX10 sqmm XLPE cable.
- ii. 2CX 25 sqmm XLPE cable
- iii. 4CX 25 sqmm XLPE cable
- iv. 4CX50 sqmm XLPE cable.

Following are the salient features of LT AB cable are being used in BSES distribution.

4.1	Conductor (phase, neutral and street light)	Stranded, circular and compacted Aluminum
4.2	Conductor insulation	Cross link polyethylene
4.3	Thickness of insulation (nominal / minimum)	
4.3.1	For 150 sqmm conductor	1.80 mm / 1.52 mm
4.3.2	For 95 sqmm conductor	1.50 mm / 1.25 mm
4.3.3	For 50 sqmm conductor	1.50 mm / 1.25 mm
4.3.4	For 16 sqmm conductor (street light)	1.20 mm / 0.98 mm
4.4	Messenger	Stranded circular, Aluminum – magnesium-silicon alloy
4.5	Min. breaking strength of messenger	i. 36.64KN for 125 sqmm messenger ii. 19.7 KN for 70 sqmm messenger. iii. 10.11 KN for 35 sqmm messenger

5.0 Insulated Piercing Connectors (IPC):-

The IPC have all the following features –

5.1	Use	Tee, Tap-off connection of AB Cable or service cable from main AB cable.
5.2	Method of connection	Connection between uncut main AB cable's conductor to branch cable's conductor without having to trip either cable to expose the conductor. IPC must perform the piercing and connection of main and branch cable simultaneously while tightening.
5.3	Housing of current carrying part	Completely within weather resistance reinforce polymer or better insulating material.
5.4	Exposed metallic part	Should not have any potential during and after connector installation to allow safe installation on life lines. The arrangement of bolt and nut shall be locking type.
5.5	Tightening arrangement	Shear bolt is required. Bolt shall be tightened by standard hexagonal single spanner. Tightening arrangement by two spanners is not recommended.
5.6	Water proof and water tightness	Ensured by appropriate elastomeric material and not only by grease, gel or paste.
5.7	End sealing cap	To seal the cut end of branch cable. It should not be reusable type. It will not

		possible to remove the cap once the connector is fitted without damaged the cap. Loose cap with IPC is not acceptable.
5.8	Vibration & relative movement effect.	Design of IPC should be such as to not cause any damage to insulation of adjacent conductors due to vibration and relative movement during service.
5.9	Metallic part	Corrosion resistance
5.10	Contact blade / teeth material	Tinned copper / aluminum alloy.
5.11	Rating of contact blade / teeth	Should not be less than the current rating of maximum size of tap cable for which it is designed. Justify by calculation.
5.12	Connector blade / teeth	Factory greased and sealed to retard water & moisture ingress and corrosion
5.13	Hardware	Stainless steel for size upto M12. Hot dip galvanized for size above M12.
5.14	Phase marking	UV resistance Red, Yellow and Blue strip shall be fixed on connector in such a way that it is visible from ground level.
5.15	Marking of suitable size	Indelibly mark the following on IPC <ul style="list-style-type: none"> i. Name or Logo of manufacturer. ii. Model Number iii. Size of max. & min. main cables for which it shall be suitable. iv. Size of max. & min. branch cables for which it shall be suitable. v. Month and year of manufacture. vi. BSES logo.
5.16	Permanence test of marking	The performance of marking shall be checked by rubbing 15 seconds first with a cloth dipped in water and then for 15 seconds with a cloth dipped in petroleum spirit (aliphatic solvent hexane with boiling point of 65 Deg.C and specific gravity of 0.68)

6.0 Satellite connector:

It should have all the technical features as mentioned in clause no. 5.0. In addition, it must be suitable for terminating minimum 4 nos service cable of size upto 25sqmm. Main LT AB cable size shall be 150 / 95 sqmm.

7.0 Anchor clamp for bare messenger.

The clamp should be designed to anchor the 1.1KV AB cable with pole and shall have all the following features –

7.1	Size of clamp	Suitable for 125 sqmm, 70 sqmm or 35 sqmm aluminum alloy bare messenger.
7.2	Material of clamp body and keeper	Aluminum alloy (A-6) corrosion resistance.
7.3	Constructional requirement	Suitable to fit in easily with the eye hook. The clamp should not or corrode the messenger.
7.4	Surface finish	Finishing of clamp shall be smooth to avoid any damage of insulation of the other conductor. The clamp shall be free from all flaws, irregularities and sharp radii of curvature.
7.5	Breaking load of clamp	Shall not be less than the UTS of messenger.
7.6	Slip strength of clamp	Min. 95 % of the UTS of messenger.
7.7	Tightening arrangement	By bolting. The bolt must have a minimum thread of M10 and they must be prevented from getting loose by means of spring washer, flat washer and double nuts. The bolts must be withstands a minimum torque of 35Nm at tightening.
7.8	Hardware	Stainless steel for size upto M12. Hot dip galvanized for size above M12.
7.9	Marking of clamp (aluminum part)	By embossing , engraving the following marking on each clamp i. Name or Logo of manufacturer. ii. Size of messenger for which it shall be suitable. iii. Month and year of manufacture. iv. BSES.

8.0 Suspension clamp for bare messenger

The clamp should be designed to hold 1.1KV AB cable with pole and shall have all the following features-

8.1	Size of clamp	Suitable for 125 sqmm, 70 sqmm or 35 sqmm aluminum alloy bare messenger.
8.2	Material of clamp	Aluminum alloy (A-6) or 4635 of IS: 617, corrosion resistance.

