



West Bengal State Electricity Distribution Company Limited

(A West Bengal Government Enterprise)

Gowalafatak 33/11 KV S/Stn. Campus, Naihati : 24-PGS.(N)
Registered Office: BidyutVhavan: Block-DJ, Sector-II, Bidhannagar, Kolkata-700091,
Corporate Identity Number (CIN):U40109WB2007SGC113473,
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NOTICE INVITING e-TENDER

Memo no NHD/25-26/1913

Dt. 09.02.2026

NIT No: DM/NHD/ELECTRICAL/25-26/22

Date: 09.02.2026

The Divisional Manager, Naihati Division, WBSEDCL invites e-tender for the work detailed in the table below.
(Submission of Bid through Online)

Sl. No	Description of Materials	Materials code	Unit	Qty	Unit price	Estimated cost	Earnest Money	Delivery time
1	Supply and delivery of single tension hardware fittings compression Extruded type suitable for ACSR Wolf as specification of WBSEDCL	0505011941	set	264	1500	3,96,000/-	@2% of the estimated cost to be (Rs. 9880)submitted online	30 days
2.	LT DIST. BOX WH SHACKLE STRAP FOR AB CABLE as specification of WBSEDCL	0504060841	Nos	80	1225	98,000/-		
Total value						4,94,000/-		

The makers of Sl. No 2 should be Syntex/Raychem/Enstro

- (1) For e-filling of tender, intending bidder may download the tender documents from the website <https://wbtenders.gov.in> directly with the help of Digital Signature Certificate (DSC).
- (2) Both Technical Bid and Financial Bid should be submitted in technical and financial folder concurrently and duly digitally signed by the prospective bidder through the website <https://wbtenders.gov.in>.
- (3) Technical Document and Financial Bid should be submitted online on or before the 'Date & Time Schedule' stated in Serial Number (10).
- (4) The FINANCIAL OFFER of the prospective bidder will be considered only if the TECHNICAL DOCUMENT is found qualified by the Tender Inviting Authority. The decision of the Tender Inviting Authority will be final and absolute in this respect. The list of Responsive and Non-Responsive Bidders will be displayed in the website.
- (5) The bid so prepared by the bidder and all other correspondences and documents relating to the bid, exchanged by the bidder and WBSEDCL, shall be written in English Language only.
- (6) **Eligibility criteria for participation in the tender:**
 - (i) Original manufacturers/Distributors of the tendered items will be eligible in the tender
 - (ii) The bidders must be bonafide, experienced & resourceful contractors and have successfully completed similar nature of work under the authority of Government, Semi-Government, Government Undertaking Organizations, Government Enterprises or any power utility etc.
 - (iii) The Bidders are required to produce valid copies of current G.S.T. registration certificate, professional tax (P.T.) deposit challan, E.P.F. registration certificate & challan, E.S.I. registration certificate & challan, PAN card, income tax acknowledgement / return for the last three financial years, trade license as well as other certificates of compliance of statutory obligations (to be documented through e-filing).
 - (iv) The Bidders shall submit reports on the financial standing reflecting solvency of bidder (company / firm) as certified by bankers, audited annual reports on accounts with auditor's certificate, Tax audit report for last three financial years, as applicable.

Prospective bidders are advised to note carefully the minimum qualification criteria as mentioned in the Table-I of Serial Number(4) (Submission of Tenders) of Section- A (INSTRUCTION TO BIDDERS).
- (7) **Responsibility of Bidders:**
 - (i) It shall be the sole responsibility of Bidders to determine and to satisfy themselves by such means as they consider necessary or desirable for all matters pertaining to this contract including, in particular, all factors that may affect the cost, duration and execution of the work.

- (ii) It must be understood and agreed that such factors have properly been investigated and considered while submitting the bid. Any claim, whatsoever, including those for financial adjustments to the contract, once awarded under these documents will not be entertained by WBSEDCL. Neither any change in time schedule of the contract nor any financial adjustments, arising thereof, shall be permitted by WBSEDCL, which are based on the lack of such clear information of its effect.
- (iii) WBSEDCL will not assume any responsibility regarding information gathered, interpretations or conclusions made by the bidder or regarding information, interpretation or deductions the bidder may derive from the data furnished by WBSEDCL. Verbal agreement or conversation with any officer, employee of WBSEDCL either before or after the execution of the contracts, shall not affect or modify any of the terms or obligations contained in the contract.
- (iv) The bid shall include all the information as per bid document. The bidder is expected to examine carefully all instruction, conditions, forms, schedules, terms, Annexure, specifications etc. in the bidding documents. Failure to comply with the requirement of bid submission will be at the bidders own risk. Bids, which are determined to be not substantially responsive to the requirements of the bidding documents, will be rejected.
- (v) The bidder shall bear all the costs associated with the preparation and submission of bid and WBSEDCL in no case shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
- (vi) In order to avoid any problem arising out of network error or server error, bidders are advised to submit the bid, well in advance of the last date and time of submission of the bid. WBSEDCL shall not be held responsible for any failure of Bid submission due to snag arising out of network failure.
- (8) **Mobilization Advance:** Nomobilization advance or secured advance will be allowed.
- (9) **Validity of Bids:** Bids shall remain valid for a period not less than **120 (One hundred twenty) days** after date of opening of bids of the tender. Bids valid for a shorter period shall be rejected by the Tender Inviting Authority as non-responsive. If the bidder withdraws the bid before the period of bid validity without giving any satisfactory explanation for such withdrawals, the earnest money as deposited will be forfeited forthwith without assigning any reason thereof.
- (10) **Schedule of Key Dates & Time:**

Sl. No.	Particulars	Date & Time
01.	Date of uploading of N.I.T and Tender Documents (online). [Publishing date]	13.02.2026 after 10.00 Hrs
02.	Documents Download Start date (online).	13.02.2026 after 10.00 Hrs
03.	Bid Submission Start date (online)	13.02.2026 after 10.00 Hrs
04.	Bid Submission End date (online)	20.02.2026 up to 17.00 Hrs
06.	Technical bid opening date (online)	23.02.2026 after 10.00 Hrs
07.	Date of uploading the Final List of Technically Qualified Bidders after Technical Bid Evaluation (online).	To be intimated later.
08.	Financial Bid opening date (online).	To be intimated later.

