

**ANDREW YULE & COMPANY LIMITED**  
**(A Government of India Enterprise)**  
**BRENTFORD UNIT, Electrical Division**  
**P-25, TRANSPORT DEPOT ROAD**  
**KOLKATA 700 088**

**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 bonafide and reputed **Company/Firm** for supply, 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](http://www.mstcecommerce.com/eprochome/aycl). Corrigendum 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 CONFORMING TO IS 335/2018 (WITH LATEST AMENDMENTS)**TYPE-I, in DRUMs** for 33 KV operation

Approximate Quantity: **15 KL** supplied In **DRUMS**

- II) EHV GRADE TRANSFORMER OIL CONFORMING TO IS 335/2018 (WITH LATEST AMENDMENTS),**TYPE-II, in DRUMs** for 33 KV operation

Approximate Quantity: **61 KL** supplied In **DRUMS**

- III) EHV GRADE TRANSFORMER OIL CONFORMING TO IS 335/2018 (WITH LATEST AMENDMENTS) ,**TYPE-II, in TANKER** for 33 KV operation

Approximate Quantity: **180 KL** supplied In **TANKER**

PLEASE CONFIRM THAT "Polychlorinated bi-phenyls is not used in the Oil as it is banned by Ministry of Environment".

The quantity mentioned in the Tender is our approximate requirement from **01.04.2019** up to **30.09.2019**

The quantities mentioned are indicative only and the order will be released to you from time to time during the contract period based on our actual requirement. You shall have to make supplies accordingly in phased manner.

Andrew Yule & Co Limited reserves the right to increase the tender quantity by 30 %. Price quoted should be FOR destination.

### Schedule of Tender

1.	<b>TENDER NO.</b>	<b>AY/BU/PU/108/TRF OIL/19-20/ET</b> <b>Dated : 08.03.2019</b>
2.	<b>MODE OF TENDER</b>	e-Procurement System Online submission of <b>Part I - Techno-Commercial Bid</b> and <b>Part II - Price Bid</b> through <a href="http://www.mstcecommerce.com/eprochome/aycl">www.mstcecommerce.com/eprochome/aycl</a> The intending bidders are required to submit their offer electronically through this e-tendering portal. <b>No physical tender is acceptable by AYCL/MSTC</b>
3.	<b>E-Tender No. / Event No.</b>	<b>AYCL/Electrical Division -KO/67/19-20/ET /490 DATED 08.03.2019</b>
4.	<b>Date of publication of e-Tender through publication MSTC/AYCL websites and Central Public Procurement Portal</b>	<b>08.03.2019</b>
5.	<b>Date of availability of NIT to the Vendors for downloading</b>	<b>08.03.2019</b>
6.	<b>Earnest Money Deposit &amp; Tender fees</b>	<ul style="list-style-type: none"> <li>• “Earnest Money Deposit” of Rs.50,000.00 (Rupees Fifty Thousands only) should be paid through RTGS / NEFT .</li> <li>• Tender fees of Rs. 500.00 (Rupees five hundred only) should be made through RTGS/NEFT and the UTR details should be uploaded.</li> <li>• Other document as described in Annexure I, Sl. No.2</li> </ul>
7.	<b>Last date of submission of EMD &amp; other documents to AYCL Ltd.</b>	<b>26.03.2019-3.00 PM</b>
8.	<b>Date of Starting of e-Tender for submission of Online Techno-Commercial Bid and Price Bid at</b> <a href="http://www.mstcecommerce.com/eprochome/aycl">www.mstcecommerce.com/eprochome/aycl</a>	<b>08.03.2019</b>
9.	<b>Date of closing of Online e-tender for submission of Techno-Commercial Bid &amp; Price Bid at</b> <a href="http://www.mstcecommerce.com/eprochome/aycl">www.mstcecommerce.com/eprochome/aycl</a>	<b>26.03.2019 – 3.00 PM</b>
10.	<b>Date &amp; time of opening of Part-I (Techno-Commercial Bid)</b>	<b>26.03.2019 – 3.30 PM</b>
11.	<b>Date &amp; time of opening of Part-II (Price Bid )</b>	<b>To be intimated to the eligible vendor .</b>

