

COEP Technological University

(COEP Tech)

A Unitary Public University of Government of Maharashtra

w.e.f 21st June 2022

(Formerly College of Engineering Pune)

Invitation of Quotations

Preventive Maintenance of VCBs, ACBs and Dry Type Transformers at COEP Technological University Main Campus & Hostel Campus.

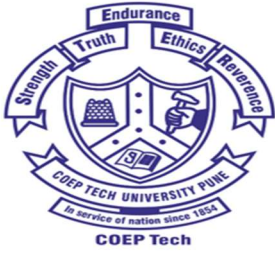
Ref: COEP TECH/ EWC/ Maintenance VCBs, ACBs and Transformer /2024-25/23.

Date: 03/01/2025

Website: <https://www.coeptech.org.in>

Telephone Number :- 020 - 2550 - 7425

Cost of document: Nil



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Ref: COEP TECH/ EWC/ Maintenance VCBs, ACBs and Transformer /2024-25/ 23.

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INVITATION OF QUOTATION

Name of Work: Preventive Maintenance of VCBs, ACBs and Dry Type Transformers at COEP Technological University Main Campus & Hostel Campus.

Sir,

You are invited to submit your most competitive quotation for **Preventive Maintenance of VCBs, ACBs and Dry Type Transformers at COEP Technological University Main Campus & Hostel Campus.** The details are as below:

Preventive Maintenance of VCBs, ACBs and Dry Type Transformers at COEP Technological University & Hostel Campus.				
Sr.	Existing Circuit breakers and Transformer Specifications	Quantity (No's)	Unit Rate In Rs.	Total Amount In Rs.
1	LT Air Circuit Breakers Servicing & Testing Schneider-Make.	19		
2	11 kV VCB Servicing and testing Schneider-Make.	04		
3	750 kVA, Dry Type Transformer servicing and Testing (CAST RESIN INDOOR TRANSFORMER VOLTAMP VADODARA LICENCE : HTT GERMANY)	03		
			Total Rs.	
			GST @ % Rs.	
			Grand Total Rs.	

SCOPE OF WORK/CHECK POINT FOR SERVICING OF AIR CIRCUIT BREAKER

1. Dismantling, cleaning, and assembling of front cover, push button, locking device.
2. Dismantling, cleaning of arc chute cover and terminal shield.
3. Dismantling, cleaning, checking, and assembling of arc chute.
4. Dismantling, cleaning / greasing, and assembling of electrical spring charging motor (In EDO ACB only).
5. Dismantling, cleaning, checking / testing, and assembling of tripping coil / closing Coil (In EDO ACB only)
6. Dismantling, cleaning & tightening of Protection relay.
7. Checking of main contact wear by physical inspection.
8. Cleaning and greasing of Breaker Main Mechanism by Schneider recommended fully synthetic imported multipurpose grease to increase the reliability in terms of mechanical as well as electrical properties and their endurance.
9. Inspection of Main Spring / tripping spring / locking spring.
10. Dismantling / cleaning & greasing of spring charging handle.
11. Inspection / cleaning of breaker rear terminals & greasing them.
12. Inspection / cleaning of the changeover contacts of the OF Switch.
13. Dismantling, cleaning, greasing, and assembling of clusters (applicable for draw out CB only).
14. Checking and cleaning / greasing (as required) of hand pullout system, racking mechanism of chassis and function position indicators (in draw out type only).
15. Checking and tightening of control unit connection block and chassis rear terminals.
16. Cleaning & checking of tightness of wires on WAGO terminal.
17. Verify and adjust protection release settings as necessary.
18. Checking healthiness of Protection relay mounted on breaker (Tripping current).
19. Test the circuit breaker accessories (if applicable).
20. Final testing of the circuit breaker by switching it ON/OFF both Mechanically as well as electrically.
21. Putting circuit breaker inside cubicle into Service position and re-commissioning.
22. Submission of reports. Report should include the following points:

I. Observations prior to shut down:

- a. Manual operation of circuit breaker.
- b. Electrical operation of circuit breaker.
- c. Functionality of indication lamps, push buttons, Meter & Protection Releases.
- d. Carry out Pre-maintenance insulation Resistance test with 500 V Megger during the maintenance and recording the value of insulation resistance.

