

ANDREW YULE & COMPANY LIMITED
(A Government of India Enterprise)
Electrical Division, Chennai Operation
5/346 OLD MAHABALIPURAM ROAD
PERUNGUDI, CHENNAI:600 096

TENDER DOCUMENTS FOR TRANSFORMER OIL

ANDREW YULE & CO. LTD. invites e-Tender under single stage two part system (**Part I: Techno-Commercial Bid and Part II: Price Bid**) from bona fide and reputed **Company/Firm** for finalizing rate contract for supply of transformer oil, the details of which are available in Annexure-III "**Scope of Work / Technical Specification**" as specified in this tender document.

Tender document may be downloaded from MSTC website www.mstcecommerce.com/eprochome/aycl. Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only.
AYCL reserves the right to accept or reject any tender.

Brief Description:-

I) EHV GRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018 TYPE-II
(WITH LATEST AMENDMENTS) both in tanker as well as barrels.

Approximate Quantity a) 37.00 KL In Tanker.
b) 15.75 KL In Barrel

II) Uninhibited TRANSFORMER OIL CONFIRMING TO IEC60296/2012 (WITH LATEST AMENDMENTS) as per specification sheets (Annexure I) both in tanker as well as barrels.

Approximate Quantity a) 195.00 KL In Tanker.
b) 80.85 KL In Barrel

The quantity mentioned in the Tender is our approximate requirement up to 31.12.2019.

The quantities mentioned are indicative only and the order will be released based on actual requirement.

Andrew Yule reserves the right to increase the tender quantity by 30 %.

Price quoted should be FOR destination.

Schedule of Tender

| | | |
|----|---|--|
| 1. | TENDER NO. | <u>T-15/2019-20</u> |
| 2. | MODE OF TENDER | e-Procurement System Online submission of Part I - Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/aycl The intending bidders are required to submit their offer electronically through this e-tendering portal. No physical tender is acceptable by AYCL/MSTC |
| 3. | E-Tender No. / Event No. | AYCL/Electrical Division CO/22/19-20/ET/65 |
| 4. | Date of publication of e-Tender through publication MSTC/AYCL websites and Central Public Procurement Portal | 25.05.2019 |
| 5. | Date of availability of NIT to the Vendors for downloading | 25.05.2019 |
| 6. | Earnest Money Deposit | <ul style="list-style-type: none"> • “Earnest Money Deposit” of Rs.50,000 (Rupees Fifty Thousands only) should be paid by thro’ NEFT/RTGS • Other document as described in Annexure II & IIA |
| 7 | Date of Starting of e-Tender for submission of Online Techno-Commercial Bid and Price Bid at www.mstcecommerce.com/eprochome/aycl | 25.05.2019-3.30 PM |
| 8 | Date of closing of Online e-tender for submission of Techno-Commercial Bid & Price Bid at www.mstcecommerce.com/eprochome/aycl | 10.06.2019 -11.00 AM |
| 9 | Last date of submission/ uploading details of EMD & other documents at www.mstcecommerce.com/eprochome/aycl | 10.06.2019-11.00 AM |
| 10 | Date & time of opening of Part-I (Techno-Commercial Bid) | 10.06.2019– 11.25AM |
| 11 | Date & time of opening of Part-II (Price Bid) | To be intimated to the eligible vendor separately by email. |

List of Annexure

| | |
|---|---------------------|
| Important Instructions for E-procurement - | Annexure-I |
| Terms & Conditions- | Annexure-II |
| Online Techno commercial terms | Annexure-III |
| General Terms& Conditions | Annexure-IV |
| Price Sheet | Annexure-V |
| Specification | Annexure -VI |

Important Instructions for E-procurement

This is an e-procurement event of ANDREW YULE & COMPANY LTD Ltd.

You are requested to read the Terms & Conditions (Annexure- II,III,IV) of this tender before submitting your online tender. Tenderers who do not comply with the Conditions with documentary proof (wherever required) will not qualify in the Tender for opening of Price Bid.

1. Process of E-tender:

A) **Registration:** The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type Digital Signature Certificate. Vendors are to make their own arrangement for bidding from a PC connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.mstcecommerce.com/eprochome/aycl

- 1) **Vendors are required to register themselves online with www.mstcecommerce.com → e-Procurement → PSU / Govt. depts. → Register as Vendor under AYCL- Filling up details and creating own user id and password → Submit.**
- 2) **Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.**

In case of any clarification, please contact MSTC/AYCL (before the scheduled time of the e-Tender).