**List of Annexure**

<b>Important Instructions for E-procurement -</b>	<b>Annexure-I</b>
<b>General Information -</b>	<b>Annexure-II</b>
<b>Online Techno commercial terms -</b>	<b>Annexure-III</b>
<b>General Terms&amp; Conditions -</b>	<b>Annexure-IV</b>
<b>Price Sheet -</b>	<b>Annexure-V</b>
<b>General Technical spec. -</b>	<b>Annexure –VI</b>
<b>IEEMA price variation clause -</b>	<b>Annexure -VII</b>
<b>GST DETAILS TO BE SUBMITTED</b>	<b>Annexure -VIII</b>

TECHNO-COMMERCIAL TERMS FOR TRANSFORMER OIL  
( **To be filled online in MSTC portal**).

SL NO	TERMS & CONDITIONS	VENDOR RESPONSE
1.1	<p><b>REQUIREMENT</b></p> <p><i>E-Tender offers are invited for supply of TRANSFORMER OIL for Transformer on Rate Contract basis, TO BE SUPPLIED as per specifications..</i></p> <p><i>The quantity mentioned in the Tender is our approximate requirement from <b>01.04.2019 up to 30.09.2019</b>. Actual quantity shall be mentioned in the purchase order. You have to supply the transformer oil throughout the contract period according to the orders placed to you from time to time during the contract period and as per the following details mentioned below.</i></p> <p><i>Offers are subjected to rejection, in case of any ambiguity or omission of any point. The company reserves the right to accept or reject any or all the tenders or to waive any informality, minor deviation or omission or based on their past performance without assigning any reasons whatsoever.</i></p> <p><i>In case of any dispute relating to this contract, the decision of AYCL Management shall be binding and final.</i></p> <p><i>Andrew Yule reserves the right to increase the tender quantity by 30%.</i></p>	AGREE
1.2	<p><b>Item No 1:</b></p> <p>EHV GRADE TRANSFORMER OIL SHOULD CONFORM TO IS 335/2018 (WITH LATEST AMENDMENTS).TYPE-I To be supplied in <b>DRUMS</b></p>	AGREE
1.3	<p><b>Item No 2:</b></p> <p>EHV GRADE TRANSFORMER OIL SHOULD CONFORM TO IS 335/2018 (WITH LATEST AMENDMENTS).TYPE-II To be supplied in <b>DRUMS</b></p>	AGREE
1.4	<p><b>Item No 3:</b></p> <p>EHV GRADE TRANSFORMER OIL SHOULD CONFORM TO IS 335/2018(WITH LATEST AMENDMENTS).TYPE-II To be supplied in <b>TANKER</b>.</p>	AGREE
2.1	<b>PRICE BASIS</b>	AGREE

	The price quoted should be for free delivery at our KOLKATA works of Andrew Yule as given below: ( inclusive of Packing, Forwarding, insurance & unloading etc.). However freight cost to be mentioned separately for the purpose of IEEMA PV calculation.	
2.2	<b>PERIOD OF RATE CONTRACT :</b> : Effective date for start of rate contract is <b>01.04.2019</b> , and the contract shall be valid for orders placed till <b>30.09.2019</b> .	AGREE
2.3	<b>Validity of offer:</b> Your offer should be valid for acceptance for a period of 90 days from the date of opening of techno-commercial bid.	AGREE
2.4	<b>Validity of price :</b> The price quoted should be valid for orders placed from <b>01.04.2019</b> up to <b>30.09.2019</b> with PVC.	AGREE
2.5	<b>QUANTITY VARIATION:</b> Andrew Yule reserves the right to increase the tender quantity item wise or in totality by 30%.	AGREE
2.6	<b>Delivery Lead Time :</b> The transformer oil should be delivered within a maximum of <b>7 to 10 days for local vendors and 7 to 15 day for outstation vendors</b> from the date of issue of purchase order and as per the delivery schedule mentioned in our purchase orders.	AGREE
2.7	<b>Minimum Delivery Quantity :</b> Andrew Yule prefers minimum delivery of 20 to 30 DRUMs per consignment <b>and not exceeding 80 DRUMs per consignment</b> . Kindly provide your minimum delivery quantity in Drums.	REMARKS
2.8	<b>Supply in Drums:</b> Please indicate the quantity of oil supplied in Litres per drum	REMARKS
2.9	<b>Supply in Tanker:</b> Please indicate the minimum quantity of oil supplied per tanker. Our requirement is around 20 KI / tanker.	REMARKS
2.10	<b>Delivery &amp; Destination:</b> You have to deliver as per our requirement in phased manner throughout the contract period against orders placed on you from time to time as per our requirement. The grade, quantity and delivery schedule will be informed to you vide purchase order and you have to effect supplies accordingly . <b>a) ANDREW YULE &amp; COMPANY LIMITED</b> BRENTFORD UNIT, (Electrical Division) P-25, TRANSPORT DEPOT ROAD. KOLKATA 700 088 <b>b) ANDREW YULE &amp; COMPANY LIMITED</b> 14, MAYURBHUNJ ROAD, (Electrical Division) KOLKATA -700 023	AGREE
2.11	<b>Distribution of Tender quantity among all the qualified bidders.</b> Distribution of Tender quantity among all the qualified bidders. Negotiated landed L1 price will be counter-offered to other	AGREE

