



Bharat Heavy Electricals Limited (Seamless steel Tube Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

| | |
|---|---|
| TITLE: SUPPLY OF 1600KVA COPPER WOUND OIL FILL TRANSFORMER | Phone: +91 431 257 8439 Email : pcsn@bheltry.co.in Web : www.bhel.com |
|---|---|

| | | |
|-----------------------------------|-------------------------|---|
| Reference Number: 9340841E | Date: 01/09/2014 | Due date for submission of application: 22/09/2014 |
|-----------------------------------|-------------------------|---|

- A. BHEL/SSTP, Trichy is looking for vendors to supply OF 1600KVA COPPER WOUND OIL FILL TRANSFORMER**
B. Important Note to New Vendors

The new vendors will be required to furnish the following documentary proof/ information (whichever applicable) along with their offers:

1. Certificate of registration (copy of certificate to be submitted).
2. Banker's information (copy of bank pass book first page to be submitted).
3. MSME vendor certificate (if applicable).
4. Address of your organization (complete postal address with PINCODE).
5. Contact person's Phone No. /Mobile No. / FAX No. /E-mail ID.
6. Statutory documents – VAT/TIN/EXCISE REGISTRATION/CST REGN /SERVICE TAX REGISTRATION etc. (copy to be furnished)
7. NSIC/SSI Certificate (if applicable)
8. ISO Certificate (if applicable)
9. Experience certificate as proof of supply of similar items to any Govt. agencies / PSU / Organisations (copy of PO's to be furnished).
10. Audit Report/ IT Return (if applicable)
11. Agency agreement with manufacturer (if applicable)
12. Partnership Deed (if applicable).

If the new vendors fail to submit the above documentary proof/information, their offers will not be considered for this enquiry.

"MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents".

Purchase officer / Purchase /SSTP
Phone: 0431-257 8439.
Mail: pcsn@bheltry.co.in



BHARAT HEAVY ELECTRICALS LTD.
(A GOVERNMENT OF INDIA UNDERTAKING)
SEAMLESS STEEL TUBE PLANT
TIRUCHIRAPPALLI - 620 014.
TAMIL NADU.

PHONE : 0431-2578480,
2578547,2578428,
2578406
FAX : 0431-2520464/383

TIN : 33243560005 Corp. Identity No:
L74899DL1964GOI004281

CST No. 239383
Dated 11.06.1991

PURCHASE ENQUIRY

VENDOR CODE
23071

ENQUIRY NUMBER
9340841E

ENQUIRY DATE
01/09/2014

ENQUIRY DUE DATE
22/09/2014

No.OF ITEMS
01

Office Copy

IMPORTANT POINTS :

1. Tender Closing Time - 14.00 Hrs.
2. Tender Opening Time - 15.00 Hrs.
3. Tender should be submitted in a sealed cover, duly indicating enquiry No., Enquiry date & Enquiry Due Date on the cover.
4. Offer(s) received through Courier Services after 14.00 Hrs. on Enquiry Due Date will not be considered.
5. Late Tender (s) is/are liable for rejection.
6. Other(s) shall be valid for 60 days from Enquiry Due Date.
7. Offer(s) in Vendor's Letter-Head shall contain.
 - a. Offer No. and Date
 - b. Delivery Period
 - c. Delivery Terms
 - d. Payment Terms
 - e. Excise Duty with Tariff Heading Sales Tax (against form-XVII/Form-C), etc.
 - f. Excise Regn. No. and SSI Regn. No.

Kindly arrange to submit your COMPETITIVE OFFER for the following item(s).
If you are not in a position to submit your Offer, kindly arrange to send your REGRET LETTER.