II. Post shut down activities:

- a. Racking out of Circuit Breaker.
- b. Check for freeness of rack-in and rack out mechanism and observe for wear and tear.
- c. Visual inspection for any damages.
- d. cleaning mechanism and current carrying components, insulating components with cleaning agent & dry cloth.

- e. Inspect of signs of overheating on current carrying & insulating components (contact jaws, cradle terminals & terminal support or any physical damage).
- f. Inspect for loose, broken, worn or missing parts.
- g. Ensure that all hardware is properly secured.
- h. Lubrication of all mobile joints.
- i. Tightness check of all points of circuit breaker.
- j. Ensure that operating mechanism function properly.
- k. Check condition of power and arcing contacts.
- l. Check for any physical damage on arc chute.
- m. Carry out insulation resistance test with 500 V Megger post maintenance and record the value
- n. Check electrical & manual ON-OFF operation of breaker.
- o. Test the breaker with Primary / Secondary Kit or secondary injection test kit provided by OEM.

SCOPE OF WORK/CHECK POINT FOR SERVICING OF VACUUM CIRCUIT BREAKER

1. Vacuum Circuit Breaker Cleaning Using CRC-226.
2. Taking off the old grease and replacing it with the recommended grease.
3. Verify the SIC Contacts' condition.
4. Examining the jaw's alignment and health.
5. hardware inspection and correct tightening.
6. Verifying that all of the poles are properly closed.
7. Submission of reports. Report should include the following points:
 - I. Observations prior to shut down:**
 - a. Manual operation of circuit breaker.
 - b. Electric operation of circuit breaker.
 - c. Functionality of indicating lamps, push buttons, Meters & Protection relays.
 - d. Check the condition of Battery charger and confirm the secondary voltage utilized for indications/ protections.
 - II. Post shutdown activities:**
 - a. Carry out each discharge.
 - b. Racking out of circuit breaker.
 - c. Check for freeness of rack-in and rack-out mechanism and observe for wear and tear.
 - d. Visual inspections for any damages and overheating signs on Vacuum bottle and breaker insulator and current carrying parts.
 - e. Carry out insulation resistance test with 5kV megger during the maintenance and recording the value.
 - f. Cleaning thoroughly all moving and fixed components.
 - g. Lubricants of all mobile joints.
 - h. Tightness check of all joints in Circuit Breaker.
 - i. Check for mechanical operations.
 - j. Check the condition of CT's & PT's cleanliness and tightness of its connections.

- k. Carry out post maintenance insulations resistance test with 5 kV Megger.
- l. Check for electrical operation by tripping through protection relay in test position.
- m. Operational Check for ON/OFF & Trip on Insertion in Service position.

SCOPE OF WORK/CHECK POINT FOR SERVICING OF DRY TYPE TRANSFORMER.

1. Open all doors of the Transformer & Check the condition of Transformer.
2. Clean the Transformer & cabin with air blower & cotton.
3. Clean Transformer H.V. & L.V. Bushings & Support Insulators.
4. Tighten all connections of H.V. & L.V. cables, Busbars.
5. Tighten all core bolts & Tie rod & support insulator bolts.
6. Taken Megger on H.V. & L.V. side connections & found ok.
[HV to E-2000 M ohm, LV to E-1000 M ohm, HV to LV-2000 M ohm]
7. Check & Tighten all earthing strips & also neutral busbar.
8. Close transformer door properly & tighten it.
9. Switch on the transformer & found working status.
10. Submission of reports. Report should include the following points:

I. Observations prior to shut down:

- a. Record the load currents, voltage & setting of Tap for voltage regulation.
- b. Record the no load currents, voltage, power factor & powers.
- c. Check for any unusual noise.
- d. Check for damages.
- e. Ensuring proper incomer lock out.