	<p>bidders whose price bid was opened. The tender quantity will be split among bidders who will match the negotiated landed L-1 price as per the discretion of the management which is as follows.</p> <p>a) The order quantity is to be placed on all the vendors, who have agreed to match the Negotiated landed L1 price &amp; Terms, provided preference will be given to original L-1 which will be more than 50% considering his technical and commercial ability and the remaining quantity will be procured from L-2, L-3 etc bidders. where preference will be given to L-2 considering the original value. The quantity for L2 who has matched the negotiated landed L-1 price will depend upon his Technical &amp; Commercial ability and should not be more than 30% of the total quantity. Balance will go to L3 and other Vendors following same principle.</p> <p>If none of the other bidders whose price bids have been opened agree to match the negotiated L-1 price, Andrew Yule reserves the right to order the entire Tender quantity on the L-1 bidder.</p>	
3.1	<p><b>Packing:</b> Packing should be done properly to avoid any transit damage. Supply will be made in Non-Returnable new Drums. It should accompany with a typed certificate giving the inputs (a)Manufacturer's name(b) Quantity in liters(c) Name of materials and (d) Batch No.&amp; Date</p>	AGREE
3.2	<p><b>Test Certificate:</b> Test Certificate to be submitted along with your Delivery Challan.</p>	AGREE
3.3	<p><b>CONDITIONS FOR SUPPLY:</b> Transformer oil should be supplied as per IS 335/2018 Latest revision and will be inspected as per our inspection plan</p>	AGREE
3.4	<p><b>OWN REFINERY :</b> You should have own refinery for processing TOBS.</p>	AGREE
3.5	<p><b>Inspection / Testing:</b> Initial inspection should be done by you at your works before despatch and report submitted. Oil supplied should withstand all parameters as per IS 335/2018 (with latest amendments) standard including BDV, however final inspection and acceptance shall be done at AYCL's factory.</p> <p>Oil when taken from the tanker should withstand all tests confirming to IS 335/2018 (with latest amendments) and including BDV test. On receipt of material Test can be done at our works or through CPRI / ERDA (at AYCL cost). In no case deviation from IS or IEC standard shall be accepted.</p> <p><b>Non Confirming</b> Material to be rectified / replaced (as suggested by our inspection authority) and re-submitted for acceptance by AYCL.</p>	AGREE
4.1	<p><b>Guarantee:</b> Materials should be guaranteed for manufacturing defects, poor workmanship and defective raw materials for a minimum period of 18 months after delivery</p>	AGREE