Contact person (ANDREW YULE & COMPANY LTD):

1. Mr. A T E Pandian
Manager (Materials)
Ph. No: (044) 2496-0793
Email: atepandian@andrewyule.com

2. Mr Kingsley Rueben
Technical Assistant (EDP)
Mobile No: 91 9884446378
Email: reuben@andrewyule.com

3. Mr. R. Tamilselvan
Assistant Manager (Materials)
Mobile. No: 91 9788520864
Email: tamilselvan@andrewyule.com

Contact person (E-Commerce, MSTC Ltd):

1) Mr. Vikash Kumar Jaiswal
Regional Manager (ERO)
MobileNo:9903042449
Email: vikash@mstcindia.co.in

2) Mr. Pritambiswas
Assistant Manager (ERO)
Mobile- 9903248755
Email:pbiswas@mstcindia.co.in

3) Mr. Mayank Jain
Assistant Manager (ERO)
Mobile- 9721277969
Email:mhjain@mstcindia.co.in

Help Desk No.: 033 22901004, will operate on all working days from 10 AM to 6PM for online support to the vendors

System Requirement:

- i) Windows XP-SP3 or above / Windows 7 Operating System
- ii) IE-7 or above Internet browser.
- iii) Signing & Encryption type digital signature
- iv) JRE 7 update 79 software to be downloaded and installed in the system. Security level should be medium
- v) To enable ALL active X controls and disable 'use pop up blocker' under Tools → Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)

4. Part-I: Uploading of EMD & other Documents:

Within specified Date & time the vendor must submit the documents as per the annexure. (Annexure II & II (A))at www.mstcecommerce.com/eprhome/aycl

Bidding in e-Tender:

- a. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by ANDREW YULE & COMPANY LTD.EMD to be paid along with the Document within the last date as mentioned in SOT.
- b. The process involves Electronic Bidding for submission of Techno Commercial Bid as well as Price Bid.
- c. The bidder(s) should submit their Techno Commercial Bids , upload payment details of tender fee, EMD & other documents and Price Bid through online in MSTC website www.mstcecommerce.com→ e-procurement → Psu / Govt depts. → click Andrew Yule & Co Ltd →Login as vendor → My Menu → Auction Floor Manager → live event → Selection of the live event.

- d. The bidder should allow to run an application namely enApple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms /Commercial specification and save the same. After that clicking on the Techno-Commercial bid, if this application is not run then the bidder will not be able to save / submit his Techno-Commercial bid.
- e. After filling the Techno-Commercial Bid, bidder should click 'save' for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to be filled up and then bidder should click on "**Save**" to record their Price Bid. Then once both the Techno-Commercial bid & Price Bid has been saved, the bidder can click on the "**Submit**" button to register their bid.
- f. Vendors are instructed to use link in **My Menu** to **Upload Documents** in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.
- g. Once documents are uploaded in the library, vendors can attach documents through *Attach Document* link against the particular tender. For further assistance please follow instructions of vendor guide.
- h. In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
- g. During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- h. The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
- i. Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can download Technical Comparative statement.
- j. Price bid will be opened electronically on specified date and time given in the NIT. Bidder(s) can download Price Comparative statement.
- k. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- l. All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter **SUPPLIER**.
- m. It is mandatory that all the bids are submitted with Digital Signature Certificate otherwise the same will not be accepted by the system.
- n. Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.

- o. No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
- p. Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.

E-tender cannot be accessed after the due date and time mentioned in NIT.

All notices / corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by ANDREW YULE & COMPANY LTD/MSTC LTD. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with MSTC. Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).

Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.

No deviation to the technical and commercial terms & conditions are allowed.

ANDREW YULE & COMPANY LTD has the right to cancel this e-Tender without assigning any reason thereof.

The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.mstcecommerce.com/eprochome/aycl of MSTC Ltd.

The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.

The bid will be evaluated based on the filled-in technical & commercial formats.

Bidders are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome/mstc of MSTC Ltd. to familiarize them with the system before bidding.

**ANDREW YULE & COMPANY LIMITED
Electrical Division, Chennai Operation**

General Information

Ref. Tender No.: T-15/19-20

(This document should be uploaded along with EMD)

Those bidders who had participated and qualified in our earlier tender or bidders in AYCL-Chennai approved vendor list need not submit the documents.

The applicants are required to furnish full information to the queries included in this form. In giving the particulars, the supporting documents/certificates as called for per queries at places, must be tagged with the application for evidencing the information furnished in the application.

1. Name of the firm in full :

2. Address, Telephone No.,
Fax No. & E-mail :

a) Address :

b) Telephone No. :

c) Fax No. :

d) E-mail ID :

3. Status of the organization :

4. Trade License No.
**(Please attach a photo
copy of the license)** :

5. Banker's name
(a) Name of the Bank :

(b) Name of the Branch :

(c) Account No. :

Note : A copy of Banker's Certificate to be attached.