THIS IS ONLY A REQUEST FOR OFFER AND NOT AN ORDER

| No. | BHEL Material Code and Description | Unit | Requirement | |
|-----|--|---------|-------------|------------|
| | | | Quantity | Delivery |
| 1 | BHEL Material Code : SP2002740071 ----- COPPER WOUND OIL FILLED TRANSFORMER 1600KVA RATING WITH SPECIFICATIONS AS PER THE ENCLOSED ANNEXURE NO.2740071 | Nos. 01 | 1.000 | 06/12/2014 |
| | Foot Note :: ----- 1. Customer list where such transformer has been supplied shall be enclosed 2. Detailed Technical specification shall be enclosed alongwith the offer and our technical specification shall be answered poing by point 3. Drawing shall be sent for our approval prior to manufacturing 4. Inspection will be carried out at suppliers works prior to despatch 5. Relevent Test Certificate shall be sent alongwith the materials 6. 3 hard copies and 1 CD of Operation & Maintenance Manual shall be sent alongwith the materials 7. Offer shall be sent in TWO BID SYSTEM. 8. Assembly shall be done by the supplier at our works. 9. Commissioning & Testing shall be done by the suppliers. 1) This tender is floated on a TWO PART BID SYSTEM hence you are requested to follow the instruction given in the annexure A, B, & C. 2) Annexure B & C duly completed must be sent back along with part I of your offer. Annexure B & C duly completed must be sent back along with part I of your offer. 3) KINDLY QUOTE YOUR RATE ON DOOR DELIVERY BASIS DULY ABSORBING, PACKING, FORWARDING, FREIGHT AND INSURANCE CHARGES. 4) KINDLY OFFER WITH MINIMUM DELIVERY PERIOD. 5) MENTION THE ED, TNVAT/CST ETC. IN THE OFFER LETTER WITHOUT FAIL. 6) YOU ARE REQUESTED TO SEND YR OFFER THRO OUR FAX NO 0431 2576828 OR E-MAIL ID pcsn@bheltry.co.in FOLLOWED BY THE ORIGINAL THRO POST/COURIER. "MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM II certificate | | | |

PORTANT NOTE :

Delivery Terms : "Free Delivery at BHEL-SSTP STORES" is preferable.
Payment Terms : 100% payment within 45days after receipt and acceptance of materials by BHEL"
Terms and Conditions of Tender : Please see reverse.
The Technical Requirements / Specification Details / Quality Requirements/Commercial Terms & Conditions are clearly furnished in the Tender. If Deviation(s) is/are not explicitly brought out in the Offer, it will be construed that the Tenderer is complying with the requirement of BHEL in full without any deviation(s).

For and on behalf of
BHARAT HEAVY ELECTRICALS LTD.

Sneha
PURCHASE EXECUTIVE

| | | | |
|---|--|------------------------------------|---|
|  BHARAT HEAVY ELECTRICALS LTD. (A GOVERNMENT OF INDIA UNDERTAKING) SEAMLESS STEEL TUBE PLANT TIRUCHIRAPPALLI - 620 014. TAMIL NADU. | PHONE : 0431-2578480, 2578547,2578428, 2578406 FAX : 0431-2520464/383 | TIN : 33243560005 | Corp. Identity No: L74899DL1964GO1004281 |
| | | CST No. 239383 Dated 11.06.1991 | PURCHASE ENQUIRY |

| | | | | |
|----------------------|----------------------------|----------------------------|--------------------------------|-------------------|
| VENDOR CODE 23071 | ENQUIRY NUMBER 9340841E | ENQUIRY DATE 01/09/2014 | ENQUIRY DUE DATE 22/09/2014 | No.OF ITEMS 01 |
|----------------------|----------------------------|----------------------------|--------------------------------|-------------------|

Office Copy

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 - e. Excise Duty with Tariff Heading Sales Tax (against form-XVII/Form-C), etc.
 - f. Excise Regn. No. and SSI Regn. No.