(11) **Earnest Money Deposit (EMD):**

The amount of Earnest Money Deposit (EMD) shall be deposited **through Online** as prescribed in the NIT. The bidder shall select the tender to bid and initiate payment of EMD.

- (a) Following payment options are available for paying EMD amount through

Online mode:

- **Net-banking through payment Gateway.**
- **RTGS/NEFT Payment:** On selection of RTGS/NEFT as the payment mode, the e-Procurement portal will show a pre-filled challan having the details to process RTGS/NEFT transaction. The bidder will print the challan and use the pre-filled information to make RTGS/NEFT payment using his bank account. Once the payment is made, the bidder will come back to the e-procurement portal to continue the bidding process after expiry of a reasonable time to enable the RTGS/NEFT process to be completed.

(b) **General Instruction for Online Payment:**

- The bidder will have to mandatorily pay through Net-banking facility once Net-banking mode is opted for payment.
- Status of NEFT/RTGS payment through challan for a bid may take time for bank settlement which is updated in 24 Hrs. (approx.). As such bidders opting to pay through NEFT/RTGS mode shall make payment well before 24 Hrs. to avoid any complicity.
- In case actual EMD amount as per NIT is more than the one shown in E-tender Portal, bidders will have to opt for NEFT/RTGS mode (challan mode). In that case the total actual EMD amount is to be paid only through NEFT/RTGS mode (challan mode).
- The bank account used for payment of EMD by the bidders shall be maintained operative until the completion of tendering process. All refunds will be made mandatorily to the Bank A/c from which the payment of EMD has been initiated.

(c) **Refund /Settlement of EMD Amount:**

- For unsuccessful bidders, EMD amount submitted against the tender shall be refunded automatically, through an automated process, by NIC portal on receipt of updated status of any bid.
 - For successful bid(s), EMD will be refunded from WBSEDCL authority after completion of tendering process and following due procedures.
 - The bank account used for payment of EMD by the bidders shall be maintained operative until the completion of tendering process. All refunds will be made mandatorily to the Bank A/c from which the payment of EMD has been initiated.
 - For any queries related to payment and refunds, bidders will have to communicate with ICICI Customer Support, viz. 033 40267512/13 since payment gateway facility used by E-tender portal is maintained by ICICI.
- (d) Successful bidder(s) shall have to mandatorily **create Vendor ID through WBSEDCL Web Portal Vendor Corner**, if not created earlier.
- (e) **Forfeiture of Earnest Money Deposit (EMD):** Earnest money deposit /bid guarantee shall be forfeited in case of the following situations:
- If during the period of validity, the bidder withdraws/modifies its bid as a whole or in part.
 - If the bidder deviates from any clarification/confirmation given by him sub-sequent to submission of his bid.
 - In the case of successful bid, if the bidder fails:
 - To accept LOA /Order unconditionally and sign contract.
 - To furnish contract performance bond as per standard proforma.
- (12) **Specification of Work:** The work should conform to WBSEDCL's general conditions of contract, standard specifications, and approved drawings of WBSEDCL satisfying relevant provisions of I.E. rules.
- (13) **Supply of Materials:** Major items of necessary equipment and materials shall be supplied by the WBSEDCL from the nearest site stores. In excess of 35 (thirty five) km, only cost of transport of excess kilometers beyond 35 (thirty five) km will be payable as per approved rate schedule of the WBSEDCL prevailing at the time of actual transport.
- (14) **Sample Approval:** Lowest bidder must submit sample of materials within Bid submission end date of intimation from WBSEDCL end, which will be inspected by the tender committee. Only after satisfactory sample approval, formal order will be issued. The vendor must deliver same quality of materials.
- (15) **Tools & Tackles:** Adequate quantities of standard tools and tackles shall be available so as to complete the work entrusted as expeditiously as possible.
- (16) **Penalty for delay in Completion:** In case of failure to complete the work within time, penalty from ½% to 2.5% (depending upon the nature of non performance) of the executed work within the stipulated rate @ ½% for every fortnight shall be liable for payment.
- (17) **Site Visit:** The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing Bid and entering into an agreement for the work / works as mentioned in the NIT, before submitting offer with full satisfaction. The costs for visiting the working site shall be at the bidder's own expense.
- (18) **Right to reject Bids:** WBSEDCL reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of the Order, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders the reason for WBSEDCL's action.
- (19) **Controlling Officer:** The **Divisional Manager, Naihati Division**, WBSEDCL shall act as Controlling Officer.
- (20) **Supervising Officer & Site-in-Charge:** The **Divisional Engineer (Technical), Naihati Division**, WBSEDCL shall act as Supervising Officer & Site-in-Charge.
- (21) **Paying Authority:** The **Assistant Manager (F&A), Naihati Division**, WBSEDCL shall be the Paying Authority.
- (22) Work Order & Payment of work will depend on availability of fund. Intending bidders may consider this criteria while submission of tender and quoting their rate through online.
- (23) No Conditional Bid / Incomplete Tender will be accepted under any circumstances.
- (24) The intending bidder(s) are required to quote the rate (percentage above/below/at par) over the total estimated cost put to tender online considering that no escalation and / or price adjustment will be allowed by the department under any circumstances and to consider the following costs and criteria & conditions.
- At any stage during scrutiny, if it is found that the credential or any other papers which the Bidder uploaded during Bidding process is/are incorrect / manufactured / fabricated / misleading, that bid will be considered as nonresponsive and outright rejected with forfeiture of Earnest Money Deposit and action will be taken as per stipulations of Information Technology Act & Rules and other admissible law, as in force.
- (25) Before issuance of Letter of Acceptance / Work order, the tender accepting authority may verify the credential & other documents of the lowest bidder so uploaded online if found necessary. If it is found such document incorrect / manufactured / fabricated, Letter of Acceptance / Work order will not be issued in favor of the bidder under any circumstances and action will be taken accordingly. If any bidder fails to produce the original hard copies of the document like Successful Completion Certificate and any other documents on demand of the department within a specified time frame or if any deviation is detected in the original copies from the uploaded soft copies, it may be treated as submission of false documents by the bidder and action may be referred to the appropriate authority for prosecution as per relevant IT Act.
- (26) The Tender Inviting Authority reserves the right to cancel the NIT due to unavoidable circumstances and no claim in this respect will be entertained.
- (27) The WBSEDCL shall not bind itself to accept the lowest tender and reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the 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 ground for WBSEDCL (Tender Accepting Authority)'s action.