6. GST Registration No.

7. I. T. Permanent Account No.:

8. Financial Capacity : Year (2017-18)

(a) Fixed capital :

(b) Working capital :

I/we hereby certify that the particulars furnished by me/us above are true to the best of my / our knowledge and belief and mis-representations of facts will render me/us liable to my/our action as may be deemed fit by Andrew Yule & Co. Ltd. (Chennai Operation) & have the sole discretion to reject or accept my/our candidature.

(Signature of the Applicant)
Office Stamp/Seal.

Place :

Date ;

List of Enclosures :

The following documents are to be uploaded online at www.mstcecommerce.com/eprhome/aycl

1. EMD: Rs. 50,000/= *

* Bidders may request for exemption from submitting EMD (Refer details given in General terms & conditions)

2. Tender fee Rs: 200 /= should be paid by way of RGTS/ NEFT *

* Bidders participating in the tender should upload the UTR details towards cost of tender document.

3. Customer List

4. Copies of purchase orders & Performance Certificate from at least three reputed transformers manufacturers for having supplied Transformer Oil for transformers above 10 MVA rating during the year 2018-19. Offers received without copies of performance certificate will be rejected.

5. Balance sheets and P&L Account. (2015-16, 2016-17 & 2017-18).

6. Copy of the certificate for having tested your Oil as per IS 335/2018 Type-II at CPRI / ERDA.

7. Copy of valid ISO 9001 - 2008 edition certificate.

8. Copy of BIS Certificate for the Product.

9. Copy of Inspection report issued by KPTCL during 2018-19.

**Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 need not submit the document pertaining to SI No 3 to 9. Balance sheet and P&L account for 2017-18 alone needs to be submitted.

OFFERS RECEIVED WITHOUT ANY OF THE ABOVE WILL BE REJECTED

Our Bank details for making RTGS payment.

| | |
|------------------------------|---|
| Bank Name and Address | ALLAHBAD BANK CHENNAI ADYAR BRANCH 19, 1ST STREET, PADMANABHA NAGAR CHENNAI 600 020 |
| IFSC Code | ALLA0211103 |
| Account No | 20276303182 |
| Account Name | ANDREW YULE & COMPANY LIMITED |

TECHNO-COMMERCIAL TERMS FOR TRANSFORMER OIL
(To be filled online in mstc portal)

| SL NO | TERMS & CONDITIONS | VENDOR RESPONSE |
|-------|---|-----------------|
| 1 | EHV GRADE TRANSFORMER OIL SHOULD CONFIRM TO IS 335/2018 TYPE-II (WITH LATEST AMENDMENTS). | AGREE |
| 2 | Uninhibited TRANSFORMER OIL SHOULD CONFIRM TO IEC 60296/2012 (WITH LATEST AMENDMENTS).as per specification sheets (Annexure I) | AGREE |
| 3 | Unfiltered oil when taken from the tanker should withstand 30 KV BDV Test at our factory. | AGREE |
| 4 | Transformer oil should be supplied as per our specification SMI 101 Rev.0 (Third issue) for SI No 1 and will be inspected as per our inspection plan no. QAP 127 Rev.0 | AGREE |
| 5 | Transformer Oil confirming to IEC is meant for KPTCL jobs and it will be inspected by KPTCL inspector at the supplier's premises. The minimum inspection quantity will be 12 KL. | AGREE |
| 6 | You should have own refinery for processing TOBS. | AGREE |
| 7 | Risk purchase clause: The company reserve the right to impose risk purchase clause as " For delay in execution / supply we shall have every right to do the same through some other agency/s which shall deemed fit and the additional cost of the same (Incidental/Consequential) shall be to your account which with respect to our intimation or observation whatsoever. Please confirm acceptance. | AGREE |
| 8 | Security Deposit– a) The EMD amount of the successful Bidder will be retained as security deposit towards the execution of the contract and the same will be released after completion of contract. b) If the bidder is exempted from paying EMD vide clause no 1 of Annexure II(A) then on being awarded the contract, 1) The bidder should execute the bank guarantee /DD in favor of Andrew Yule & Co .Ltd for Rs.50,000/= 2) For bidders already enlisted with AYCL- Chennai Operation, having outstanding amount more than the Security deposit amount then it will be adjusted towards Security Deposit. | AGREE |
| 9 | Liquidated damage - If the delivery is delayed beyond the date of scheduled date of dispatch in the purchase order, penalty will be levied@ 1/2% per week subject to a maximum of 5%. Please confirm acceptance. | AGREE |