8.3	Constructional requirements	Suitable to fit in easily with the eye hook.
		The clamp shall be provided with black weather resistance plastic coating of atleast 1mm thick to prevent the insulation of the phase conductor from chafing due to rubbing against clamp.
		The clamp should not damage or corrode the messenger
		Finishing of clamp shall be smooth to avoid any damage of insulation of the other conductor.
		It must be possible, during the installation, to suspend the messenger in the open clamp before the bolts is tightened.
		Suspension clamp assembly shall provide sufficient flexibility to allow free movement of the clamp at both straight run and angle locations.
		The clamp shall have good finish and shall be free from all flaws, sharp radii of curvature and the edges shall be suitable round off.
8.4	Breaking load of clamp	Minimum 20 KN for 125 sqmm messenger and Min. 10 KN for messenger upto 70 sqmm. .
8.5	Slip strength of clamp	Shall not be less than 5 KN for 125 sqmm messenger and 3 KN upto 70 sqmm messenger.
8.6	Tightening arrangement	The bolt must have a minimum thread of M8 and they must be prevented from getting loose by means of flat washer, spring washers double nuts. The bolts must withstand a minimum torque of 22 Nm at tightening.
8.7	Hardware	Stainless steel for size upto M12. Hot dip galvanized for size above M12.
8.8	Marking of clamp (aluminum part)	By embossing , engraving the following marking on each clamp
		v. Name or Logo of manufacturer.
		vi. Size of messenger for which it shall be suitable.
		vii. Month and year of manufacture.
		viii. BSES

9.0 Cable end caps

The Cable end cap shall have all the following features -

9.1	Used of end cap	To seal the unused end of LT AB cable for protection.
9.2	Size	Suitable for cable sizes of 16 sqmm to 150 sq.mm
9.3	Material	UV resistance premoulded type elastomeric material
9.4	Colour of cap	Black / colour preferred if IPC doesn't have colour marking
9.5	Marking on cap	i. Name or Logo of manufacturer. ii. Size of max and min cables for which it shall be suitable. iii. Month and year of manufacture. iv. BSES.

10.0 Eye hooks (Flat type).

The Eye Hooks shall have all the following features-

10.1	Size	Suitable to hold anchor and suspension clamps.
10.2	Installation	With bracket / clamp at pole.
10.3	Material	Forged galvanized steel.
10.4	Corrosion resistance	By galvanization with min. mass 610 gm / sqm
10.5	Hardware	Stainless steel for size upto M12. Hot dip galvanized for size above M12.
10.6	Ultimate tensile strength	Should not be less than the UTS of messenger.
10.7	Marking	i. Name or Logo of manufacturer. ii. Month and year of manufacture.

11.0 PG Clamp.

The PG Clamp shall have all the following features –

11.1	Use	The clamp shall be suitable to connect messenger for continuity of messenger in LT feeder. Also it shall be suitable for connecting the messenger to aluminum / steel wire for earthing.
11.2	Material	Aluminum alloy (A-6) or 4635 of IS: 617, corrosion resistance. The body & keeper shall be made by extrusion / pressure die casting or any superior method.

11.3	Constructional requirements	The connector shall be free from all irregularities, flaws and sharp raddi of curvature.
11.4	Hardware	Stainless steel for size upto M12. Hot dip galvanized for size above M12.
11.5	Tightening arrangement	The bolt must be prevented from getting loose by means of flat washer, spring washers double nuts.
11.6	Marking on clamp	i. Name or Logo of manufacturer.
		ii. Size of messenger for which it is design.
		iii. Year and month of manufacture
		iv. BSES

12.0 Service Main Clamp

The service main clamp shall have all the following features

12.1	Use	To anchor insulated service cable as per size specified in clause no. -4.
12.2	Material	Weather proof, UV resistance polymer.
12.3	Constructional requirements	The clamp should be made of polymer type wedges sliding inside the body to be insulated without using any tool, such as self supporting type.
		The bail shall be easy to open type fixing to brackets or pigtails with adjustable length upto 220mm (approx.).
		The clamp shall be as per NFC 33042 standard or equivalent IS / IEC / DIN standard.
12.4	Guaranteed breaking load	Min. 3 KN.
12.5	Hardware	If provided, it shall be stainless steel for size upto M12 and Hot dip galvanized for size above M12.
12.6	Marking on clamp	i. Name or Logo of manufacturer.
		ii. Size of service cable for which it is design.
		iii. Year and month of manufacture
		iv. BSES logo
12.7	Permanence test of marking	The performance of marking shall be checked by rubbing 15 seconds first with a cloth dipped in water and then for 15 seconds with a cloth dipped in petroleum spirit (aliphatic solvent hexane with boiling point of 65 Deg.C and specific gravity of 0.68)

13.0 Universal Service Bracket

The universal service bracket shall have all the following features

13.1	Use	To hold the service main clamp with pole.
13.2	Material	Weather proof, UV resistance polymer or aluminum alloy (A-6)
13.3	Constructional requirements	The bracket shall be fixed with pole by stainless steel strap in min two run. Suitable for anchoring min. 4 nos service main clamp.
14.4	Guaranteed breaking load	Min. 15 KN.
14.5	Marking on clamp	i. Name or Logo of manufacturer. ii. Model no. iii. Year and month of manufacture iv. BSES
14.6	Permanence test of marking (on polymer)	The performance of marking shall be checked by rubbing 15 seconds first with a cloth dipped in water and then for 15 seconds with a cloth dipped in petroleum spirit (aliphatic solvent hexane with boiling point of 65 Deg.C and specific gravity of 0.68)

14.0 Steel Buckles

The steel strap shall have all the following features.

14.1	Use	To hold the steel strap used for fastening of universal service bracket, distribution box on LT pole, supporting the GI pile with pile.
14.2	Material	Stainless Steel.
14.3	Constructional requirements	Inner height of the buckle shall be 3mm and inner width of the buckle be 21 mm. Surface of the buckles should be degreased.
14.4	Guaranteed breaking load	Min. 7.5 KN.

15.0 Steel Strap

15.1	Use	To hold the universal service bracket, distribution box on LT pole, supporting the GI pile with pile.
15.2	Material	Stainless Steel.
15.3	Constructional requirements	Width and thickness of strap shall be 20 X 0.75 mm.
15.4	Guaranteed breaking load	Min. 7.5 KN.

16.0 Tests

For all accessories, the type test report should be submitted from an independence NABL accredited laboratory like CPRI or the ILAC- MAR signatory laboratory in case of a foreign manufacturer. The type test conducted within five years shall only be considered as a valid type test report. Vendor in event of order has to submit QAP.

Testing of components shall be as per following.