- (28) Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors, who resort to canvassing will be liable to rejection. Any evidence of unfair trade practices, including overcharging, price fixing, cartelization etc. as defined in various statutes, will automatically disqualify the parties. Evidence of repeated occurrence of such malpractices by any bidder shall be viewed seriously by the WBSEDCL authority and appropriate penal measures shall be imposed on such bidders which may include blacklisting.
- (29) **LOSS AND DAMAGE OF MATERIALS:** The contractor shall be responsible for safe custody of all materials until the installation is officially taken over by the Company. For any loss including theft/pilferage/damage during the period of transportation, storage, erection, jointing, reinstatement etc. the same shall be made good by the contractor at his own cost and arrangement.
- (30) **STORAGE CUM ERECTION INSURANCE:**“Loss” mentioned in serial number (27), shall also include theft. In case of any theft, the contractor shall lodge FIR with the Police Station within 24 hours of occurrence of the incident with intimation to the Site Engineer with copy of the FIR. The contractor shall obtain Insurance Policy for all such materials which shall be issued by the Company for the erection of cable and other installation works from the time of taking over the materials from the Company up to the time of taking over of the completed installation work by the Company. The contractor will obtain Insurance in the name of “WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED” with a General Insurance Company. In the event of any loss/damage or both, the contractor shall lodge claim with the Insurance Company and take necessary measures to realize claim from them on behalf of WBSEDCL. The payment received from the Insurance Company against such loss/theft shall be deposited to WBSEDCL.
However, for timely completion of work, the materials may be issued to the contractor by the company against a receipt of fresh requisition from the contractor on that effect. In spite of the insurance being made by the contractor, some special security arrangement will have to be ensured by the contractor to prevent theft of company’s property during storage/erection/installation and the cost of such arrangement shall be borne by the contractor. It may be noted that neither any materials can be issued by the company nor the contractor will be allowed to take up the work unless the insurance coverage is obtained. The contractor at his own cost shall make adequate arrangement to safeguard the materials. Such arrangement shall be maintained round the clock along the entire stretch to eliminate any attempt of damage/pilferage of materials already utilized by them. The damages required to be covered under the insurance shall include, fire and allied risk, miscellaneous accidents, erection risk, workman compensation risk, loss or damage in transit, theft, pilferage etc. as per the project requirement.
All cost on account of insurance liabilities covered under the contract will be to the contractor’s account. It is the responsibility of the contractor to keep the policy alive throughout the desired period and adequate premium should be paid by them time to time. The policy should cover the material and labour cost of the entire contract. The insurance policy has to be handed over to the ordering authority before first lot of material is issued to the contractor.
- (31) Civil and Electrical activities which are not covered in scope/BPS but are required to complete the job, shall be paid as per published schedule of rates of the Public Works Department, Government of West Bengal and schedule of rates published by the competent authority of WBSEDCL, as effective on the date of bid opening.
- (32) **Bidder should provide the rates for erection work without GST. Applicable GST will be paid in extra.**
- (33) **Award of Contract:**The bidder whose bid has been accepted will be notified by the Tender Inviting & Accepting Authority through Acknowledgement Letter / Letter of Acceptance. The notification of award will constitute the formation of the contract.
- (34) **Supply of materials:**The supply of materials including scope, applicable standards, conditions of installation, general technical requirement, general construction, special requirement, tests, Inspection, drawings & documentation, dispatch etc. shall conform to the technical specifications as enclosed. The bidder shall arrange to prepare Guaranteed Technical Particulars (GTP) as per format and drawings from the original manufacturer and to be submitted to the Controlling Officer for approval by the competent authority of WBSEDCL.The complete cost of delivering the materials shall be borne by the vendor. Consignee and other details shall be as stated in the LOA / PO and may generally be at the respective store of WBSEDCL under the jurisdiction of the Controlling Officer.
- (35) **Additional Performance Security which shall be equal to 10% of the tendered amount must be furnished by the successful bidder if the accepted bid value is 80% or less of the estimate put to tender(L1 bid in the range of -20% to -80%). The additional Performance Security shall be submitted in the form of Bank Guarantee from any scheduled bank valid for a period of 1 (one) year, as per specified format marked ‘Annexure - A’ enclosed with this NIT,before issuance of the Work Order. This is in compliance of the terms of Memorandum No. 4608-F(Y) dated 18.07.2018 of the Finance department, Government of West Bengal.**
- (36)**WARRANTY PERIOD:** Warranty Period of supplied material will be one year from the date of delivery of the said materials. In case of any adverse report from store or defect found in site, materials have to be replaced or it would affect the vendor rating.