Kindly arrange to submit your **COMPETITIVE OFFER** for the following item(s).
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THIS IS ONLY A REQUEST FOR OFFER AND NOT AN ORDER

| No. | BHEL Material Code and Description | Unit | Requirement | |
|-----|---|------|-------------|----------|
| | | | Quantity | Delivery |
| | along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents". | | | |
| | | | | |

IMPORTANT NOTE :

Delivery Terms : "Free Delivery at BHEL-SSTP STORES" is preferable.
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 Terms and Conditions of Tender : Please see reverse.
 The Technical Requirements / Specification Details / Quality Requirements/Commercial Terms & Conditions are clearly furnished in the Tender. If Deviation(s) is/are not explicitly brought out in the Offer, it will be construed that the Tenderer is complying with the requirement of BHEL in full without any deviation(s).

For and on behalf of
BHARAT HEAVY ELECTRICALS LTD.

Sreedhar
PURCHASE EXECUTIVE

Certificate by Chartered Accountant

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
MeMemorandum No (Part—II)..... dtd:.....,
Category:..... (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on
date as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises: Investment in plant and machinery** (i.e. original cost
excluding land and building and the items specified by the Ministry of Small Scale Industries vide its
notification No.5.0.1722(E) dated October 5, 2006:
Rs.Lacs
2. **For Service Enterprises: Investment in equipment** (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.Lacs

The above investment of Rs..... Lacs is within permissible limit of
RsLacs for Micro / Small (~~Strike off which is not applicable~~)
Category under MSMED Act 2006.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

Annexure-A

Important Note to Tenderers - for TWO BID system (including REVERSE AUCTION)

(Page No. 1 of 4)

1. This Tender is floated on TWO-BID System.
 - A. Tenderers are requested to submit their Offers in TWO-BID basis, viz.
 - a. Part I .. Technical and Un-Priced Commercial Bid
 - b. Part II .. Price Bid
 - B Both the above Bids are to be submitted (or to be made available) before 14.00 hours (Indian Time) on Tender Due Date, as detailed under Para 3 below. **Tenders received after 14.00 Hrs. on the Tender Due Date, shall not be taken into consideration, irrespective of the mode of dispatch.**
2. Above Bids (Part I and Part II) are to be submitted in sealed-covers as detailed below:

A. Technical and Un-Priced Commercial Bid :

a. Shall contain complete Scope of Supply with all Technical details, Specifications, Delivery Schedule, Delivery Terms, Payment Terms, Offer Validity, Taxes & Duties and other Commercial Terms & Conditions.

(Also please refer Clause No. 5 – General).

b. Price columns are to be strictly filled-in only as 'QUOTED':

| Enq.Sl. No. | BHEL Matl. Code / Description of Material | Quantity with Unit Name | Unit Rate Rs. | Total Price Rs. |
|-------------|---|-------------------------|---------------|-----------------|
| .. | .. | .. | QUOTED | QUOTED |

c. Shall contain Point-wise confirmation for all Enquiry Clause Nos., TDC Clause Nos., and other attachments, if any.

d. If any deviation is taken on Technical and / or Commercial points, the same shall be clearly highlighted in the Offer with Enquiry Clause No(s). and its attachments. Otherwise, it shall be construed by BHEL that the Tenderer is complying with all Enquiry Clauses in full.

e. Any request for modification / change of Technical / Commercial points shall be entertained only before they are frozen.

B. Price Bid:

a. Shall contain following details **only**:

| Enq. Sl. No. | BHEL Matl. Code / Description of Material. | Quantity with Unit Name | Unit Rate Rs. | Total Price Rs. |
|--------------|--|-------------------------|---------------|-----------------|
| | | | | |

b. Wherever required / possible, Break-up-Price details are to be furnished.

c. This Bid shall NOT contain any Technical and/or Commercial Conditions. (If indicated, such terms shall not be taken into consideration).