16.1	IPC, Satellite connector & End cap (as applicable)	Following type test to be conducted on sample.
16.1.1	Type Test-	i. Mechanical Testing <ul style="list-style-type: none"> a. Test for mechanical damage to the main conductor. b. Branch cable pull out test. c. Connector bolt tightening test. d. Shear Head function test e. Low temperature Impact test. ii. Dielectric Voltage test & leakage current test. iii. Water tightness test. iv. Low temperature assembly test. v. Corrosion test. vi. Climactic ageing test. vii. Electrical ageing test. (min. 1000 nos heating- cooling cycles) viii. Permanent marking test. ix. Contact resistance test by 100V DC source
16.1.2	Acceptance test.	Following tests on randomly selected samples shall be carried out during inspection to validate the acceptance of product. Manufacturer also needs to carry out all the following tests on randomly selected samples from every batch before offer inspection. <ul style="list-style-type: none"> i. Visual Inspection. ii. Dimensional as per type test report. iii. Dielectric and leakage current test. iv. Water tightness test. v. Mechanical test <ul style="list-style-type: none"> a. Test for mechanical damage to the main conductor. b. Branch cable pull out test. c. Connector bolt tightening test. d. Shear Head function test vi. Marking & permanence.

16.1.3	Routine Test	i. Visual Examination
		ii. Dimensional as per type test report.
		iii. As per NFC / EN / IEC / IS
16.2	Anchor Clamp & Dead end clamp	
16.2.1	Type Test	Following type tests shall carried out on sample.
		i. Visual Examination.
		ii. Slip strength test.
		iii. Ultimate strength test.
		iv. Electrical resistance test
		v. Heating cycle test.
		vi. Verification of dimension.
		vii. Galvanizing test (uniformity & mass of Zn coating)
16.2.2	Acceptance test	The following tests shall be carried out during acceptance test.
		i. Visual examination.
		ii. Chemical composition test.
		iii. Verification of dimension
		iv. Slip strength test
		v. Ultimate strength test.
		vi. Galvanizing test (uniformity & mass of Zn coating)
16.2.3	Routine test	i. Visual Examination.
		ii. Mechanical test, slip strength test.
16.3	Eye Hook	Following type tests shall carried out on sample.
16.3.1	Type Test	i. Visual Examination.
		ii. Verification of dimension.
		iii. Mechanical test.
		iv. Galvanizing test. (Uniformity and mass of Zn coating)
		v. Chemical composition test.
16.3.2	Acceptance test	The following tests shall be carried out during acceptance test.
		i. Visual Examination
		ii. Verification of dimension
		iii. Mechanical test.
		iv. Galvanization test.
16.3.3	Routine test	i. Visual Examination.
		ii. Verification of dimension.

16.4	PG Clamp	
16.4.1	Type Test.	<p>Following type tests shall carried out on sample</p> <p>i. Tensile Test.</p> <p>ii. Resistance Test.</p> <p>iii. Temperature rise test.</p> <p>iv. Short time withstand current test.</p> <p>v. Dimensional check.</p> <p>vi. Galvanizing test (uniformity and mass of Zn collating). Where applicable.</p>
16.4.2	Acceptance Test	<p>The following tests shall be carried out during acceptance test.</p> <p>i. Tensile test.</p> <p>ii. Resistance test.</p> <p>iii. Galvanization test (Uniformity and mass of Zn coating), where applicable</p> <p>iv. Visual inspection</p> <p>v. Dimensional check</p>
16.4.3	Routine Test	<p>i. Visual Inspection</p> <p>ii. Dimensional check</p>
16.5	Service main clamp & Universal Service Bracket	
16.5.1	Type Test	<p>Following type tests shall carried out on sample</p> <p>i. Visual Examination.</p> <p>ii. Dimensional verification.</p> <p>iii. Tensile strength</p> <p>iv. Electrical resistivity.</p> <p>v. Climatic ageing / UV resistance test.</p> <p>vi. Corrosion test.</p> <p>vii. Chemical composition test. (Applicable for aluminum alloy made universal bracket)</p>
16.5.2	Acceptance Test	<p>Following acceptance test shall be carried out on randomly selected sample during inspection.</p> <p>i. Visual Examination</p> <p>ii. Dimensional verification.</p> <p>iii. Tensile strength.</p> <p>iv. Electrical resistivity.</p> <p>v. Chemical composition test (Applicable for only aluminum made universal service bracket)</p>

16.5.3	Routine Test	i. Visual examination.
		ii. Dimensional verification.
		iii. Tensile strength (on sample of each batch)
		iv. Electrical resistivity (On sample of each batch)

17.0 Shipping, Handling and Site support

17.1	Packing protection	Against shocks, vibration & corrosion.
17.2	Packing Identification Labels	To Show purchase name, P.O number, Item Code number, name & type of product, Quantity of product, weight of packing box etc.
17.3	Handling Instruction	To be marked on packing box.

18.0 Deviations

Deviations from this Specification shall be stated in writing with the tender by reference to the Specification clause / GTP/ Drawing and a description of the alternative offer. In absence of such a statement, requirements of the Specification shall be met without exception.

19.0 Documentation

15.1	Technical bid submission to include	Dully filed GTP
15.2		Valid Type test report
15.3		GA drawing
13.4		Catalogue of product.
		Sample – 1no each type

Annexure - A Technical particulars (Data by purchaser)

The package substation shall be designed & tested to operate satisfactorily under following conditions –

Sr No	Description	Data by purchaser	
1	Location of equipment	Delhi	Outdoor
2	Reference design ambient temperature	Delhi	40 deg C
3	Maximum ambient temperature	Delhi	50 deg C
4	Relative humidity	Delhi	85% for Delhi
5	Seismic zone as per IS 1893 part1	Delhi	Zone IV

Annexure - B Guaranteed Technical Particulars (Data by Supplier).**B-1: GTP for Insulating Piercing Connector / Satellite Connector.**

