

MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LTD.

CIN NO-U40109MH2005SGC153646

Executive Engineer, MSETCL, EHV O&M Dn., Sangli
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CIN NO-U40109MH2005SGC153646

Ref No. EE/EHV O&M/DN/SGL/T/No.

316

Date **06/03/2024**

E-ENQUIRY

Sub:- Enquiry for the Supply of WTI, OTI, Digital Tap Position Indicator & Digital Temp Indicator, for various S/Stns under EHV O&M Division, Sangli.

Estimated Amount:- Rs. 3,47,330/- Including of all Taxes

1. Detail

1.Enquiry No.	E-Enquiry
2. Name of the Work	Enquiry for the Supply of WTI, OTI, Digital Tap Position Indicator & Digital Temp Indicator, for various S/Stns under EHV O&M Division, Sangli.
3.Date for download of Enquiry documents	From 07/03/2024 to 13/03/2024
4. Date for online submission of Enquiry Documents	On or before 13/03/2024 up to 5:30PM
5. Date & Time (Hrs.) for opening of Enquiry Documents.	a)Technical Bid Opening:- 14/03/2024 at11:00 Hrs onwards; if possible b)Commercial Bid Opening:- 14/03/2024 at14:00 Hrs onwards; if possible
6.Enquiry Amount	Rs. 3,47,330/- Including of all Taxes

TOR. **Following documents should be attached with the quotation

- 1) Shop Act License OR Electrical Contract License of Govt. of Maharashtra.
- 2) GST Registration, if applicable,
- 3) PAN CARD document.
- 4) Model Data Sheet to be supplied should be submitted with the Enquiry documents.**

2. SCOPE OF WORK:- Supply of WTI, OTI, Digital Tap Position Indicator & Digital Temp Indicator, for various S/Stns under EHV O&M Division, Sangli. Enquiry for by the Contractor and accepted by the competent Authority, duly authorized in that behalf by the company at rates and delivers to the place at or within the time specified and without any extra charges or expenses to the company whatsoever other than those mentioned in the accepted tender. Work should be done as per scope of work in Schedule "A". & Annexure "I" (Technical Specifications & Parameters)

3.COMPLETION PERIOD :- Work should be completed within 60 days.

4. VALIDITY OF OFFER :- The offer should be valid for our acceptance for a period of 180 days from the due date of opening.

5. OPERATING AUTHORITY :- Concern S/S In-charge is appointed as operating officer for this work.

6. WARRANTEE/GUARANTEE:- Supplied Material should be Warranted for 1 Year from date of delivery.

7. CONSIGNEE :- The Addl Executive Engineer, S/Stn Maintenance Division, Vishrambag. Delivered at S/Stn Maintenance Division, Vishrambag.

Please offer your reasonable rates for the subjected work as per Schedule 'A' given below. The scope of work is also mentioned therein.

SCHEDULE 'A'

Sr. No.	Description	Unit	Qty	Rate/unit	18% GST	Rate/Unit Incl. GST	Item No.
1	WTI TF MB Panel Supply of Winding Temperature Indicator for 220/33KV, 50MVA Transformer with 10 Meter Capillary Tube & Accessories	No.	3	26,724.00	4810.32	31534.32	
2	OTI TF MB Panel Supply of Oil Temperature Indicator for 220/33KV, 50MVA Power Transformer (HV) with 10 Meter Capillary Tube & Accessories	No.	1	22,765.00	4097.70	26862.70	
3	Digital Tap Position Indicator RTCC Panel with Counter suitable for existing Mechanizam	No.	8	4,201.77	756.32	4958.09	
4	Digital Temp Indicator RTCC Panel suitable for existing Meter in TF MB	No.	25	6311.86	1136.13	7447.99	

Note:-1. Rates shall be quoted including all Taxes.

2. Ratio of RTD CT should be provided as per site condition

3. PROCUREMENT OF MATERIAL:- The material should be procured from the MSETCL approved vender. The approved vendor list is available at MSETCL Site.

4. Model Data Sheet to be supplied should be submitted with the Enquiry documents.

5. Calibration Report should be submitted along with the material.

Encl. 1) Annexure "P" & "S"

Yours faithfully,
Sd/-
**Executive Engineer,
M.S.E.T.C.Ltd,
EHV O&M Dn, Sangli**

Annexure “I”

Technical Specifications and Parameters

Technical Specifications and Parameters for Winding Temperature Indicator (WTI) & Oil Temperature Indicator (OTI) for 66 KV & above Voltage Class Transformers and Reactors by referring CEA regulations vide ref No. 1 are as follows:

1. Winding Temperature Indicator (WTI):

1. The transformer/reactor shall be provided with a dial type hot spot indicator of about 150mm diameter for measuring the hot spot temperature of each winding [HV, IV & Tertiary (if applicable)].
2. Range of temperature should be 0- 150°C with accuracy of $\pm 1.5\%$ (or better) of full scale deflection.
3. The instruments should be capable of withstanding high voltage of 2.5kV AC rms, 50Hz for 1 minute.
4. The terminal provided for auxiliary wiring should be Press-fit type.
5. The thermometer shall have adjustable, potential free alarm, trip contacts besides that required for control of cooling equipment, if any.
6. Instrument should be provided with maximum reading pointer and resetting device, switch testing knob & anti-vibration mounting grommets (for projection mounting).
7. Up to four Micro switches required for Alarm, Trip, Cooler Fan/Pump operation. **Micro Switches should be preferred as; Switches have better vibration resistance and are not sensitive to deviation from vertical mounting.**
8. Type of switch (NO/NC) shall be **heavy duty micro switch of 5A at 240V AC/DC**. Adjustable range shall be 20-90% of full scale range.
9. The instruments case should be weather proof and epoxy coating at all sides. Instruments should meet degree of protection of IP55 as per IEC60529. A temperature sensing bulb located in a thermometer pocket on tank cover should be provided to sense top oil. This shall be connected to the WTI instrument by means of flexible stainless steel armour to protect capillary tubing. WTI shall have image coil and auxiliary CTs, if required to match the image coil mounted in local control box.
10. The setting of alarm and tripping contacts shall be adjustable at site.
11. The WTI shall be so mounted that the dials are about 1200 mm from ground level. Glazed door of suitable size shall be provided for convenience of reading.

In addition to the above, the following accessories shall be provided for remote indication of winding temperature: Temperature transducer with PT100 sensor for each winding RTD shall be provided with PT100 temperature sensor having nominal resistance of 100 ohms at zero degree centigrade. The PT100 temperature sensor shall have three wire ungrounded system. The calibration shall be as per IS 2848 or equivalent. The PT100 sensor may be placed in the pocket containing temperature sensing element. **RTD shall include image coil, Auxiliary CTs, if required to match the image coil, for WTI system and shall provide dual output 4-20mA for remote WTI and SCADA system individually.** The transducer and Auxiliary CT shall be installed in the Individual Marshaling Box. Any special cable required for shielding purpose, for connection between PT100 temperature sensor and transducer, shall be in the scope of Contractor. 4-20mA signal shall be wired to Digital RTCC / BCU panel for further transfer data to SCADA through IS/IEC 61850 compliant communications

2. Oil Temperature Indicator (OTI)

1. The transformer/reactor shall be provided with a **dial type thermometer of about 150mm diameter for top oil temperature indication with angular sweep of 270°.**
2. **Range of temperature should be 0-150°C with accuracy of ±1.5% (or better) of full scale deflection.**
3. The instruments should be capable of withstanding high voltage of 2.5kV AC rms, 50Hz for 1 minute.
4. The terminal provided for auxiliary wiring should be Press-fit type.
5. The thermometer shall have adjustable, potential free alarm and trip contacts besides that required for control of cooling equipment (if any), maximum reading pointer and resetting device, switch testing knob & anti-vibration mounting grommets (for projection mounting).
6. Up to four Micro-switch or Mercury switches required for Alarm, Trip, Cooler Fan/Pump operation. Micro Switches should be preferred as; Switches have better vibration resistance and are not sensitive to deviation from vertical mounting.
7. Type of switch (NO/NC) shall be **heavy duty micro switch of 5A at 240V AC/DC.** Adjustable range shall be 20-90% of full scale range.
8. The instruments case should be weather proof with epoxy coating at all sides.
9. Instruments should meet degree of protection of IP55 as per IS/IEC60529. A temperature sensing bulb located in a thermometer pocket on tank cover should be provided to sense top oil. This shall be connected to the OTI instrument by means of flexible stainless steel armour to protect capillary tubing.
10. Temperature indicator dials shall have linear gradations to clearly read at least every 2 deg C.
11. The setting of alarm and tripping contacts shall be adjustable at site.
12. The OTI shall be so mounted that the dials are about 1200 mm from ground level. Glazed door of suitable size shall be provided for convenience of reading.

In addition to the above, the following accessories shall be provided for remote indication of oil temperature: Temperature transducer with PT100 sensor RTD shall be provided with PT100 temperature sensor having nominal resistance of 100 ohms at zero degree centigrade. The PT100 temperature sensor shall have three wire ungrounded system. The calibration shall be as per **IS 2848 or equivalent.** The PT100 sensor may be placed in the pocket containing temperature sensing element. **RTD shall include image coil for OTI system and shall provide dual output 4-20mA for SCADA system.** The transducer shall be installed in the Individual Marshalling Box. Any special cable required for shielding purpose, for connection between PT100 temperature sensor and transducer, shall be in the scope of manufacturer. 4-20mA signal shall be wired to Digital RTCC panel/BCU for further transfer data to SCADA through IS/IEC 61850 compliant communications.

3. Digital Tap positioning indicator

17' Positions Digital type
 4-20mA input
 Optional 4-20mA DC output
 Universal power supply 90-260V AC/DC
 Compact in size (suitable with existing RTCC panel)

4. Digital Temperature Indicator

Digital Oil/Winding Temperature Indicator
 Universal power supply 90-260V AC/DC
 With optional Analog output
 Temp Range- 0°C to 150°C
 With 24V DC power supply to power two wire transmitter and display of temperature.