| | | |
|----|---|-------|
| 10 | Legal condition: Any contract entered against this tender will be as per the following legal condition- It is recorded that this purchase order/ contract / agreement is executed and concluded by and between the parties hereto at premises No.5/346, Old Mahabalipuram Road, Perungudi, Chennai 600 096 and in the event any dispute arises out of this agreement between the parties only the appropriate Civil Court in the City of Kolkata shall have the exclusive jurisdiction to entertain, try and determine the said proceedings in exclusion of all other courts. | AGREE |
| 11 | Validity of offer: Your price should be valid for acceptance for a period of 60 days from the date of opening of techno-commercial bid. | AGREE |
| 12 | The price quoted should be valid for deliveries up to 31.12.2019 with PVC. | AGREE |
| 13 | Andrew Yule reserves the right to increase the tender quantity by 30 %. | AGREE |
| 14 | Prices shall be variable as per IEEMA's PV Cir No.140/DIV/TRF/05 dt. 17.06.2011 effective from 01.07.2011 with price applicable on the 1st working day of April-2019. | AGREE |
| 15 | The price quoted above should be for free delivery at our Perungudi works Andrew Yule, Chennai. | AGREE |
| 16 | The credit period will start from the date of receipt of material at Andrew Yule, Perungudi, Chennai. | AGREE |
| 17 | <p>Distribution of Tender quantity among all the qualified bidders.</p> <p>Negotiated L1 price will be offered to other bidders whose price bid was opened. The tender quantity will be split among bidders as follows.</p> <p>a) If only one bidder (among L2, L3,L4,L5,L6, etc) agrees to match the negotiated L1 bidders price then tender quantity will be split as follows</p> <p>L1 bidder will get 70 % of Tender quantity</p> <p>Other bidder who agreed to match the negotiated L1 landed price will get 30 % of Tender quantity</p> <p>b) If two or more bidders (among L2,L3,L4,L5,L6, etc) agree to match the negotiated L1 bidders landed price then Tender quantity will be split as follows</p> <p>L1 bidder will get 60 % of Tender quantity</p> <p>Next higher bidder than L1 bidder who agrees to match the negotiated L1 landed price (Bidder 'A') will get 25 % of Tender quantity</p> <p>Next higher bidder than Bidder 'A' who agrees to match the negotiated L1 landed price will get 15 % of Tender quantity.</p> | AGREE |

| | | |
|----|---|---------------|
| | <p>c) If none of the other bidders whose price bid was opened agree to match the negotiated L1 price L1 bidder will get the entire tender quantity</p> <p>The different grades and quantity of transformer oil mentioned in the tender is based on our estimated requirement, while releasing order based on actual requirement the quantity against a grade may change but the overall tender value will remain same.</p> | |
| 18 | <p>Customer Profile UP LOADED</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 and submitted their price bids online need not upload the document and should mention exempted</p> | Remarks Filed |
| 19 | <p>Copies of purchase orders and Performance Certificate from at least three reputed transformers manufacturers for having supplied Transformer Oil for transformers above 10 MVA rating during the year 2018-19. Offers received without copies of performance certificate will be rejected.</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 and submitted their price bids online need not upload the document and should mention exempted.</p> | Remarks Filed |
| 20 | <p>Bidders should have a minimum turnover of Rs.5 crores per annum. Please enclose copy of last 3 years Balance sheets and P&L Account Balance sheets and P&L Account. (2015-16, 2016-17& 2017-18).</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 and submitted their price bids online need to submit the P&L account for 2017-18 only.</p> | Remarks Filed |
| 21 | <p>Copy of the certificate for having tested your Oil as per IS 335/2018 at CPRI / ERDA.</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 and submitted their price bids online need not upload the document and should mention exempted</p> | Remarks Filed |
| 22 | <p>Copy of valid ISO 9001 - 2008 edition certificate.</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 and submitted their price bids online need not upload the document and should mention exempted</p> | Remarks Filed |
| 23 | <p>Copy of BIS Certificate for the Product.</p> <p>** Those who have participated and qualified in our earlier tender no T-10/18-19 or T-21/18-19 submitted their price bids online need not upload the document and should mention exempted.</p> | Remarks Filed |

| | | |
|----|---|---------------|
| 24 | EMD : Rs. 50,000/= UP LOADED Bidders may request for exemption from submitting EMD (Refer details given in General terms & conditions) | Remark field |
| 25 | Tender fee Rs: 200 /= should be paid by way of RGTS/NEFTUP LOADED Bidders participating in the tender should upload the UTR details towards cost of tender document. | Remark field |
| 26 | PAYMENT TERMS: -Direct Credit In case it is agreed fill 27 with number of days of direct credit otherwise fill 27 with 0 | Remarks Filed |
| 27 | Please indicate the number of days of direct credit. (Andrew Yule payment terms is minimum 90 days direct credit. If the offered payment terms is less than 90 days, bids will be opened at the sole discretion of Andrew Yule & price will be loaded as per Andrew Yule norms) | Remarks Filed |
| 28 | PAYMENT TERMS: - Against L/c Bidders, who wish to quote with L/c, select AGREE IN 28& fill 30 with number of days of credit. Bidders, who have selected agreed in 26 and filled credit days in 27 should select Disagree in 28 and fill 30 with 0 | Remarks Filed |
| 29 | If L/c payment term is selected then the L/c opening charges will be to the bidders account. | AGREE |
| 30 | Please indicate the number of days of credit against L/c (Andrew Yule payment term is minimum 90 days direct credit. For bidders offering L/c payment terms , bids will be opened at the sole discretion of Andrew Yule & price will be loaded as per Andrew Yule norms) | Remarks Filed |
| 31 | If a bidder select AGREE in both 26&28, their offer will not be accepted | AGREE |