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	i. Size of main	
	ii. Number and size of tap	
7	Number of tightening bolts	
8	Rated bolt tightening torque	
9	Torque required for breaking shear head	
10	Type of end cap for branch cable	
11	Continuous current rating	
12	Over load capacity	
13	Minimum breasting load of connector	
14	Torque required for establishing connection between main & body	
15	Type and grade materials of the body.	
16	Type & grade of contact plate materials	
17	Number of teeth and size	
	i. Main	
	ii. Tap	
18	Material of bolts, shear head	
19	Approx weight	
20	Marking on clamp	
21	Overall dimension	
22	GA drawing attached.	
23	Type test report enclosed	

B-2: GTP for Anchor Clamp.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	

5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of clamp	
7	Range of messenger	
8	Type and grade of metallic / non-metallic material	
9	Manufacturing process of metallic body and keeper	
10	Min. Ultimate tensile strength	
11	Min. slip strength	
12	Overall dimension (LXWXD) mm	
13	Approx. Weight	
14	Marking on clamp	
15	GA drawing submitted (Y / N)	
16	Type test report submitted (Y / N)	

B-3: GTP for Suspension Clamp.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of clamp	
7	Range of messenger	
8	Type and grade of metallic material	
9	Type and grade of metallic & non metallic material	
10	Manufacturing process body and keeper	
11	Profile of contact surface (tooth / grooved / grip jawed)	
12	Min. Ultimate tensile strength	
13	Min. slip strength	
14	Overall dimension (LXWXD) mm	
15	Approx. Weight	
16	Marking on clamp	
17	GA drawing submitted (Y / N)	
18	Type test report submitted (Y / N)	

B-4: GTP for Eye Hook.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of design	
7	Type and grad of metallic material	
8	Manufacturing process	
9	Min. Ultimate tensile strength	
10	Overall dimension (LXWXD) mm	
11	Approx. Weight	
12	Marking on clamp	
13	GA drawing submitted (Y / N)	
14	Type test report submitted (Y / N)	

B-5: GTP for PG Clamp.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of clamp	
7	Range of messenger	
8	Type and grade of metallic material	
9	Manufacturing process of metallic body and keeper	
10	Min. Ultimate tensile strength	
11	Min. slip strength	
12	Overall dimension (LXWXD) mm	
13	Approx. Weight	
14	Marking on clamp	
15	GA drawing submitted (Y / N)	
16	Type test report submitted (Y / N)	

B-6: GTP for Service main clamp / Universal Bracket.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of design	
7	Type and grade of metallic / non metallic materials	
8	Manufacturing process	
9	Min. Ultimate tensile strength	
10	Overall dimension (LXWXD) mm	
11	Approx. Weight	
12	Marking on clamp	
13	GA drawing submitted (Y / N)	
14	Type test report submitted (Y / N)	

B-7: GTP for Steel Buckles / SS Strap.

Sr. No.	Descriptions	Data to be filled by Manufacturer
1.	Name and address of manufacturer	
2	Place of manufacture	
3	Standard	
4	Confirmation to specification (Yes/ No)	
5	If NO for point no. 4 above, submission of deviation sheet for mentioning clause no.	
6	Type of design	
7	Type and grade of metallic / non metallic materials	
8	Manufacturing process	
9	Min. Ultimate tensile strength	
10	Overall dimension, mm	
11	Approx. Weight	
12	Marking on clamp	
13	GA drawing submitted (Y / N)	
14	Type test report submitted (Y / N)	

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE**TECHNICAL SPECIFICATIONS****OF****SLOTTED ANGLE,****L-TYPE ANGLE,****BRACKET ANGLE****BRPL RAJDHANI POWER LTD.**

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Approved by	K. Sheshadri	<i>K. Sheshadri</i> 21/01/19	No of Pages:	11

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BSES Rajdhani Power Ltd

GN101-03-SP-157-00

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

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TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

1.0 Scope of Supply

1.1 The specification covers the design, manufacturing, inspection, testing & supply of slotted angle, L-type angle, bracket angle, d-clamps

1.2 Design, Engineering, Manufacturer, Assembly, Inspection, testing at manufacturer works before dispatch Packing, delivery of material to BRPL stores and submission of documents to purchaser.

2.0 Service Condition

The Safety helmets to be supplied against this specification shall be suitable for satisfactory continuous operation under outdoor environment. Following are the climatic condition:

Sl.no	Parameters	Requirements
i.	Peak ambient temp.	55°C
ii.	Min ambient temp. in shade	45°C
iii.	Max. average ambient temp in 24 hours period in shade	40°C
iv.	Min ambient temp.	(-)5°C
v.	Max. temp. attainable by an object exposed to sun	70°C
vi.	Max. relative humidity	95%
vii.	Average number of thunder storm days per annum	40
viii.	Average number of rainy storm days per annum	120
ix.	Average annual rainfall	1250mm
x.	No of months of tropical monsoon condition	4 months
xi.	Max. wind pressure	150kg/m ²
xii.	Altitudes	Not exceeding 1000mtrs

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

3.0 Applicable Standards

3.1 Codes & Standards

In the event of supply of slotted angle, L-type angle, bracket angle, D-clamps confirming to Standards other than specified, the bidder shall confirm in his bid that these standards are equivalent or better to those specified. In case of award, salient features of comparison between the standards proposed by the bidder and those specified in this document will be provided by the supplier to establish equivalence.

Standards including amendments –		
S.no	Code	Description
I.		Indian electricity act & Indian Electricity Rules
II.		CBIP manual
III.		REC Specification 32/1984
IV.	IEC 60060	High voltage test techniques
V.	IEC 60068-2-5	Test Sa: Simulated solar radiation at ground level and guidance for solar radiation testing.
VI.	IEC 60112	Method for the determination of the proof and the comparative tracking indices of solid insulating materials
VII.	IEC 60947-3	Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
VIII.	IEC 60269-1,-2,-3,	Low voltage air break switches, air break disconnectors, air-break switch Disconnectors and fuse combination units
IX.	IEC 60529	Classification of degrees of protection provided by enclosures
X.	IEC 60695-2-1	Fire hazard testing. Part 2: Test methods. Glow-wire test and guidance
XI.	IEC 61238	Compression and mechanical connectors for power cables for rated voltages up to 30 kV (Um = 36 kV) - Part 1: Test methods and requirements
XII.	IS 14255 / HD 626	LV Aerial Bunch Cable
XIII.	IS 7098, Part-1	Cross linked Polyethylene Insulated PVC Sheathed Cables, Part-1,

