
 <p><b>MAHATRANSCO</b> Maharashtra State Electricity Transmission Co. Ltd.</p>	<p align="center"><b>MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD</b> <b>CIN No. U40109MH2005SGCI53646</b> <b>EHV O&amp;M DIVN-II PUNE-30</b> <b>MSETCL 220kV PARVATI S/STN.,</b> <b>NEAR P.L. DESHPANDE GARDEN, SINHGAD ROAD,</b> <b>PUNE - 411030</b> <b>☎ - PH.NO.020-29910830 E-mail: ee6120@mahatransco.in</b></p>	
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EE/EHV /O&M/PN /Tech-/ 289

DT: 03.04.2024

**ENQUIRY**  
**(Through MSETCL webpage)**  
**TO WHOM SO EVER IT MAY CONCERN**

Dear Sir,

The budgetary offers through e-mail are hereby invited for the above work as per Schedule `A' mentioned below:-

Sr. No.	Scope of work	UOM	Ex Rate	Extra Taxes	Unit Rate
1	<b>Double jumpering work (Bypass Jump) by providing &amp; fixing of WEDGE type connector for 0.3 goat conductor of 220kV Pirangut-Kandalgaon line under EHV O&amp;M Dn-II, Pune as per drawing &amp; specification attached.</b>				
A	<b>Material Portion</b>				
	WEDGE Connector suitable for 0.3 Goat Conductor	No.			
	<b>Service Portion</b>				
B	Fixing of WEDGE Connector to Jump/conductor of 0.3 Goat Conductor	No.			

**Note:- Rate shall be valid for 60 days from the date of submission of offer.**

You are requested to quote your best reasonable rate for the above work. The Term & Conditions are as follows.