Annexure-A

Important Note to Tenderers - for TWO BID system (including REVERSE AUCTION)

(Page No. 2 of 4)

3. **Details for submitting the Offer:**

A. **Cover No.1 – Technical and Un-Priced Commercial Bid :**

- a. Put the Technical & Un-Priced Commercial Bid inside Cover No.1 seal it.
- b. Mark Cover No.1 :
"Part-I -- TECHNICAL and UN-PRICED COMMERCIAL BID"
Tender No., Tender Date, Tender Due date, Address of Tenderer.

B. **Cover No.2 -- Price Bid :**

- a. Put the Price Bid inside Cover No.2 and seal it.
- b. Mark Cover No.2 :
"Part-II - PRICE BID"
Tender No., Tender Date, Tender Due date, Address of Tenderer.

C. **Cover No.3 -- Techno-Commercial Bid & Price Bid :**

- a. Put Cover No. 1 and 2 inside Cover No.3 and seal it.
- b. Mark Cover No. 3, with Tender No., Tender Date, Tender Due date, Address of Tenderer.
- c. Address the Cover No.3, to ::
Purchase Executive,
BHEL/SSTP,
Tiruchirapalli-620014, INDIA.

4. **Tender Opening:**

A. On the Tender Due Date, Technical and Un-Priced Commercial Bid (Ref: 1.A.a. and 3.A. above), shall alone be opened, at the pre-fixed time, in presence of Responded Tenderers / their Authorized Representative, who may like to be present for Tender opening.

B. Clarifications / Confirmations, if any, required by BHEL for Technical / Commercial evaluation, shall be sought from Bidders before opening the Price Bid.

C. Price Bid of Technically suitable Bidders alone shall be opened, on a pre-determined date and time, in presence of the Responded Tenderers / their Authorized Representative, who may like to be present for such opening.

5. **General:**

A. Incomplete Offers shall be liable for rejection.

B. Fixed Price: Bidder shall quote only Fixed Rate / Price and not subject to any escalation whatsoever during the period of Bid Validity and execution of Purchase Order. Any Bid with adjustable or price variation clause shall be treated as 'Non-Responsive' and liable for rejection. Prices shall be written both in numbers and words. In the event of any difference, the price in words shall be valid and binding. Unit Rate shall only be considered as correct and valid, which shall be taken for further consideration.

Annexure-A

Important Note to Tenderers - for TWO BID system (including REVERSE AUCTION)

(Page No. 3 of 4)

C. Taxes and Duties: All Taxes / Duties, if any, payable extra over and above the quoted rate, shall be specifically indicated in the Un-Priced Bid, failing which the quoted rates shall be considered as '**all inclusive**'.

Offer shall carry clear details of Excise Tariff Heading No. and applicable Rate of ED / ST (along with Rate of Cess, if any).

D. Validity of Offer: Offer shall be kept valid for acceptance for a period of 90 days (ninety days) from the date of opening of the Technical & Un-Priced Bid.

E. Terms of Payment: Refer annexure B.

F. Liquidated Damages, Risk Purchase and Warranty: Refer annexure B

G. Evaluation of the Offers shall be on the basis of 'To-Door Cost at SSTP' (NET Cash outflow to BHEL)

H. "BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders are to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit "online sealed bid" in the Reverse Auction. Non submission of "online sealed bid" by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue."

I. In case BHEL decides NOT to resort for RA, Price Bids and Price-Impacts, if any, already submitted by Bidder and available with BHEL, shall be opened, as detailed under Point 4 above.

J. Information and General Terms and Conditions governing RA, are detailed below

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

Annexure-A

Important Note to Tenderers - for TWO BID system (including REVERSE AUCTION)

(Page No. 4 of 4)

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit, „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder for any of the eligible items for which techno commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for noncompliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice.
12. Bidders shall be required to read the “Terms and Conditions” section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

Annexure – B. PAYMENT TERMS

| | | |
|--------------|--------------|------------------|
| Vendor Code: | Vendor Name: | |
| Tender No.: | Tender Date: | Tender Due Date: |