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

Standards including amendments –		
S.no	Code	Description
		Working Voltage upto and including 1100V
XIV.	IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
XV.	IS 2633	Methods for testing uniformity of coating of zinc coated articles
XVI.	IS 2486, Part-1	Metal fittings of insulators for overhead power lines with nominal voltage greater than 1000 V : Part 1 General requirements and tests
XVII.	IS 5561	Electric Power connector.
XVIII.	IS 617	IS 617 : 1994 for general engineering purposes
XIX.	NFC 33-020 /EN 50483	Insulating Piercing Connectors for overhead distribution and service for ABC system.
XX.	NFC 33-021	Pre insulated compression type connecting equipment for overhead distribution & services for ABC System
XXI.	NFC 33-004 /EN 50483-5	Electrical Aging Test (1000 Cycle heating cooling test)
XXII.	EN 50483 -1	Test requirements for low voltage aerial bundled cable accessories, Part 1: Generalities
XXIII.	EN 50483 -3	Test requirements for low voltage aerial bundled cable accessories - Part 3: Tension and suspension clamps for neutral messenger system.
XXIV.	EN 50483 -4	Test requirements for low voltage aerial bundled cable accessories - Part 4: Connectors
XXV.	EN 50483 -5	Test requirements for low voltage aerial bundled cable accessories - Part 5: Electrical ageing test
XXVI.	EN 50483- 6	Test requirements for low voltage aerial bundled cable accessories - Part 6: Environmental testing

In the event of direct conflict between various order documents, the precedence of authority of documents shall be as follows –

- i. Guaranteed Technical Particulars (GTP)
- ii. Specification including applicable codes, standards
- iii. Approved Vendor Drawings
- iv. Other documents

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

4.0 Electrical data

Sl.no	Parameter	Details
4.1	LT supply system	3 phase AC, 4 wire
4.2	Rated voltage	415v +/-10%
4.3	Rated frequency	50 Hz ± 5%
4.4	Fault level	35MVA – 50kA

5.0 Cable construction

Constructional features of standard sizes of LT AB cable & Service cables being used in BSES distribution system are given below.

5.1 Main / Branch AB Cable

- i) 3CX150 (Ph) + 1CX150 (N) + 1CX125 (M) + 1CX16 (SL)
- ii) 3CX95 (Ph) + 1CX95 (N) + 1CX70 (M) + 1CX16 (SL)
- iii) 3CX50 (Ph) + 1CX50 (N) + 1CX35 (M) + 1CX16 (SL)

5.2 Service cable

- i) 2CX10 sqmm XLPE cable
- ii) 2CX 25 sqmm XLPE cable
- iii) 4CX 25 sqmm XLPE cable
- iv) 4CX50 sqmm XLPE cable

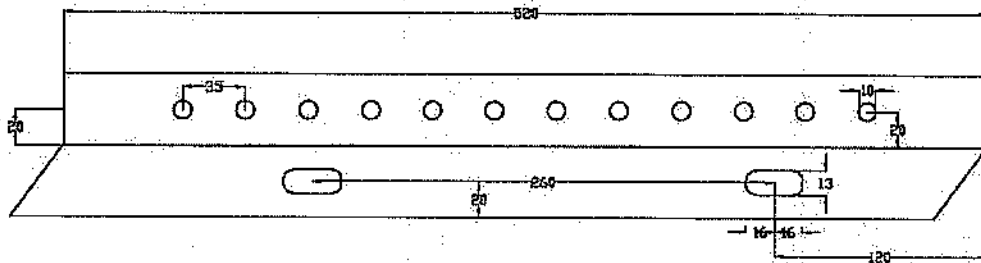
6.0 Requirements

6.1 Slotted Angle

Sl.no	Material	Dimension (mm)	Weight KG (Approx)
1	Slotted Angle	40X40x5	1.2
2	D-Clamp	40x6	1.064
3	Nut-Bolt	M 10, 65	—

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

SLOTTED ANGLE



Nut Bolt Size : M10X65(Nut & Washer - 2Nos. each with each bolt)

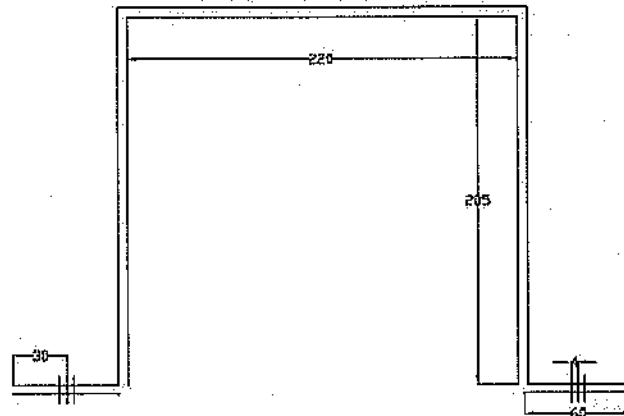
Angle Size 40x40x5

Drawing 01.1

Prepared by : Sumit Kumar

Checked By : Naved Ahmed

Approved By : Amit Tomar

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE**D-CLAMP FOR SLOTTED ANGLE (HOT GALVANIZED)**

Flat Size 40x6
WEIGHT : 1.064KG
SAP Code : 2000069076

Drawing 01
Prepared by : Sumit Kumar
Checked By : Naved Ahmed
Approved By : Amit Tomar

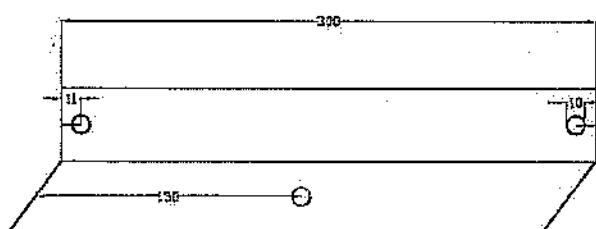
Application: Suitable to support 12 no's of 2x10, 2x25, 4x25 sqmm service cable at PCC pole end (out door installation).