Yours faithfully,
 Sd/-
Executive Engineer,

ANNEXURE (S)

GENERAL TERMS AND CONDITIONS

1. ADDITIONS / ALTERATIONS PROHIBITED:

Enquirers/Tenderers shall not make any additions, alterations/changes in the tender form & the conditions of tender and supply including the description, specifications of material mentioned.

2. ACCEPTANCE OF QUOTATION:

The Company does not bind itself to accept the lowest of any Quotation nor will any reasons be assigned for the rejection of any Quotation on part of Enquiry. It is also not binding on the Company to disclose any analysis report on tender/samples. The Owner/Enquirer/Tenderer on his part binds himself to supply any item or items selected from his offer in part or whole at the option of the Company. The Company reserves the right to order out/procure any quantity in excess, to the extent of 50% or the ordered quantity.

3. SCOPE :

- i) This specification covers the technical details for the mention material requirement raised by this office. .
- ii) The offered material shall be complete with all components necessary for their effective and trouble free operation. Such components shall be deemed to be within scope of the Enquirer's supply irrespective of whether those are specifically brought out in this specification and/or commercial order or not.

4. SECURITY DEPOSIT:

The contractor should pay security deposit at the rate of 10 % of the value of the order within 7 days from the date of receipt of order. Security Deposit is payable by (a) Cash (b) D.D. from a nationalized/scheduled Bank. The S.D. will be refunded after satisfactory completion of the work/guarantee period if asked for. * **FDR against Security Deposit should not be allowed**

4 (A). SPECIFIC CONDITIONS:-

- i) Bidder shall specify the Make with ISI-Mark of the material quoted by the Bidder while supplying of material
- ii) Transportation, Repair/Replacement against Manufacturers defect at your cost.

5. The material shall be provided with details indelibly marked with the following information:

- a) Manufacturer's name or trade mark and identification with contact details of the supplied Material
- b) Make / Model No./quantity details
- d) Sample should be approved before delivery.
- e) Material supplied should not be manufactured before 6 months from the date of order (ie old material with Mfg not accepted)

6. DELIVERY PERIOD:

The time being essence of the contract, the supplier should strictly adhere to the delivery period. The delivery will be deemed to have been completed on the date of R.R. / on the date of receipt of material at stores in case of door delivery. A postal transit period of 7 days will be allowed from the date of issue of this order. The delivery period is 15 Days from the date of the order.

7. DISPATCH INSTRUCTIONS:

The material shall be dispatched and consigned to the Executive Engineer, EHV O&M Division, Sangli. Material Received should be in good condition, Party should have to transport all the

material at their own Risk.

8. BILLS:

Bidder/Enquirer/Tenderer will have to submit the Tax invoice bills in triplicate indicating PAN No., GST No., accompanied by the test certificated, if any and advance stamp receipt in the office of the Executive Engineer, EHV O&M Division, Sangli after completion of supply, giving the full details of RR No., Delivery Challan, Order No., Insurance Cover No., GST registration No. etc for passing& payment of the bill. The payment will be made to the Supplier within reasonable time after receipt of material by the consignee in good condition.

9. PAYMENT:

Payment will be made after satisfactory delivery of material at EHV O&M Division, Sangli/ Concern S/Stn.

10. PENALTY :

In case the material not delivered in time, the supplier shall be liable for penalty @ ½ % of the price (Order value) per week delayed, subject to maximum of 10% reckoned on the contract value of such complete portion or section of the plant, equipment or material including the portion supplied which could not be brought in to commission due to any part thereof not being delivered in time. The penalty will be levied subject to force majeure conditions, for which documentary evidence will have to be produced to the satisfaction of the competent authority of the Board.

11. WARRANTEE/GUARANTEE:

The material to be supplied is guaranteed against the defective manufacturing workmanship for a period as mentioned in the respective annexure from the date of supply to MSETCL. If supplied material found to be faulty within warrantee/guarantee period, same should be replaced free of cost by the Tenderer. The Warrantee certificates shall be submitted by the bidder at the time of supply of material.

12. INSURANCE:

In all cases the insurance will be effected by you with Government Insurance Fund for the total value of the order plus 10% to cover freight, Tax and other incidental charges.

13. All royalties and all local and other Taxes/duties etc., shall be paid by the Tenderer at his cost.

14. APPLICABILITY OF GENERAL CONDITIONS OF CONTRACT:

Notwithstanding anything stated here, the Board's General Terms & Conditions of Contract shall be applicable to the contract as far as they are applicable to your contract.

15. TERMINATION OF CONTRACT:

The undersigned reserves the right to cancel the contract, after giving due notice to you, in the event of the breach of contract in any respect or undue delay in execution of works /starting of the works.

16. In case of any dispute arising out of your contract, it will be in the jurisdiction of Sangli, District Court Only.

Sd/-
**Executive Engineer,
M.S.E.T.C.Ltd.
EHV O&M Dn,Sangli**