II. Post shut down activities:

- a. Checking any loose connections of the terminations of HV & LV side.
- b. Carrying out the cleaning of Transformer.
- c. Checking Transformer for sign of overheating if any.
- d. Inspection of Tap-changer Circuit Health Check if any.
- e. Inspection of bushings for overheating and cracks.
- f. Inspection of the condition of earthing.
- g. Inspection of relays, alarm, circuit if any.
- h. Carrying out the tightness of HV & LV terminations.
- i. Insulation Resistance Test.
- j. Magnetic core balancing test.
- k. Checking of magnetizing current value & measurement of per-phase winding resistance.

Terms and Conditions:

1. The bidder should submit GST registration document along with tender.
2. Fax and Email quotation are not acceptable.
3. The taxes, insurance, freight, packing and forwarding charges if any be quoted in Indian Rupees separately.

4. The rates shall be valid for 90 days.
5. Quotation(s) received after the last date of Quotation submission will be rejected.
6. All following documents/certificates should be provided / attached.
 - a) Shop Act License/Incorporation Certificate/Firm Registration Certificate Copy.
 - b) PAN Card Copy
 - c) GST Certificate Copy
 - d) Experience/work completion self-certification for last three years
7. The blank copy of quotations should be downloaded from the COEP Technological University website (www.coeptech.ac.in) and submitted in the given format to Electrical Engineering Department, COEP Technological University, Pune during working days.
8. The quotation should be duly signed and submitted in a sealed envelope.
9. All duties, taxes, and other levies payable by the bidder need to be included in the total price and break up needs to be indicated.
10. The bidder shall have to quote for all the items of the quotations. Part quotations /incomplete quotations shall be summarily rejected without any consideration.
11. The quotations shall be signed by an authorized person and the bidder's full name and status be indicated below the signature along with an official stamp of the vendor/firm/company.
12. Offers in the bid should be written in English and price should be written in both figures and words.
13. Delivery/Work period is within Two Months only, from date of issue of W.O. No extension shall be given for completion of work. In such case penalty for delay in proportion to the cost of equipment.
 - a) At the rate of 0.5 % per week, maximum limit of 10 % shall be charged in case of WO value is less than 2 Lakh.

OR

 - b) At the rate of 0.5% per week, maximum limit of 5 % shall be charged in case of WO value is 2 Lakh and above.
14. The 100% bill for the above Servicing will be paid immediately after successful Preventive Maintenance of VCBs, ACBs and Dry Type Transformers. No advance payment will be given.
15. All the required consumable materials like cotton waste, Dhoti, any oil, any spray, petroleum jelly etc. for cleaning of various installations shall be in the scope of contractor for which nothing shall be paid extra.
16. Spare parts required for maintenance like coil, motor, relay, timer, power-pack etc. will be provided by COEP Tech. Pune. However extra labour charges will not be paid by COEP Tech Pune.
17. One time rigorous maintenance in a year is compulsory. However as per the emergency or need the required maintenance need to be carried out by the party.

18. The COEP Technological University reserves the right to cancel any of the items of the tender without any reason thereof.
19. The contractor shall take all precaution for safety of the workmen. If any accident/mishap occurs, the department shall not be responsible for the same. Consequently, any compensation payable shall be paid by the contractor.
20. The contractor shall be responsible for the safety of his staff. The agency shall display the contact number in the Sub-Station Room for making contact in case of any emergency.
21. Quotations will be opened on 15-01-2025 at 04.00 pm. in the Conference Hall, Electrical Engineering Department, COEP Tech. Pune in presence of the bidder's representatives who wish to attend. In the event of any change in the date of opening, the same will be intimated to all.
22. Name of contact person for queries regarding tender process
- i) Dr. A. R. Phadke Contact No. 020-2550-7409.
- ii) Mr. A. A. More Contact No. 020-2550-7422 (Mob. No.9860615778).
23. The various time limits are as follows.

Activity	Date	Time
Start of submission of quotation	03/01/2025	11.00 am
Last date of submission of quotation	13/01/2025	04.00 pm
Opening of Quotations	15/01/2025	04.00 pm

-Sd
Registrar
COEP Technological University, Pune.