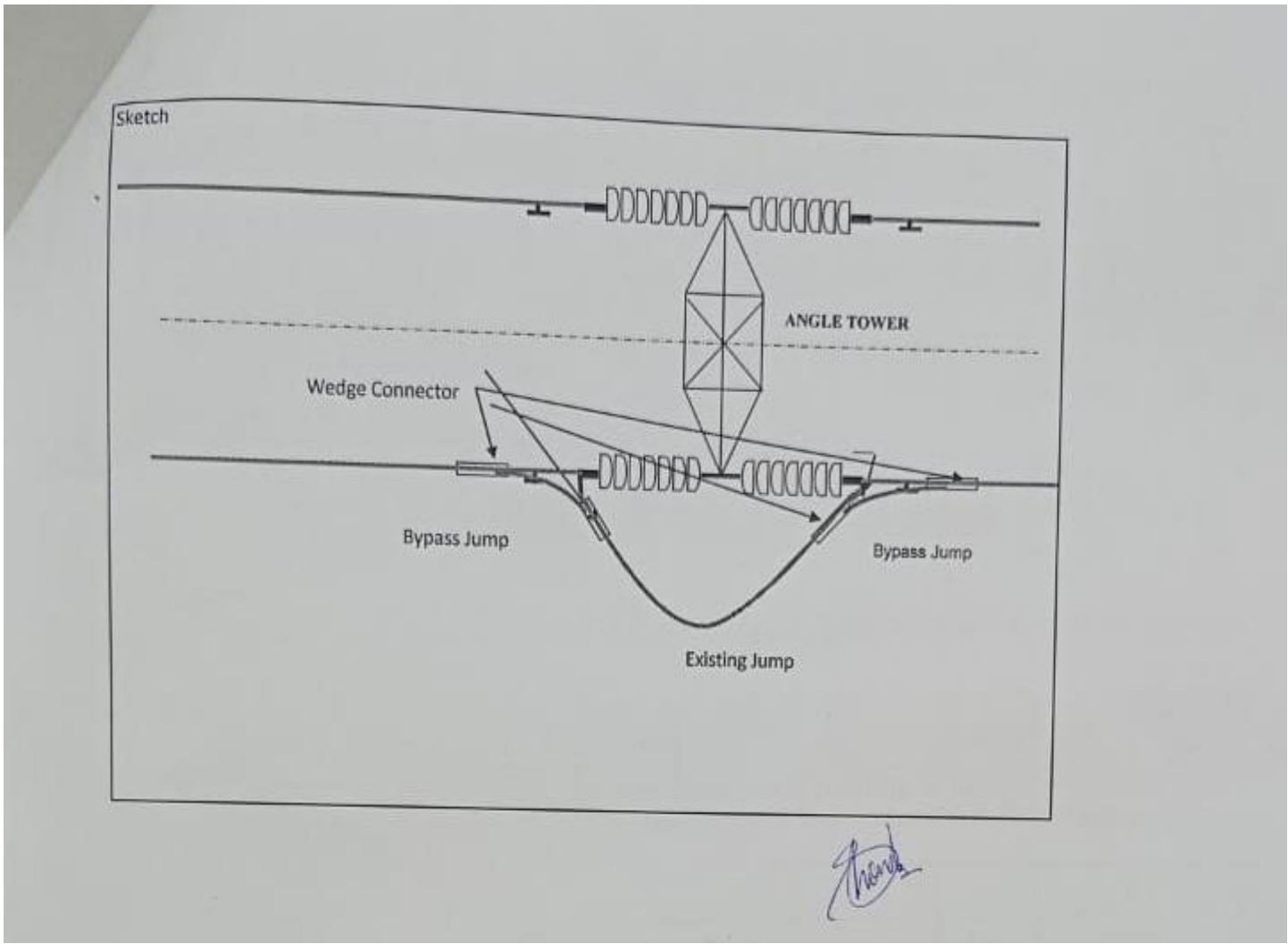
**Terms & Conditions:-**

- The rate should be quoted on firm quotation basis.
- The rate should be exclusive of all taxes. Taxes should be quoted extra.
- You are requested to submit your best reasonable budgetary offer as per Schedule 'A' for above works on E-mail ID: **ee6120@mahatransco.in** upto **18:00 Hrs on dtd. 10.04.2024.**
- Following documents should be submitted along with your offer,
  - Shop act/Udyog addhar registration certificate.
  - Work experience certificate for similar nature of works in MSETCL/MSEDCL/in any power utility or in private company in India.
- Please note that said budgetary offer is only for estimate purpose & will not be considered for any bidding & No work order will be issued based on this offer.

Thanking you,

Yours Faithfully,

-Sd-  
Mrs. P. U. Raut  
**Executive Engineer**  
**EHV (O&M) Dn-II, Pune**



-Sd-  
Mrs. P. U. Raut  
Executive Engineer  
EHV (O&M) Dn-II, Pune

**SPECIFICATIONS FOR WEDGE CONNECTORS SUITABLE FOR**  
0.5 to 0.5, 0.5 to 0.4 & 0.4 to 0.4, 0.3 & 0.3 ACSR/ AAAC CONDUCTOR

- (1) Wedge Connectors must have a boltless design as well and there should not be any Nut, Bolt, and Clamping, Tightening, or Compression activity requirements during installation.
- (2) Wedge shall be inserted in tapered C member with suitable modality, such that no damage to the connector or the conductor shall occur during installation.
- (3) Wedge connector members - tapered 'C' shaped spring member and wedge should be made from a special aluminium alloy of high ductility and electrical conductivity. When installed, it will provide a tenable electrical and mechanical connection for solid or stranded conductor combinations including ACSR / AL59 conductor.
- (4) The dimensions for the wedge shall be manufactured to close tolerances to ensure repeatability and reliability of the connection.
- (5) All sharp edges and burrs shall be removed.
- (6) The wedges shall be burnished to achieve optimum surface roughness for electrical contact.
- (7) The wedge terminal shall have backup conductor cleaning capability during application. The Wedge Terminals should ensure stable & and low contact resistance under varying load conditions & and the thermal cycling effects.
- (8) An oxide inhibiting compound placed in the wedge and "C" member groove of Wedge Terminals.
- (9) The following Type Tests shall be submitted for registered works with MSETCL, performed for Wedge connectors suitable for ACSR / AAAC conductor to ACSR / AAAC conductor combination as per IS:5561 2018 (latest revision).
  - a) Dimensional verification
  - b) Pull-out strength test (Product should not get fail when steady load increases to 110 kg and held for 1 minute)
  - c) resistance test ( $\leq 110\%$  of the resistance without connector)
  - d) temperature rise test (For 0.5 to 0.5/ 0.4, the test should be performed at 1200 AMP or above load, the temperature should be  $\leq 95^\circ\text{C}$ , For 0.4 to 0.5/ 0.4, the test should be performed at 795 AMP or above load, the temperature should be  $\leq 45^\circ\text{C}$ )
  - e) Short circuit current test for 0.5 & 0.4 Conductor (for 40 kA for 3 Seconds with an initial peak of 100 kA) and 0.3 & 0.2 Conductor (for 25 kA for 3 Seconds with an initial peak of 62.5 kA)
  - f) Visual corona (Corona extinction voltage should be more than 320 kV AC)
  - g) RIV test (Measured RIV should be below  $2500\mu\text{V}$  at specified test voltage)
- (10) The following Type Tests shall be submitted for registered works with MSETCL, performed for Wedge connector suitable for every ACSR / AL59 conductor combination of same run & tap conductor incl. offered sizes (e.g. ACSR 0.2 to ACSR 0.2 connector & ACSR 0.3 to ACSR 0.3 Connector & ACSR 0.4 to ACSR 0.4 Type Test required for offered ACSR 0.3 to ACSR 0.4 connector likewise for every combination), with latest revision of standard mentioned.
  - a) The wedge connector shall meet the current cycle test requirements as per ANSI, C 119.4-2016 Class AA. When connected as specified, samples shall indicate electrical stability for terminated connectors. The resistance of the connection, when measured as specified shall be stable throughout the test. The samples shall be tested to 500 on/off current cycles with the control conductor temperature raised between  $175^\circ\text{C}$  to  $180^\circ\text{C}$  above ambient.
  - b) The wedge connector shall meet the mechanical requirements as per ANSI C 119.4-2016 Class 3, minimum tension. When tested as specified or 5% of the rated cable strength of the weaker conductor.
  - c) The wedge connector shall meet the following thermal shock & and salt spray test. Connectors shall be installed with designed run & and tap conductors of suitable length. Free ends of both conductors shall be suitably connected/welded to Aluminium pads for ease of current supply & and resistance measurements. Initial resistance shall be measured & and resistance shall be measured after each cycle as below. Results shall be tabulated.
    - o 2 ½ Hours at  $150^\circ\text{C}$ .
    - o 15 minutes at  $0^\circ\text{C}$  water, immediately from the oven.
    - o 30 minutes at  $150^\circ\text{C}$ .
    - o 20 ¾ hours at room temperature.