GENERAL TERMS AND CONDITIONS

1. EMD: Rs.50, 000/- (Rupees Fifty Thousand only) by way of RTGS/NEFT.

EMD: Rs. 50,000.00 (Rupees Fifty thousand only), by way of RGTS/ NEFT. Bank Guarantee from any nationalized / scheduled / Multinational Bank for the EMD amount can also be accepted, sought the necessary document (MSME certificate/ Turnover details) should be uploaded.

For bidders already enlisted with AYCL- Chennai Operation, having outstanding amount more than the EMD amount or who have already submitted the EMD against our earlier tenders or those who have security deposit with Andrew Yule may apply for adjustment of the same. The total EMD should be Rs: 50,000/=

Bidders who are MSMED units may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same.

Bidders whose turnover is more than Rs: 50 crores may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same

If reason for non-submission of EMD or adjustment against the outstanding balance for EMD is not mentioned in Techno-commercial bid of tender, the tender will be rejected.

2.Security Deposit:

- a) The EMD amount of the successful Bidder will be retained as security deposit towards the execution of the contract and the same will be released after completion of contract.
- b) If the bidder is exempted from paying EMD vide clause no 1 of Annexure II(A) then on being awarded the contract,
 - 1) The bidder should execute the bank guarantee /DD in favor of Andrew Yule & Co Ltd for Rs.50,000/=
 - 2) For bidders already enlisted with AYCL- Chennai Operation, having outstanding amount more than the Security deposit amount then it will be adjusted towards Security Deposit.

3. Bidders should pay the amount of Rs: 200 /= by RTGS /NEFT towards cost of tender document

4. Bidders should have tested their Oil as per IS 335/2018 Type-II at CPRI / ERDA and obtained the certificate. A copy of the certificate should be submitted.
5. Bidders organization should be certified for ISO 9001 - 2008 edition. A copy of the certificate should be submitted.
6. Bidder should have been obtained BIS Certificate for the Product. A copy of the certificate should be submitted.
7. Bidder should submit copies of purchase orders & Performance Certificate from at least three reputed transformers manufacturers for having supplied Transformer Oil for transformers above 10 MVA rating during the year 2017-2018. Offers received without copies of performance certificate will be rejected
8. Bidders should have a minimum turnover of Rs.5 crores per annum. Please enclose copy of last 3 years Balance sheets and P&L Account. (2014-2015, 2015-2016, 2016-2017).
9. The transformer oil is required for KPTCL jobs and the bidder should have supplied the transformer oil to KPTCL. Copy of inspection report issued by KPTCL during 2017-18 should be enclosed.
10. After the finalization of tender, individual rate contract will be issued to all successful bidders and the individual order will be released to all successful bidders based on the distribution of tender quantity as shown below,

Distribution of Tender quantity among all the qualified bidders.

Negotiated L1 price will be offered to other bidders whose price bid was opened. The tender quantity will be split among bidders as follows.

- a) If only one bidder (among L2, L3, L4, L5, L6, etc) agrees to match the negotiated L1 bidders price then tender quantity will be split as follows

L1 bidder will get 70 % of Tender quantity

Other bidder who agreed to match the negotiated L1 landed price will get 30 % of Tender quantity

- b) If two or more bidders (among L2, L3, L4, L5, L6, etc) agree to match the negotiated L1 bidders landed price then Tender quantity will be split as follows

L1 bidder will get 60 % of Tender quantity

Next higher bidder than L1 bidder who agrees to match the negotiated L1 landed price (Bidder 'A') will get 25 % of Tender quantity

Next higher bidder than Bidder 'A' who agrees to match the negotiated L1 landed price will get 15 % of Tender quantity.

- c) If none of the other bidders whose price bid was opened agree to match the negotiated L1 price L1 bidder will get the entire tender quantity.

11. THE RIGHTS OF THE COMPANY

Bidders who have quote other payment terms & condition having financial implication will be loaded as per Andrew Yule's norms.