6.2 Bracket Angle

Sl no	Parameters	Dimension (mm)	Weight KG (Appox)
1	Bracket Angle	50X50x5	1.35
2	Shape	As per drawing	

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

BRACKET ANGLE



Angle Size 50x50x5 MM
WEIGHT : 1.35 KG
SAP Code : 2000069078

Drawing 01.1
Prepared by : Sumit Kumar
Checked By : Naved Ahmed
Approved By : Amit Tomar

Application: Suitable to support 2~3 no's of 2x10, 2x25, 4x25 sqmm service cable at consumer end (out door installation).

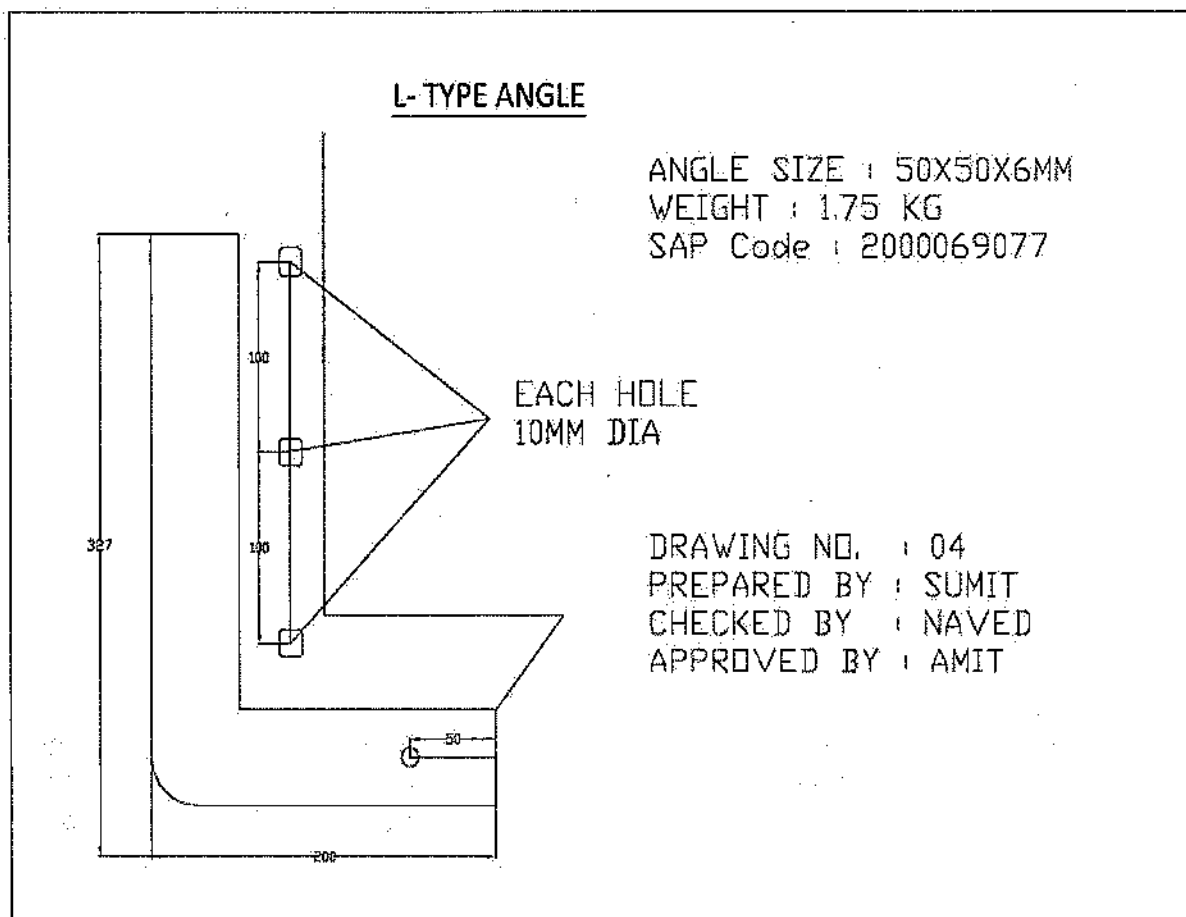
6.3 L type Angle

Sl no	Parameters	Dimension (mm)	Weight KG (Approx)
1	L type Angle	40X40x5	1.75
2	Shape	L-type section with MIG welding	

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BSES Rajdhani Power Ltd

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TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

Application: Suitable to support of 2x10, 2x25, 4x25 sqmm service cable at consumer end (out door installation).

7.0 Test

7.1 Chemical composition test as per IS

7.2 Visual examination

7.3 Dimensional verification

7.4 Relevant standards applicable to angles mentioned in the document

TECHNICAL SPECIFICATIONS OF SLOTTED ANGLE, L-TYPE ANGLE, BRACKET ANGLE

8.0 Guarantee Certificate

Guarantee Certificate to be given for any manufacturing defects along with its consignment from the date of receipts at stores for free replacement within one year.

9.0 Packing and Marking

The material shall be punched with 10 numbers each other and marked indelibly with the following information.

- a. Name of the material
- b. Identification of the source of manufacture
- c. Month and year of manufacture and
- d. Property of "BRPL"

10. Inspection

Manufacturer shall intimate the manufacturing schedule in advance. The manufacturer shall give minimum 15 days advance notice about readiness of material at their works. The material shall be inspected for conformity with BRPL specification before the same is accepted.

10.1 Certificates required

- Manufacturing certificates
- Test certificates
- Routine Test

11. Deviation

Deviation from this specification is only acceptable in cases where the bidder has submitted deviation list along with the technical bid. It may also be noted that the deviation can only be accepted by BRPL in case it does not hamper the basic purpose of the Angles.

In the absence of a list of deviations, it will be assumed by Buyer that the seller complies fully with this specification.