No physical damage to samples is acceptable.

- d) For Salt spray corrosion, samples of (c) above which are successfully passed, subsequently shall be subjected to a 30-day salt spray corrosion test. Initial resistance shall be measured & and resistance shall be measured after every 5 cycles. Results shall be tabulated. Each daily exposure shall consist of:
- 15 hours in 5% salt spray atmosphere
  - 1 hour in drying over at 100 C.
  - 8 hours at room temperature.

No physical damage to samples is acceptable.

- (11) During installation, the wedge of the wedge tap shall be driven inside the "C" member between the run & and tap conductor to spread the "C" member to ensure high retentive force on the conductors. A locking tab should prevent the wedge from loosening once it has been driven into position.
- (12) Also, a locking arrangement shall be provided to avoid overrun of wedge into C member.
- (13) Successful bidders have to offer inspection for the finished product a minimum of 15 days in advance with routine test reports applicable as per IS:5561. All acceptance tests as per IS 5561 2018 (latest revision) shall be carried out during inspection by the MSETCL inspector as per the sampling criteria specified in IS. Additionally, one sample of each offered item shall be subjected to a Chemical Composition test from the offered lot for inspection. For retesting, the guideline specified in IS:5561 2018 (latest revision) shall be followed. No material shall be dispatched without inspection or dispatch instructions issued by MSETCL.
- (14) Type tests shall be considered valid for a period of Ten (10) years & and shall be valid as on the last date of submission of a bid.
- (15) Bidder shall submit valid type test reports from NABL accredited/Government Laboratory. The bidder has to submit all type test reports as stated for the offered item along with the technical bid. In case of non-submission / partial submission or type test reports of which validity is over, the bidder shall submit pending type test report/s from NABL accredited/Government Laboratory, in the event of an order, before the commencement of supply without affecting delivery schedule, free of cost to MSETCL. Confirmation for the above shall be invariably submitted along with a technical bid. Furthermore, the purchaser reserves the right to select the sample from Manuf. Works & and recommends the NABL lab to carry out type tests in case of non-submission/ partial submission or type test reports of which validity is over.
- (16) Bidder has to submit a detailed drawing including all important dimensions, material grade, ratings etc. & and detailed QAP including raw material stage to finished product inspection stage-wise check points with technical bid.
- (17) ONE Sample of each required combination is required to be delivered to the office of Tender inviting authority of MSETCL before the tender submission limit.
- (18) MSETCL reserves the right to conduct any testing out of the tender testing reference mentioned in the tender on any sample delivered by the bidder at any NABL-accredited laboratory located within India.
- (19) Expense of the testing will be under the scope of the bidder. In case of non-paying testing charges or failure to deliver the tender sample or failure in testing, the bidder will be considered as disqualified & and no further discussion will be entertained by the tender inviting authorities.
- (20) Bidder must have valid type test reports as demanded in technical spec available with the bidder when they've quoted tender. In case of missing the same, the bid will be considered as deviation and the bidder will get disqualified without any further correspondence.
- (21) You Must be either a manufacturer or authorized dealer of manufacture. In Case of authorized dealer, you must submit the Specific Tender Authorization letter from manufacture.

-Sd-

Mrs. P. U. Raut  
**Executive Engineer**  
**EHV (O&M) Dn-II, Pune**