We reserves the right to accept or reject any or all the tenders or to waive any informality, minor deviation or omission without assigning any reasons whatsoever.

Short Closure of Rate Contract: AYCL reserves the right to short close the rate contract at any point of time during validity of the contract with suitable prior notice to the bidders / vendors

PRICE FORMAT FOR SUPPLY OF TRANSFORMER OIL

| SI. NO | DESCRIPTION | Quantity | Basic Price (Including Packing, Forwarding, Freight & Insurance) (RS./KL) | IGST (%) (If not applicable please enter Zero) | CGST (%) (If not applicable please enter Zero) | SGST (%) (If not applicable please enter Zero) | Landed cost per No (In Rs) |
|--------|---|----------|---|--|--|--|----------------------------|
| | | KL | A | B | C | D | Landed Cost =a |
| 1 | EHV-GRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018 TYPE-II (WITH LATEST AMENDMENTS) In Tanker | 37 | | | | | |
| 2 | Uninhibited TRANSFORMER OIL CONFIRMING TO IEC 60296/2012 (WITH LATEST AMENDMENTS as per specification sheets In Tanker | 195 | | | | | |
| 3 | EHVGRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018 TYPE-II (WITH LATEST AMENDMENTS) In Barrels | 15.75 | | | | | |
| 4 | Uninhibited TRANSFORMER OIL CONFIRMING TO IEC 60296/2012 (WITHLATEST AMENDMENTS) as per specification sheets In Barrels | 80.85 | | | | | |

ANDREW YULE & CO. LTD.
T & S UNIT
MADRAS 600 096.

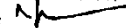


MATERIAL INSPECTION PLAN
TRANSFORMER OIL

Method of Inspection:

1. Verification of manufacturer's test certificate for the following parameters.
 - a) Physical properties
Appearance
Density
Flash point
Kinematic viscosity
Pour point
 - b) Electrical properties
Dissipation factor
Electric strength
 - c) Chemical property
Water content
Neutralization value
Corrosive sulphur
Anti oxidant additives
Oxidation stability
Total acidity
Sludge % by mass
Gassing tendency
2. Check on the material at our works
 - 1). Break down voltage.

Prepared by : B. Muralitharan
Designation : A M QC
Date : 30/8/95

Approved by : 
Designation : D M QC
Date : 30/8/95



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CHENNAI OPERATIONS, CHENNAI.**

SPEC NO. SMI 101
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SPECIFICATION FOR TRANSFORMER OIL

I GENERAL REQUIREMENTS

1. Type : Mineral oil
2. Application : Used as insulating and cooling medium in transformers & switchgears

II SPECIFICATIONS

1. Reference standard : IS 335/2018
2. Material composition : Napthanic/Paraffinic based low viscosity mineral oil
3. Material Properties : The properties/Characteristics of the transformer oil is as follows.

| SI NO. | Property | Test Method | Limits |
|------------------------------|--|--|---|
| | | | Type II of IS 335 Transformer Oil |
| A Function | | | |
| i) | Viscosity at 40°C | IS 1448(Part 25) | 15mm ² /s,Max |
| ii) | Viscosity at 0°C ¹ | IS 1448(Part 25) | 1800mm ² /s,Max |
| iii) | Pour point | IS 1448(Part 10/sec2) | (-10°C,Max To be based on LCSET refer Table 1 ¹¹ of IS335 |
| iv) | Water content | IEC 60814 | 30mg/kg ¹¹ /40mg/kg ¹² , Max |
| v) | Breakdown voltage | IS 6792 | 30 kv/70KV ¹³ ,Min |
| vi) | Density at 20°C | IS 1448(Part 16) | 0.895g/ml, Max |
| vii) | DDF at 90°C | IS 16086 | 0.005,Max |
| viii) | Particle content | IS 13236 | No general requirement ¹³ |
| B Refining/ stability | | | |
| ix) | Appearance | | Clear, free from sediment and suspended matter |
| x) | Acidity | IEC 62021-1 | 0.01mg KOH/g, Max |
| xi) | Interfacial tension | ASTM D971 | No general requirement ¹⁴ |
| xii) | Total sulphur content | ISO 14596 or ASTM D4294 ¹¹¹ | No general requirement |
| xiii) | Corrosive sulphur | DIN 51353 | Not corrosive |
| xiv) | Potentially corrosive sulphur | IS 16310 | Not corrosive |
| xv) | DBDS | IS 16497 (part 1) | Not detectable(< 5 mg/kg) (U) Uninhibited oil not detectable(<0.01%) (T) Trace inhibited oil:<0.08% (I) Inhibited oils:0.08%-0.40% (see 3.6 to 3.8) of IS 335 |
| xvi) | Inhibitors according to IS 13631/IEC 60666 | IS 13631 | |
| xvii) | Metal passivator additives according to IS 13631/IEC 60666 | IS 13631 | Not detectable (<5mg/kg). |

| | | | | |
|----------|--|------------------|------------------------|------------|
| 1 | Specification revised as per IS 335,2018 | <i>R Sambath</i> | <i>S Ravichandaran</i> | 22/05/2019 |
| 0 | Fourth Issue | R Sambath | S Ravichandaran | 20/07/2013 |
| Revision | Descriptoin | Prepared | Approved | Date |