BSES

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

Technical Specification no: GN101-03-SP-161-01

BRPL RAJDHANI POWER LTD.				
Prepared by	Naved Ahmad	<i>Naved Ahmad</i> 18/03/19	Date:	18.03.2019
Reviewed by	Amit Tomar	<i>Amit Tomar</i> 18/03/19	Revision	R1
Approved by	K. Sheshadri	<i>K. Sheshadri</i> 19/03/19	No of Pages:	12

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TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

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- 1.0 Scope of Supply
- 2.0 Code and Standards
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- 4.0 Design Feature
- 5.0 General Requirement
- 6.0 Quality Assurance
- 7.0 Testing and Inspection
- 8.0 Drawings, Data and Manuals
- 9.0 Shipping, Handling and Site Support
- 10.0 Progress reporting
- 11.0 Deviation
- 12.0 Drawings and Materials Details
- 13.0 GTP

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

1.0 Scope of Supply

1.1 The service requirement of this standard has been made in order to improve the reliability & quality of LT distribution network.

1.2 Design, Engineering, Manufacturer, Assembly, Inspection, testing at manufacturer works
Before dispatch packing, delivery of material to BRPL stores and submission of documents to purchaser.

2.0 Code and Standards

Following Indian/International Standards, which shall mean latest revision, with amendments/changes adopted and published, unless specifically stated otherwise in the Specification, shall be referred while accessing conformity of Lineman safety helmets

In the event of supply of Dead End clamps confirming to Standards other then specified, the bidder shall confirm in his bid that these standards are equivalent or better to those specified. In case of award, salient features of comparison between the standards proposed by the bidder and those specified in this document will be provided by the supplier to establish equivalence.

Standards including amendments –		
S.no	Code	Description
I.	-----	Indian electricity act & Indian Electricity Rules
II.	-----	CBIP manual
III.		REC Specification 32/1984
IV.	IEC 60060	High voltage test techniques
V.	IEC 60695-2-1	Fire hazard testing. Part 2: Test methods. Glow-wire test and guidance
VI.	IEC 61238	Compression and mechanical connectors for power cables for rated voltages up to 30 kV (Um = 36 kV) - Part 1: Test methods and requirements
VII.	IS 2629	Recommended Practice for Hot-Dip Galvanizing of Iron and Steel
VIII.	IS 2633	Methods for testing uniformity of coating of zinc coated articles
IX.	IS 2486, Part-1	Metal fittings of insulators for overhead power lines with nominal voltage greater than 1000 V : Part 1 General requirements and tests
X.	IS 5561	Electric Power connector.
XI.	IS 617	IS 617 : 1994 for general engineering purposes

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

Standards including amendments –		
S.no	Code	Description
XII.	NFC 33-020 /EN 50483	Insulating Piercing Connectors for overhead distribution and service for ABC system.
XIII.	NFC 33-021	Pre insulated compression type connecting equipment for overhead distribution & services for ABC System
XIV.	NFC 33-004 /EN 50483-5	Electrical Aging Test (1000 Cycle heating cooling test)
XV.	NFC 33-041 1998	Insulated cable and their accessories for power systems anchoring device for overhead distribution with bundle assembled cores, Voltage 0.6/1 kV
XVI.	EN 50483 -1	Test requirements for low voltage aerial bundled cable accessories, Part 1: Generalities
XVII.	EN 50483 -3	Test requirements for low voltage aerial bundled cable accessories -Part 3: Tension and suspension clamps for neutral messenger system.
XVIII.	EN 50483 -4	Test requirements for low voltage aerial bundled cable accessories -Part 4: Connectors
XIX.	EN 50483 -5	Test requirements for low voltage aerial bundled cable accessories -Part 5: Electrical ageing test
XX.	EN 50483- 6	Test requirements for low voltage aerial bundled cable accessories -Part 6: Environmental testing

3.0 Service Conditions

The Dead End Clamps to be supplied against this specification shall be suitable for satisfactory continuous operation under outdoor environment. Following are the climatic condition:

Sl.no	Parameters	Requirements
i.	Maximum ambient temperature (Degree C)	50°C
ii.	Minimum ambient temperature (Degree C)	0°C
iii.	Relative Humidity (%)	100
iv	Maximum annual rainfall (mm).	1450
v	Maximum wind pressure (Kg/Sq.m)	150
vi	Maximum Altitude above mean sea level (Meters)	1000

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

Sl.no	Parameters	Requirements
vii	Seismic level (Horizontal Acceleration)	0.30
viii	Climatic Conditions :	Moderately Hot and humid tropical climate conducive to rust and fungus growth
ix	Ref Ambient Temperature for Temperature (Degree C)	50

4.0 Design Feature

4.1 Flexible Bail of Anchor Assembly

- a) The Anchoring assembly shall be supplied with a stainless steel flexible Bail to connect the Tension Clamp to the pole/consumer bracket.
- b) The flexible Bail forming part of clamp should be of length to maintain at least 150mm distance between bracket and body of clamp and shall have sufficient mechanical strength to withstand the mechanical test for the complete assembly tests.
- c) The Bail should have sufficient flexibility to ease the tensional movement (180 degree min)
- d) The Bail should be pre-fitted with compression type end fittings which needs to be removable and re-fittable at one side of the clamp and locked at the other end of the Dead end clamp.

4.2 Body of Anchor Assembly

- a) The length shall be 70mm for the fitting of bail & moveable wedge.
- b) The moveable wedge shall be properly move inside the body and capable the to hole the consumer service cable.
- c) No bolts or loose parts are allowed as part of the Clamping system
- d) The clamp shall be self tightening and capable of holding without slippage (30 kN required)

4.3 Wedge of Anchor Assembly

- a) Wedge shall be used for clamping the service cable without damaging the cable.

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

- b) The Fittings shall be free from defect, fraction and shall meet the requirements of field installation.
- c) All parts of shall be made such that sufficient clearance is provided at the connection point to ensure free movement.