Annexure I

Self Declaration

I/We on behalf of (Name of bidder agency) do hereby declare that I/We have quoted rate for supply of the mentioned materials for the e-tender id _____ dt:_____

I/We also declare that I/We shall successfully complete the work in scheduled time maintaining the terms & conditions of Warranty of NIT Clause no. 36 if ranked as L1 bidder of the tender.

Yours faithfully,

**Signature of authorized
Representative of the bidder agency
with official seal**

6
SECTION – A
INSTRUCTION TO BIDDERS

General Guidelines for e-Tendering

Instructions/ Guidelines for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

1. Registration of Contractor:

Any intending bidder willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <https://wbttenders.gov.in> (the web portal). The contractor shall click on the link for e-Tendering site as given on the web portal.

2. Digital Signature certificate (DSC):

Every intending bidder is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount. Details are available in the website. DSC is given as a USB e-Token.

3. The intending bidder can search & download the Notice Inviting Tender (NIT) and tender documents electronically from the website, once he logs on using his Digital Signature Certificate. This is the only mode of collection of tender documents.

4. Submission of Tenders:

Tenders are to be submitted in online mode in the website in two folders at a time for each work, one as Technical Proposal & the other as Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded (virus free scanned copy) duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

In order to avoid any problem arising out of network error or server error, bidders are advised to submit the bid, well in advance of the last date and time of submission of the bid. WBSEDCL shall not be held responsible for any failure of Bid submission due to snag arising out of network failure.

4.1. Technical proposal:

The Technical proposal should contain scanned copies of the following in one cover (folder).

4.1.1 Non Statutory / Technical Document Cover file containing Certificates, Company Detail(s), Credentials and Financial Information as given in the **Table-I** of this Clause.

Note: Failure of submission of any of the above mentioned documents will render the tender to be rejected for both statutory & non statutory cover.

THE NON-STATUTORY / TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER.

Table - I

Sl. No.	Category Name	Sub-category Description	Details
01.	Certificates	Certificates	(a) PAN Card. (b) Copy of Income Tax Return for last 3 (three) financial years. (c) GST Registration Certificate. (d) Professional Tax Clearance Certificate for the last month.
02.	Company Detail(s)	Company Detail	(a) Trade License (b) Certificate of incorporation of company (if applicable).
03.	Credentials	Credential	(a) Performance as prime contractor (having supervisor for this particular voltage level or higher) for execution of similar nature of works of Govt., Semi Govt., Govt. undertaking Organizations, Govt. Enterprises or any power utility etc. for last 5 (five) years and details of work in hand. (b) Credential of any of the said tendered item should be full value of the total proposed tendered amount. (c) Enlisted Dealership certificate of (Make-Syntex/Raychem/Enstro) for Sl. No 2 need to be provided.
04.	Financial Information	Financial Information	a) Annual Audited Financial Report for last 3 (three) years to be submitted for verification in respect of bidders for whom Audit of Accounts is mandatory. For whom Audit of Accounts is not mandatory, they shall submit copy of Income Tax Returns along with related enclosures (Form 3CA and Form 3CB) for last 5 years. b) Average annual turnover during last 3 years shall not be less than 30% of the estimated cost. c) Working capital in the year, proceeding the year of bid submission shall not be less than 30% of the estimated cost. d) In case documents certifying credit facility from a scheduled bank is submitted, the requirement given in clause (c) above shall be judged by adding available credit facility and working capital taken together.

Click the check boxes beside the necessary documents in the My Document list and then click the tab "**Submit Non-Statutory Documents**" to send the selected documents to Non-Statutory folder. Next Click the tab "**Click to Encrypt and upload**" and then click the "**Technical**" Folder to upload the Technical Documents.

4.2. Financial proposal:

The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ). The contractor is to quote the rate (Offering above / below / at par) online in the space marked for quoting rate in the BOQ.

Only downloaded copies of the above documents are to be uploaded scanned for virus and digitally signed by the contractor / bidder.

5. Opening and evaluation of tender:

5.1 Opening of Technical Proposal

- (i) Technical proposals will be opened by the Tender Inviting Authority or his authorized representative electronically from the website stated above, using their Digital Signature Certificate.
- (ii) Technical proposals for those tenders where EMD have been received within due date will only be opened. Proposals corresponding to which EMD has not been received, will not be opened and will stand rejected.
- (iii) Intending bidders may remain present, if they so desire.
- (iv) Cover (folder) for statutory documents will be opened first and if found in order, cover (folder) for non-statutory Documents will be opened. If there is any deficiency in the statutory documents, the tender will summarily be rejected.
- (v) Decrypted (transformed into readable formats) documents of the statutory and non-statutory covers will be downloaded for the purpose of evaluation.

5.2. Techno-commercial Evaluation of Tender

- (i) During evaluation, the Tender Inviting Authority or his authorized representative may summon the bidders and seek clarification / information or additional documents or original hard copy of any of the documents already submitted and if those cannot be produced within the stipulated timeframe, their proposals will be liable for rejection.
- (ii) The summary list of bidders, whose bids will be found techno-commercially eligible, will be uploaded in the web portals. Date of opening of financial bid will be intimated to the Techno-commercially qualified bidders.