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| SI NO. | Property | Test Method | Limits |
|--|--|---|---|
| xviii) | Other additives | | see 7) |
| xix) | 2-Furfural and related compounds content | IS 15668 | Not detectable(<0.05mg/kg)for each individual compound |
| C Performance | | | |
| xx) | Oxidation stability | IS 12422(Method C) Test duration ¹⁾ (U)Uninhibited oil:164h (T)Trace Inhibited oil: 332h (I) Inhibited oil:500h | For oils with other antioxidant additives and metal passivator Additives (see 6.12) of IS 335 |
| a) | •Total acidity ⁹⁾ | 1.9.4 of IS 12422 | 1.2mg KOH/g,Max |
| b) | •Sludge ⁹⁾ | 1.9.4 of IS 12422 | 0.8%,Max |
| c) | •DDF at 90°C ¹¹⁾ | 1.9.6 of IS 12422 | 0.500 ¹²⁾ , Max |
| xxi) | Gassing tendency | IEC50628, Method A | No general requirement ¹⁰⁾ |
| xxii) | ECT | See 6.14 of IS 335 | No general requirement ¹⁰⁾ |
| D Health, Safety and Environment(HSE) | | | |
| xxiii) | Flash point | IS 1448(part 21) | 135°C,Min |
| xxiv) | PCA Content | IP 346 | 3%,Max |
| xxv) | PCB content | IS 15082 | Not detectable(<2 mg/kg) |

1)This is the standard LCSET for a transformer oil (see 6.1 of IS 335) and can be modified depending on the climatic condition of each region.Pour point should be minimum of 10°C below LCSET.

2)Standard LCSET for low temperature switchgear oil.

3)For bulk supply.

4)For delivery in drums and IBC.

5)After laboratory treatment (see 6.4) of IS 335.

6)Where it is used as general requirement, a limit of minimum 40mN/m is recommended.

7)The supplier shall declare the generic type of all additives and their concentrations in the case of antioxidant additives.

8)To be agreed upon between supplier and purchaser.

9) At the end of oxidation stability tests.

10) Particle content in drums at the delivery of the oil can be agreed between supplier and customer based on a statistical reference at delivery.

11) A DDF of maximum 0.020 after 2 h of oxidation (see IS 12422 or IEC 61125) can be used for application in EHV instrument transformer and bushings.

12) In case of any dispute, ISO 14596 should be used.

| | | | | |
|----------|--|------------------|------------------------|------------|
| 1 | Specification revised as per IS 335,2018 | <i>R Sambath</i> | <i>S Ravichandaran</i> | 22/05/2019 |
| 0 | Fourth Issue | R Sambath | S Ravichandaran | 20/07/2013 |
| Revision | Description | Prepared | Approved | Date |



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III. TESTS

Routine tests shall be conducted for the characteristics mentioned as per IS 335

IV. EXTENT OF CHECK

Sampling as per IS 6855

V. PACKING

Transformer oil shall be supplied in road tankers or in non-returnable steel drums of 210 ltrs capacity clearly marked. It shall accompany with a typed certificate giving the following information.


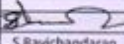
- i. Manufacturer's name
- ii. Quantity in liters
- iii. Name of the material
- iv. Batch no and date

VI. DOCUMENTS

*Test certificate should accompany each consignment

VII. ACCEPTANCE CRITERIA

As per SPT 116 (For Internal use only).

| | | | | |
|-----------------|--|--|---|-------------|
| 1 | Specification revised as per IS 335,2018 |  |  | 22/05/2019 |
| 0 | Fourth Issue | R Sambath | S Ravichandaran | 20/07/2013 |
| Revision | Description | Prepared | Approved | Date |



SPT 116

II. ACCEPTANCE CRITERIA FOR TRANSFORMER OIL FOR SPEC.NO.SMI 101

| SL.NO | CHARACTERISTICS | UNIT | REQUIRED VALUE | TOLERANCE |
|-------|---|-------|----------------|-----------|
| 01 | Flanish point | °C | 135 | MIN |
| 02 | Pour point | °C | -10 | MAX |
| 03 | Electric strength a)New unfiltered oil | KVrms | 30 | MIN |
| 04 | Di electric dissipation factor at 90°C | - | 0.005 | MAX |
| 05 | Water content | ppm | 30 | MAX |
| 06 | Oxidation stability Total sludge | % | 0.8 | MAX |

| | | | | |
|----------|-----------------------------|-----------|-----------------|------------|
| 1 | Revised as per IS 335 -2018 | | | 24/05/2019 |
| 0 | Second issue | R.Sambath | S.Ravichanthran | 20/07/2013 |
| Revision | Descriptoin | Prepared | Approved | Date |