IMPORTANT NOTE TO SUPPLIERS:FOR PAYMENT TERM- REFER ANNEXURE C2.

| | |
|---|--|
| If materials are receivable at Stores/Trichy without PBG | Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials. |
| If materials are receivable at Stores/Trichy with PBG | Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials and against 10% PBG valid for the warranty period. |

Any deviation in the above payment term will attract loading as mentioned below.
"Base rate of SBI (as applicable on the date of Techno-commercial bid opening) + 6% will be loaded for the period of relaxation sought by bidders.

| | |
|---------------------------------|--|
| Payment through bank | Payment through Bank is not preferred. In case of Payment through Bank is opted by Supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to Site/Stores with Consignee copy attached. In this case Loading will be 3% on the offered value. |
| | Offers of indigenous Suppliers with payment terms as LC/Advance Payment are liable for rejection. |

Liquidated Damages / Penalty

- a. Liquidated damages shall be 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value.
- b. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value.
- c. Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).

Guarantee / Warranty Period

Normally No deviation permitted and the deviated offers are liable for rejection.

Performance Bank Guarantee(applicable)

Normally No deviation permitted and the deviated offers are liable for rejection.

BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.

Annexure – C.
Commercial Conditions

| | | |
|--------------|--------------|------------------|
| Vendor Code: | Vendor Name: | |
| Tender No.: | Tender Date: | Tender Due Date: |

| Sl. No. | Commercial Terms | Accepted | If Not accepted, give details |
|---|--|---------------------------------|-------------------------------|
| C 1. | <u>Delivery Terms:</u> Free delivery at BHEL/SSTP Stores. (including Packing, Forwarding, Freight and Insurance charges) | | |
| C 2. | <u>Payment term:</u> 80% of the material cost plus 100% tax & duties shall be paid against delivery within 45 days subject to certification by user dept. balance 20% of the material cost along with erection & commissioning charges, if any, will be paid after successful commissioning & acceptance of equipment at BHEL against submission of PBG for 10% value of the contract. | | |
| C 3. | Liquidated damages @ ½% per week subject to maximum of 10% of the order value shall be applicable for delay in deliveries | | |
| C 4. | <u>Delivery:</u> | <u>indicate in no. of weeks</u> | |
| C 5. | <u>Validity of Offer</u> - 90 Days from the Date of Tender Opening. | | |
| C 6. | <u>Guarantee certificate:</u> shall cover total period of 18 months from date of dispatch or 12 months from the date of actual usage of the material whichever is earlier | | |
| C 7. | Performance Bank Guarantee (<u>applicable</u>) | | |
| C 8. | Acceptance Of General Terms & Conditions Printed On The Reverse Of Enquiry Page | | |
| C 9. | <u>Erection and Commissioning (applicable):</u> Erection / commissioning charges if any has to be mentioned in the offer or else it will be assumed that Erection/ commissioning will be done at free of cost | | |
| C 10 | a. Excise Duty Tariff Heading | | |
| | b. ED and CESS on ED (%) | | |
| C 11. | a. TVNAT (%) | | |
| | b. CST (%) | | |
| | Other Cost (if any) - % (or) Rs. | | |
| C 12. | If Micro/Small/Medium Industry , please furnish a copy of MSM Certificate & Latest CA certificate | MSM No. : | |
| <u>Remarks, if any (attach additional sheet, if required) :</u> | | | |