5.3. Opening and evaluation of Financial Proposal

- (i) Financial proposals of the bidders declared techno-commercially eligible, will be opened electronically by the Tender Inviting Authority from the web portal stated above on the mentioned date.
- (ii) The encrypted copies will be decrypted and the rates will be read out to the bidders remaining present at that time.
- (iii) After opening of the financial proposal the preliminary summary result containing *inter alia*, the name of bidders and the rates quoted by them will be uploaded.
- (iv) The Tender Accepting Authority may ask any of the bidders to submit analysis to justify the rate quoted by that bidder.

6. Revision/withdrawal of Financial Proposal by the bidder after opening of Technical Proposal of the tender will not be allowed if it is not sought by the Tender Inviting Authority.

Enclosure:

- (1) Drawings
- (2) Technical Specifications

**Divisional Manager
Naihati Division
WBSEDCL**

TECHNICAL SPECIFICATION FOR TENSION HARDWARE FITTINGS COMPRISING OF CROSS-ARM STRAP, BALL CLEVIS & SOCKET CLEVIS/SOCKET TONGUE AND DEAD END CLAMP (COMPRESSION TYPE) TO BE USED IN 33KV LINE WITH 70KN B&S TYPE DISC INSULATOR.

1.0 SCOPE:

- i) The Specification covers the design, manufacture, testing (preferably at manufacturer's works before supply) and delivery of the combined Unit of Cross Arm Strap, Ball Clevis & Socket Clevis/Socket Tongue and compression type dead end Clamp (Composite Hardware Fittings) including loading, unloading anywhere in West Bengal.
- ii) The combined units offered shall be complete with all components which are necessary (excepting disc insulator) or usual for their effective performance and easy maintenance and inter changeability at site. Such parts shall be deemed to be within the scope of contract.
- iii) **The set is to be used in 33 KV line with 70 KN B&S type Disc Insulator for ACSR Wolf Conductor.**
- iv) **The set is also be used in 33 KV Sub-Station with 70 KN Disc Insulator for ACSR Panther Conductor.**

2.0 GENERAL REQUIREMENTS:

- i) Ball designation should be 16 mm.
- ii) The Fittings shall be free from defects, corrosion protected and shall meet the requirements of Galvanizing Test etc as per IS.
- iii) All forging and casting shall be of good finish and free from flaws and other defects. The edges of the fittings such as the tongue, Clevis and holes shall be rounded.
- iv) **All parts of different fittings which provide the interconnection shall be made such that sufficient clearance is provided at the connection point to ensure free movement. All tongue and clevis connection shall be free in this manner but care shall be taken that too much clearance between Eye and the tongues of the Clevis is avoided.**
- v) **Spring washer should be electro galvanized-Coating thickness as per IS: 1573-1986.**

U bolt, Hexagonal Bolt, Nut, Plain washer and all other ferrous parts shall be Hot dip Galvanized. In case of Hot Dip Galvanization, minimum value or average mass of Zinc coating (g/m²) should be as per Table 1 of IS 4759 for different classes of materials.

The Split Pin/Cotter Pin, to be used shall be Humpback type & shall be made of Stainless Steel conforming to IS: 5522-1992 with a minimum hardness of 160HV.

Locking device (R type) for Ball and Socket Lockers shall be of Stainless Steel conforming to IS 6603-1972 with minimum hardness of 160HV. The dimension shall conform to IS: 2486 (Part 3)-1974.

3.0 STANDARDS:

The materials covered under this specification shall comply with the requirements of the latest version of the following standards as amended up to date, except where specified otherwise.

i)	IS:2486 (Part I):1993	Specification for metal fittings of insulators for overhead power lines with nominal voltage greater than 1000 V
ii)	IS :2486 (Part II):1989 IS:2486 (Part III)-1974	Specification for Insulator fittings for over head power lines with nominal voltage greater than 1000 V
iii)	IS:4759:1996	Specification for hot-dip zinc coatings on structural steel and other allied products
iv)	IS:6745-1972	Method for determination of mass of zinc coating on zinc coated iron and steel articles
v)	IS:1573-1986	Specification for electroplated coatings of zinc on iron and steel
vi)	IS:2629-1985	Recommended Practice for hot dip galvanizing of iron & Steel
vii)	IS:2633-1986	Method for testing uniformity of coating on zinc coated articles



Divisional Engineer (Tech)
Naihati Division
W.B.S.E.D.C.L

4.0 **MATERIALS AND OTHER REQUIREMENTS:**

CROSS-ARM STRAPS (fig-1) (For Tender Purpose):

Cross-arm straps shall be manufactured from **MS Flat hot dip galvanized** and to connect the cross-arm/bracket of the structure at one end and the Ball Clevis at the other end.

It should be complete with **hexagonal bolts, nuts, spring washers and cotter pin at the threaded end to lock the unit.**

Minimum Threaded portion of the bolt shall be **30mm.**

CROSS-ARM STRAPS to be used for	Ultimate tensile strength(minimum)
ACSR Wolf/Panther Conductor	70 KN

Dimensions shall be in accordance with IS: 2486 (Part-2) unless otherwise specified.

BALLCLEVIS (fig-2) & SOCKET CLEVIS/SOCKET TONGUE (fig-3) (For Tender Purpose):

All **forgings** shall be of good finish and free from any flaws and any other defects which may cause decrement of efficiency while in operation. Connection/attachment with other component of the unit shall provide reasonable clearance/ensure free movement at the connecting/attaching point. **Care should be taken to avoid too much clearance while used with Insulators.**

Materials for **Ball Clevis & Socket Clevis/ Socket Tongue** should be as stated below:-

Ball clevis - Forged Steel and hot dipped galvanized.