ANNEXURE - I

60296 © IEC:2003

Table 2 – General specifications

| Property | Test method | Limits | |
|--|--|--|--------------------------------|
| | | Transformer oil | Low temperature switchgear oil |
| 1 – Function | | | |
| Viscosity at 40 °C | ISO 3104 | Max. 12 mm ² /s | Max. 3,5 mm ² /s |
| Viscosity at -30 °C ^a | ISO 3104 | Max. 1 800 mm ² /s | -- |
| Viscosity at -40 °C ^b | IEC 61868 | -- | Max. 400 mm ² /s |
| Pour point ^a | ISO 3016 | Max. -40 °C | Max. -60 °C |
| Water content | IEC 60814 | Max. 30 mg/kg ^c / 40 mg/kg ^d | |
| Breakdown voltage | IEC 60156 | Min. 30 kV / 70 kV ^e | |
| Density at 20 °C | ISO 3675 or ISO 12185 | Max. 0,895 g/ml | |
| DDF at 90°C | IEC 60247 or IEC 61620 | Max. 0,005 | |
| 2 – Refining/stability | | | |
| Appearance | -- | Clear, free from sediment and suspended matter | |
| Acidity | IEC 62021-1 | Max. 0,01 mg KOH/g | |
| Interfacial tension | ISO 6295 | No general requirement ^f | |
| Total sulfur content | BS 2000 Part 373 or ISO 14596 | No general requirement | |
| Corrosive sulfur | DIN 51353 | Not corrosive | |
| Antioxidant additive | IEC 60666 | (U) uninhibited oil: not detectable (T) trace inhibited oil: max. 0,08 % (I) inhibited oils: 0,08 – 0,40 % | |
| 2-Furfural content | IEC 61198 | Max. 0,1 mg/kg | |
| 3 – Performance | | | |
| Oxidation stability ¹ | IEC 61125 (method C) Test duration: (U) Uninhibited oil: 164 h (T) Trace inhibited oil: 332 h (I) Inhibited oil: 500 h | | |
| - Total acidity | | Max. 1,2 mg KOH/g ¹ | |
| - Sludge | | Max. 0,8 % ¹ | |
| DDF at 90 °C | IEC 60247 | Max. 0,500 ¹ | |
| Gassing | IEC 60628, A | No general requirement | |
| 4 – Health, safety and environment (HSE) | | | |
| Flash point | ISO 2719 | Min. 135 °C | Min. 100 °C |
| PCA content | BS 2000 Part 346 | max. 3 % | |
| PCB content | IEC 61619 | Not detectable | |
| ^a This is the standard LCSET for an transformer oil (see 5.1) and can be modified depending on the climatic condition of each country. Pour point should be minimum 10 K below LCSET. ^b Standard LCSET for low temperature switch gear oil. ^c For bulk supply. ^d For delivery in drums and IBC. ^e After laboratory treatment (see 6.4). ^f Where it is used as a general requirement, a limit of minimum 40 mN/m is recommended. | | | |

¹ In some countries more stringent limits and/or additional requirements may be requested.

7 Specific requirements for special applications

7.1 Higher oxidation stability and low sulfur content

For transformers with higher operating temperatures or designed for extended service life, there may exist restricted limits after oxidation test (see IEC 61125, method C). Mostly, such oil is inhibited (I) ^{2, 3}.

- Total acidity: max. 0,3 mg KOH/g;
- Sludge: max. 0,05 %;
- DDF at 90 °C: max. 0,050;
- Total sulfur content: max. 0,15 %.

7.2 Electrostatic charging tendency (ECT)

For OF- or OD-cooled power transformers (IEC 60076-2) with high oil circulation speed, as e.g. HV/DC transformers, a limit may be agreed between purchaser and manufacturer.

7.3 Gassing

For equipment with high electrical field stress or special design, gas which may be formed under special stress conditions must be absorbed by the oil. Therefore the gassing tendency according to IEC 60628 must be agreed between the oil manufacturer and the user of the oil.⁴

² In some countries more stringent limits and/or additional requirements may be requested.

³ In some countries a DDF of max. 0,020 after 2 h of oxidation (see IEC 61125, method C) is considered as acceptable for application in EHV instrument transformers and bushings.

⁴ In some countries limits are available.