5.0 General Requirement

- 5.1 Interchangeability- The composite long rod insulators inclusive of the ball & socket connection shall be standard design suitable for use with the hardware fittings of any make conforming to relevant IEC standards.
- 5.2 All surfaces shall be clean, smooth, without cuts, abrasions or projections. No part shall be subjected to excessive localized pressure. The insulator and metal parts shall be so designed and manufactured that it shall avoid local corona formation and shall not generate any radio interference beyond specified limit under the operating conditions.
- 5.3 The design, manufacturing process and material control at various stages shall be such as to give maximum working load, highest mobility, best resistance to corrosion, good finish and elimination of sharp edges and corners to limit corona and radio interference
- 5.4 The design of the insulators shall be such that stresses due to expansion and contraction in any part of the insulator shall not lead to deterioration.

6.0 Quality Assurance

Vendor Quality Plan	To be submitted for purchaser approval
Inspection Points	To be mutually identified & agreed in quality plan

7.0 Testing and Inspection:

Manufacturer shall intimate the manufacturing schedule in advance. The manufacturer shall give minimum 15 days advance notice about readiness of material at their works. The material shall be inspected for conformity with BRPL specification before the same is accepted

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

S.no	Test	Details
i.	Type test	<p>Following test shall be carried out on service line dead end clamp from NABL Approved lab as per NF C 33-042</p> <ol style="list-style-type: none"> Slip strength test (3kN Min) Tensile Strength Dimension test Dielectric strength test High voltage test Climatic Ageing Test Corrosion test <p>Above mention test shall be witnessed by BSES representative at NABL.</p>
ii.	Routine test	Raw material certificates and Routine test certificates in accordance with relevant IS, shall be submitted during the inspection.
iii.	Acceptance tests	<p>Sampling & following acceptance tests in accordance with relevant IS/IEC shall be conducted during the inspection at manufacturer's works:-</p> <ol style="list-style-type: none"> Slip strength test (3kN Min) Tensile Strength Dimension test Dielectric strength test High voltage test Climatic Ageing Test Corrosion test

8.0 Drawing, Data and Manuals:

8.1	To be Submitted along with the bid	The seller has to submit:
		a) Details sectional drawing of Dead End clamps
		c) Complete filled GPT and QAP
		e) Type Test Certificate from NABL
		f) Complete Catalogue and manual
8.2		Within 15 days, the seller has to submit four sets of above mentioned drawings along with one set soft copy for buyer's
8.3	Submission required prior to dispatch	a) Inspection and test reports carried out in manufacturer's works
		b) Test Certificate of all bought out items.

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

8.4	Drawing and Documents Size	Standard size paper A0,A1,A2,A3,A4
8.5	No of drawings/ documents required at different stages	As per Annexure A

9.0 Shipping, Handling and Site Support

9.1	Packing	Dead End Clamps shall be packed in suitable PVC/ plastic tubes/any other suitable packing along with temporary wrap-on shields/shrouds for each insulator unit. The packing shall be of sufficient strength to withstand rough handling during transit, storage at site and subsequent handling in the field
		Suitable cushioning, protective padding, or dunnage or spacers shall be provided to prevent damage or deformation during transit and handling
		The items so wound will be grouped as per numbers per packet. The information like product quantity shall be mentioned on the packets
		Purchase order no. with SAP code shall be mentioned clearly
		Net weight and gross weight with packet shall be mentioned
		Batch no. or lot no shall be mentioned
9.2	Shipping	The seller shall give complete shipping information concerning the gross weight, size of each packing and the seller has to send the materials to buyer's preferable store or site.
9.3	Handling & Storage	Manufacturer instruction shall be followed. Detail handling & storage instruction sheet / manual needs to be furnished before commencement of supply.
9.4	Transit damage	The seller shall be responsible for any transit damage due to improper packing.

10.0 Progress reporting

10.1	Outline Document	To be submitted for purchaser approval for outline of production, inspection, testing, packing, dispatch, documentation programmer.
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TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

10.2	Detailed Progress report	To be submitted to Purchaser once a month containing a) Progress on material procurement. b) Progress on internal stage inspection c) Reason for any delay in total program. d) Details of test failures if any in manufacturing stages e) Progress on final box up. f) Constraints / forward path
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11.0 Deviations:

Deviations from this Specification shall be stated in writing with the tender by reference to the Specification clause/GTP/Drawing and a description of the alternative offer. In absence of such a statement, it will be assumed by the Buyer that the Seller complies fully with this specification.

12.0 Drawings and Materials Details:

The bidder has to submit drawings along with bid for preliminary acceptance and for final approval before manufacturing. BRPL may insist trial installation to check dimensions and may suggest necessary changes if required. BRPL decision in this regard would be final and binding to short listed vendor without any subsequent commercial liability on purchaser.

13.0 12 Marking:

The Following information shall be marked on each Dead End Clamps:

7.1 Manufacturer's name or trade mark

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

Annexure A- GUARANTEED TECHNICAL PARTICULARS OF DEAD END CLAMP

S no.	Characteristics	Requirement of BSES	Data By Supplier
1	Manufacturer's name	Required	
2	Manufacturer's address	Required	
3	Material	-Thermoplastic for body and wedge -Stainless steel for bail	
5	Use	Hold the service cable	
7	Durability	Weather and UV resistant	
8	Color	Black	
9	Length of body (base)	70mm	
10	Length of tail	150mm	
11	Installation arrangement	Easily installation	
12	Guaranteed breaking Load	Min. 3 KN	
13	BRPL logo	Required	
14	Construction	The clamp should be made of polymer type wedges sliding inside the body to be insulated without using any tool, such as self supporting type.	
16	Marking on clamp	-Name or logo of manufacture -Size of service cable for which it is design -P.O no and year -BSES logo	
17	GA drawing	Required	
18	Type test report	Required	
19	Whether the seal is type tested for the minimum pulling force required	Yes/No	
20	Whether the type test certificates are furnished	Yes/No	
21	Environmentally safe as it does not contain any lead (Pb).	Yes/No	
22	Withstand long-term exposure to	Yes/No	

TECHNICAL SPECIFICATIONS OF DEAD END CLAMP

S no.	Characteristics	Requirement of BSES	Data By Supplier
	direct sunlight.		
23	Tools required for Installation.	Yes/No	
25	Heat resistance	Yes/No	
26	Chemical resistance	Yes/No	
28	5 No's sample submitted	Yes/No	