Socket Clevis/ Socket Tongue - Forged Steel and hot dipped galvanized

BALL CLEVIS & SOCKET CLEVIS/TONGUE to be used for	Ultimate tensile strength(minimum)
ACSR Wolf/Panther Conductor	70 KN

All dimensions of Ball Clevis & Socket Clevis/ **Socket Tongue** shall be in accordance with IS: 2486 (Part-2) unless otherwise specified.

DEAD END CLAMP (COMPRESSION TYPE) & JUMPER CONE:

(fig. 4 for ACSR Wolf conductor & Fig 5 for ACSR Panther Conductor)(For Tender Purpose):

The dead end clamps shall be suitable for supporting ACSR Conductor. The Clamp comprises of outer sleeve and inner sleeve. **Outer Sleeve & Jumper Cone shall be made of EC grade Aluminium. The inner Sleeve is Steel Sleeve & shall be made by Forged Steel.** The steel sleeve of dead end clamp shall be single piece obtained by process of drop forging and shall not be made by joining, welding, shrink fitting or any other process for more than one piece of material.

The steel sleeve shall be hot dip galvanized.

The part for main conductor to be tension joint at rated tension and for jumper part it is to be non-tension type.

The dead end clamp shall be compression type with provision for compressing jumper terminal at one end. A tensile load of about 50% of the breaking load of the conductor shall be applied and the conductor shall be marked in such a way that movement relative to the clamp can be detected. Without subsequent adjustment of the clamp, the load shall be steadily increased to 95% then reduced to 90% of the breaking load of the conductor and maintained for one minute. There shall be no movement of the conductor relative to the clamp during this one minute period and no failure of the Clamp. The conductivity of the clamp shall not be less than that of conductor.

Compression zone as well as Non-Compression zone shall be clearly marked on each dead end clamp.

5.0 **MARKING:**

Combined unit shall be legibly & indelibly marked with **Name and/or Trade mark of manufacturer, Month and year of manufacture (MM/YY), 70 KN and suitable identification marking of the property 'WBSIEDCL'.** The marking should be engraved/embossed.


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6.0 Sample Approval: The supplier is required to deliver sample material that meet the agreed-upon specifications, quality standards, and regulatory requirements as outlined in the technical specification. Any deviation from these standards is not acceptable.

7.0 Tolerance: Tolerance shall be as per IS: 2486 (Part-I).


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GUARANTEED TECHNICAL PARTICULARS

FOR TENSION HARDWARE FITTINGS COMPRISING OF G.I. CROSS-ARM STRAP, BALL CLEVIS & SOCKET CLEVIS/SOCKET TONGUE AND DEAD END CLAMP (COMPRESSION TYPE) TO BE USED IN 33 KV LINE WITH 70 KN B&S TYPE DISC INSULATOR FOR WOLF CONDUCTOR :

1.	Name & Address of the Firm	
2.	Type of Insulator Fittings	B&S type
3.	Ball Designation	16mm
4.	Ultimate Tensile Strength	
a)	Dead end Clamp (Compression type)	70KN
b)	Complete Fittings	70KN
5.	Material used	
a)	Cross arm Strap	Mild Steel, hot dip galvanized
b)	Ball Clevis	Forged Steel and hot dipped galvanized
c)	Socket Clevis/Socket Tongue	Forged Steel and hot dipped galvanized
d)	Dead end Clamp (Compression type)	i) Outer Sleeve-EC grade Aluminium ii) Inner Sleeve-Forged Steel, hot dip galvanized iii) Jumper Cone & Plate -EC grade Aluminium
e)	Locking devices for ball and socket lockers	Stainless Steel conforming to IS: 6603-1972 with minimum hardness of 160 HV.
f)	Split pins/Cotter pins	Stainless Steel conforming to IS: 5522-1992 with minimum hardness of 160 HV.
g)	Rivet, Bolts & Nuts	MS, Hot Dip Galvanized
h)	Hexagonal Bolt & Nut	MS, Hot Dip Galvanized
i)	Spring Washer	Spring Steel, Electro Galvanized
j)	Plain Washer	MS Hot Dip Galvanized
6.	Zinc conforming to grade	As per IS 209: 1992
7.	Weight per set	
a)	Gross weight of complete fittings	
b)	Weight of Dead end Clamp(compression type) & Jumper Cone	
c)	Weight of Cross Arm Strap	
d)	Weight of Ball Clevis	
e)	Weight of Socket Clevis/ Socket Tongue	
f)	Weight of Nut, Bolts ,Rivet, Bolt & accessories	
g)	Minimum Guaranteed weight of Fittings	
h)	Whether galvanizing confirm to IS:2633- 1986	
8.	Packing details	
a)	Net Weight	
b)	Gross Weight	
c)	Contents of each Pack	
d)	Type of Packing	
9.	Tolerance in dimension, if any	IS:2486 Part I (Up to and Including 35mm. : ± 0.7 mm) (Over 35 mm. : $\pm 2\%$)
10.	Marking	
11.	Guarantee	



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DRAWING

CROSS ARM STRAP:

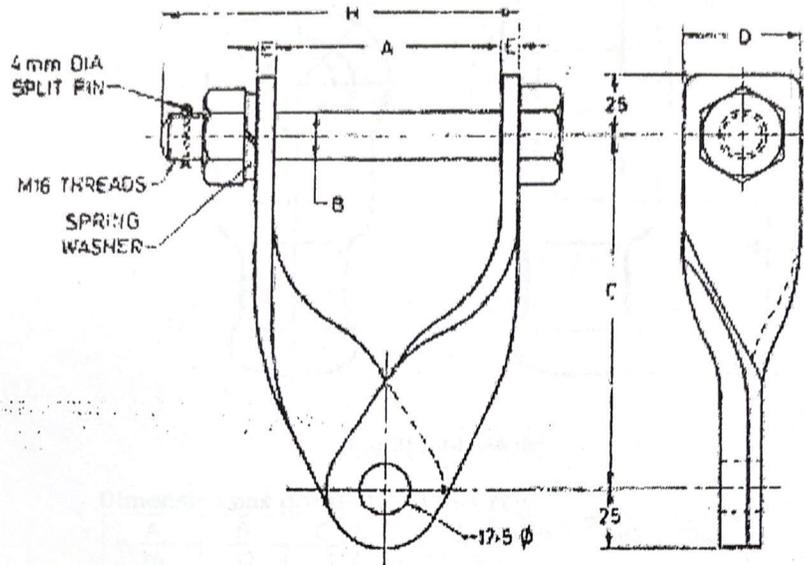


Fig-1: Cross Arm Strap

Dimensions as per IS 2486(Part II):

A	B (Dia)	C	D	E	H
100	16	140	35	6	145

(All dimensions are in mm)

PARTICULARS	MATERIAL	QTY.
TWISTED STRAP	Mild Steel, Hot Dip Galvanized	2 No.
M 16 X 145 MM BOLT	Mild Steel, Hot Dip Galvanized	1 No.
16 MM SPRING WASHER	Spring Steel, Electro Galvanized	1 No.
16MM NUT	Mild Steel, Hot Dip Galvanized	1 No.
SPLIT/COTTER PIN	Stainless Steel	1 No.


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BALL CLEVIS :

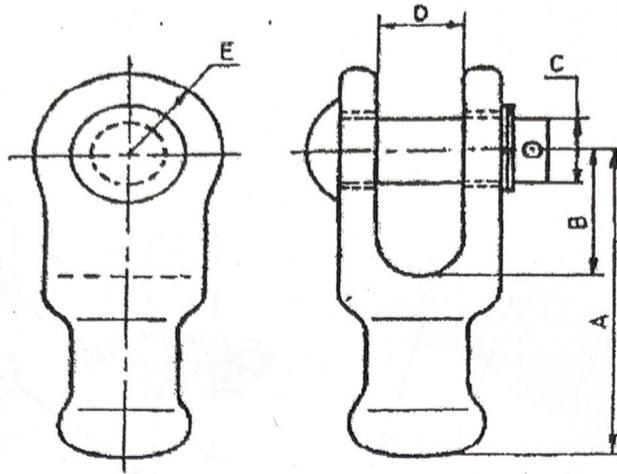


Fig 2: Ball Clevis

Dimensions as per IS 2486(Part II):

A	B	C	D	E	Pin Ball Designation
76	32	16	19	20.5	16

(All dimensions are in mm)

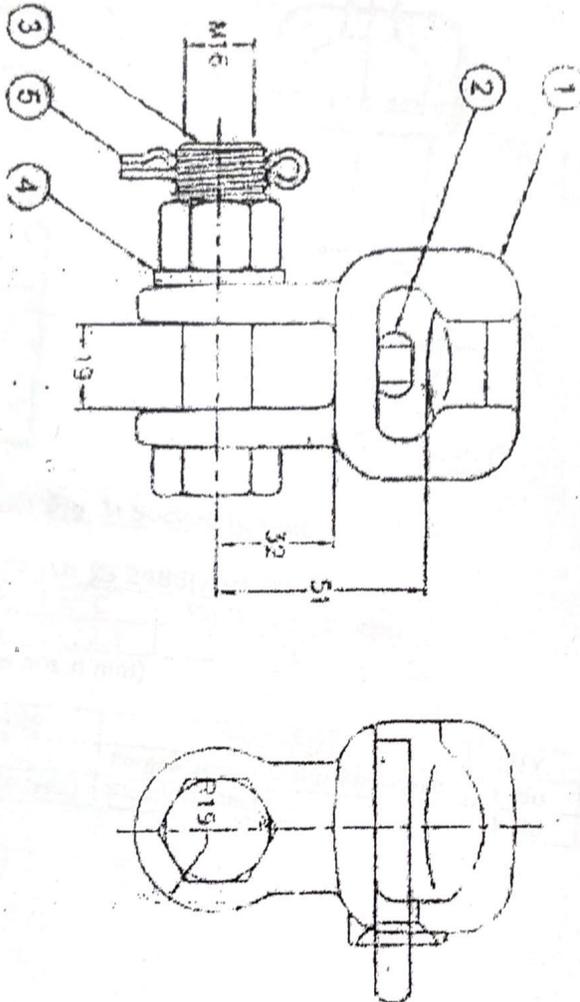
PARTICULARS	MATERIAL	QTY.
BALL CLEVIS	Forged Steel, Hot Dip Galvanized	1 No.
16 MM RIVET	Mild Steel, Hot Dip Galvanized	1 No.
16 MM PLAIN WASHER	Mild Steel, Hot Dip Galvanized	1 No.
SPLIT/COTTER PIN	Stainless Steel	1 No.

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Fig-3

SOCKET CLEVIS



Sl. No.	Description	Material	QTY.
1.	Socket Clevis	Forged Steel, Hot Dip Galvanized	1 No.
2.	R-Clip	Stainless Steel conforming to IS: 6603-1972 with minimum hardness of 160 HV.	1 No.
3.	Bolt & Nut, M-16	Mild Steel, Hot Dip Galvanized	1 No.
4.	Plain Washer (2.5mm thick)	Mild Steel, Hot Dip Galvanized	1 No.
5.	Split/Cotter Pin	Stainless Steel conforming to IS: 5522-1992 with minimum hardness of 160 HV.	1 No.