KINDLY PROVIDE FOLLOWING INFORMATION, IN CASE OF REVERSE AUCTION TO BE CONDUCTED

NAME OF THE PERSON: _____
MOBILE NO. : _____
LANDLINE NO. : _____
FAX NO. : _____
EMAIL ID : _____

| | |
|---------------------|------|
| Signature with Date | Seal |
| | |

SPECIFICATION FOR TRANSFORMERS

| S.No | Description | Specification |
|------|---|--|
| 01. | Specification to be Complied With | IS 2026/77, IS:11171/85 |
| 02. | Type of Transformer | Separate Winding Transformer |
| 03. | Installation | Outdoor |
| 04. | No.of Phases And Frequency | 3 Phases, Neutral, 50 C/S |
| 05. | Voltage Ratio | 11000 / 433 Volts |
| 06. | KVA Rating | 1600KVA |
| 07. | Connection Primary / Sec | Delta / Star |
| 08. | Vector Group Class of Insulation | Dyn11 A |
| 09. | Tapping Voltage at each step | 4 Steps, 5 Position +/- 2 1/2% & +/- 5% On Hv 2.5% |
| 10. | Tap Changer | Off Load |
| 11. | Type of Cooling | ONAN |
| 12. | Temperature Rise in Oil: Winding (By resistance measurement method): Type of Cooler | 50°C Max 55 C Max Detachable Tank Mounted Radiator |
| 13. | Installation: Outdoor/Indoor | Indoor |
| 14. | Impedance Voltage at Rated I & C/S at 75°C | 5.27% |
| 15. | System Earthing HV Winding LV Winding | NA Unearthed |
| 16. | Termination On HV Side | 3 X 185 Sq. mm Cable XLPE Cable |
| 17. | Termination On LV Side | Bus Duct Arrangement |
| 18. | Neutral Terminals | One In LV Terminal Box And One In Top of Tank |
| 19. | Thermometer With Alarm & Trip Facility | Yes |
| 20. | Winding Temperature Indicator | Yes |
| 21. | Buchholz Relay | Yes |
| 22. | Duty | Distribution |
| 23. | First Filling of Oil | Yes. As per IS-335 |
| 24. | Rated Losses No load losses: Full load losses: | 2000 W + (IS TOLERANCE) 18000W + (IS TOLERANCE) |
| 25. | Rated Current at No Load | Approx. 2% of rated current |


N. SUJITH
 Engineer
 Plant Services/SSTP
 BHEL/Tiruch... 014

ANNEXURE NO. 2#40071

| | | |
|-----|---|----------------------------|
| 26. | Rated Efficiency At U.P.F at Full Load a) At Full Load b) At 75% Load c) At 50% Load | 98.77% 99.00% 99.19% |
| 27. | Rated Regulation At Full Load at 75°C a) At Unity PF b) At 0.8 P.F Lag | 1.380 4.036% |
| 28. | Application | To Drive A C Motors |

ACCESSORIES:

| SL NO | DESCRIPTION | QTY |
|-------|---|--------------|
| 01. | Inspection cover | 1 no |
| 02. | Rating and Diagram Plate | 1 no |
| 03. | Terminal marking plate | 1 no |
| 04. | Earthing terminal | 2 nos |
| 05. | Lifting lug | 4 nos |
| 06. | Drain cum bottom filter valve with plug | 1 no |
| 07. | Dehydration breather (Silica gel) | 1 no |
| 08. | Oil level indicator with low level Alarm | 1 no |
| 09. | Thermometer pockets | 1 no |
| 10. | Oil filling hole with cover | 1 no |
| 11. | Detachable Conservator with drain plug and with plain oil level indicator | 1 no |
| 12. | Air release plug | 1 no |
| 13. | Jacking lug | 1 no |
| 14. | Filter valve | 1 no |
| 15. | Double Diaphragm Explosion vent | 1 no |
| 16. | Cooling Radiators | Adequate nos |
| 17. | Sampling valve | 1 no |
| 18. | BI-Directional Cast iron rollers | 4 nos |
| 19. | Primary bushing 12 KV | 3 nos |
| 20. | Secondary bushing 1.1 KV | 4 no |
| 21. | Off Circuit Tap Changing Switch | 1 no |
| 22. | Separate Neutral bushing | 1 no |
| 23. | Bucholz Relay with A & T Contacts | 1 no |


N. SUJITH
Engineer
Plant Services/SSTP
BHEL/Tiruchy - 620 014