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SOCKET TONGUE:

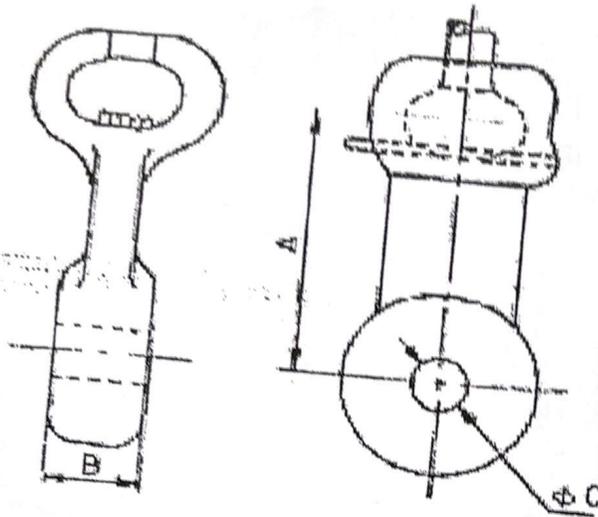


Fig-3: Socket Tongue

Dimensions as per IS 2486(Part II):

A	B	C	Pin Ball Designation
51	16	17.5	16

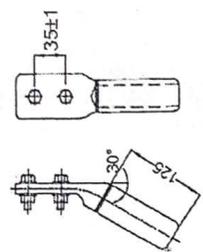
(All dimensions are in mm)

PARTICULARS	MATERIAL	QTY.
Socket Tongue	Forged Steel, Hot Dip Galvanized	1 No.
Locking device (R type)	Stainless Steel	1 No.

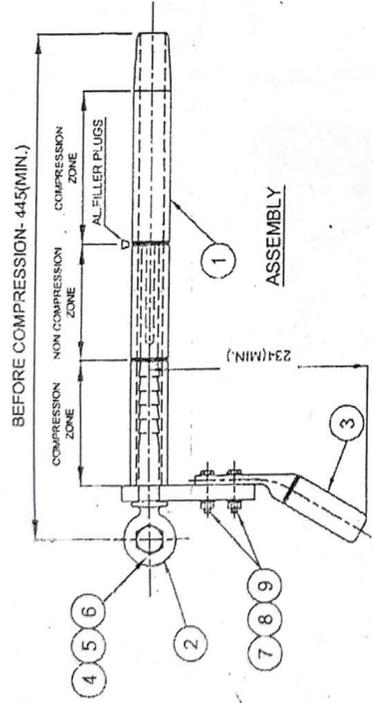
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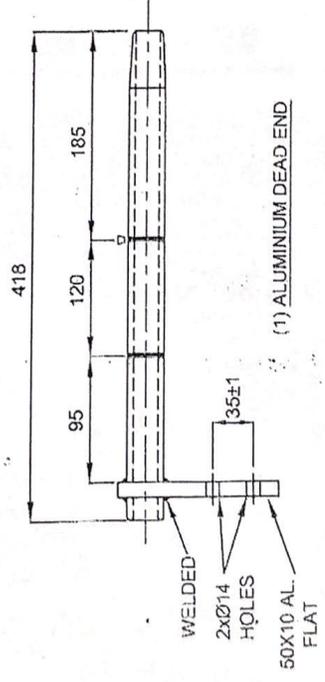
SL NO.	DESCRIPTION	MATERIAL	QTY
1	ALUMINIUM DEAD END	EC GRADE ALUMINIUM, 19500, IS:733	1 NO.
2	STEEL DEAD END	FORGED STEEL, CL-II, IS:2004, HDG	1 NO.
3	ALUMINIUM JUMPER	EC GRADE ALUMINIUM, 19500, IS:733	1 NO.
4	M13 BOLT & NUT	MILD STEEL, GRADE 5.6/5.0, HDG	1 NO.
5	M15 PLAIN WASHER	MILD STEEL, Fe-410, IS:2062, HDG	1 NO.
6	SPLIT PIN	STAINLESS STEEL, AISI-304	1 NO.
7	M12 BOLT & NUT	MILD STEEL, GRADE 5.6/5.0, HDG	2 NO.
8	M12 PLAIN WASHER	MILD STEEL, Fe-410, IS:2062, HDG	4 NO.
9	M12 SPRING WASHER	SPRING STEEL, IS:4072, EG	2 NO.



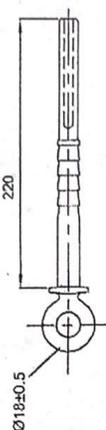
(3) JUMPER



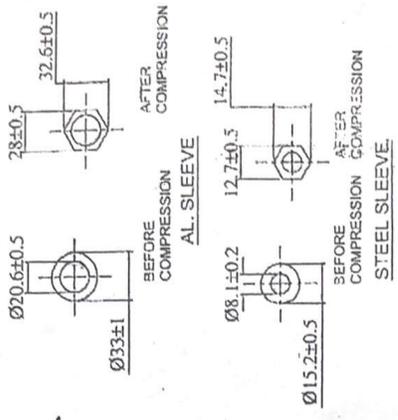
ASSEMBLY



(1) ALUMINIUM DEAD END



(2) STEEL DEAD END



TECHNICAL DATA :-

1. ALL DIMENSIONS ARE IN MM.
2. FERROUS PARTS ARE HOT DIP GALVANISED AS PER IS:2629 & 2633.
3. SLIP STRENGTH OF DEAD END - 98% OF UTS OF ACSR WOLF.

Signature
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TITLE	COMPRESSION DEAD END CLAMP FOR ACSR WOLF WITH JUMPER
FIG. - 04	DATE :-
WBSEDCL	REV:- SCALE:-NTS