	or 12 months after commissioning, whichever is earlier. During this period if the product is found to be defective due to any of the above reasons, you shall undertake to repair / replace the same FREE of COST.	
4.2	<b>Risk purchase clause:</b> 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
4.3	<b>Security Deposit -</b> The EMD amount of the successful Bidder will be retained as security deposit towards the execution of the order and the same will be released after completion of order. Please confirm acceptance.	AGREE
4.4	<b>Liquidated damage -</b> If the delivery is delayed beyond the date of scheduled date of despatch in the purchase order, penalty will be levied @ 1/2% per week subject to a maximum of 5% . Please confirm acceptance.	AGREE
4.5	<b>Legal condition:</b> 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 P-25, TRANSPORT DEPOT ROAD, KOLKATA 700 088 and 14, MAYURBHANJ ROAD, (Electrical Division) KOLKATA-700 023 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
4.6	<b>Price Variation Clause :</b> Prices shall be variable as per IEEMA 'S PV Cir No. IEEMA /PVC/ TR-OIL / 2011 , effective from 1 ST. JULY 2011. ( <b>Refer Annexure –VII</b> ) The <b>Base price</b> reference as per IEEMA circular shall be applicable on the <b>IEEMA Price of February 2019.</b>	AGREE
4.7	<b>START of CREDIT PERIOD :</b> The credit period will start from the date of receipt and acceptance of material at Andrew Yule, KOLKATA WORKS.	AGREE
4.8	<b>Landed Cost Calculation :</b> The price calculated by MSTC is provisional. The actual landed cost shall be done after proper Loading in the Price by us for important parameters like (i) Payment Terms (ii) GST, etc. (iii) L-1 vendor will be judged after taking proper credit of GST and other terms having financial impacts like payment terms, credit period etc. Price comparison shall be done based on Landed cost. Final Landed Cost shall be calculated by AYCL as per their Norms. <b><u>With introduction of GST, proper credit will be applicable while calculating</u></b>	AGREE

	<b><u>the landed cost, and L-1 shall be decided accordingly. Please indicate your GST rate, HSN code and Registration details.</u></b>	
5.1	<b>PAYMENT TERMS:</b> -Direct Credit In case it is agreed for direct credit, write <b>AGREED</b> in the remarks field, please fill <b>5.1</b> with number of days of direct credit, otherwise fill <b>5.2</b> with 0 (Zero).	REMARKS
5.2	Please indicate the number of days of direct credit. ( Andrew Yule's payment term is minimum 90 days direct credit from acceptance of material. If the offered payment term is less than 90 days , bids will be opened at the sole discretion of Andrew Yule & price will be loaded as per Andrew Yule's norms. Any advance payment terms will not be accepted.	REMARKS
5.3	<b>PAYMENT TERMS:</b> - Against L/C Bidders, who wish to quote with L/c, select "AGREE" IN <b>5.3</b> & fill <b>5.4</b> with number of days of credit. Bidders, who have selected agreed in <b>5.1</b> and filled credit days in <b>5.2</b> should select " Disagree " in <b>5.3</b> and fill <b>5.4</b> with 0 (Zero).	REMARKS
5.4	Please indicate the number of days of credit against L/C ( Andrew Yule's payment term is minimum 90 days direct credit from acceptance of material. If the offered payment term is less than 90 days , bids will be opened at the sole discretion of Andrew Yule & price will be loaded as per Andrew Yule's norms. Any advance payment terms will not be accepted.	REMARKS
5.5	Vendors opting LC payment, all costs related to LC shall be borne by the vendor	AGREE
5.6	<b>If a bidder select AGREE in both Credit &amp; LC, their offer will not be accepted</b>	AGREE
6.1	<b>EMD</b> : An Earnest Money Deposit, of <b>Rs. 50,000.00</b> to be submitted in the form of RTGS / NEFT favouring Andrew Yule & Co. Ltd. or specific request for exemption of EMD has to be submitted along with necessary supporting documents for exemption. EMD MONEY / EXEMPTION REQUEST SHOULD BE SUBMITTED ALONG WITH TECHNO COMMERCIAL BID. BIDDERS WHO WILL NOT SUBMIT EMD OR NOT MAKE PROPER APPEAL FOR EMD EXEMPTION, THEIR TENDER WILL NOT BE CONSIDERED	AGREE
6.2	EMD – EMD amount to be paid by <b>RTGS / NEFT</b> within the schedule date. If agreed, please ATTACH & UPLOAD copy of UTR details.	REMARKS
6.3	EMD amount to be <b>adjusted against the outstanding dues</b> between the vendor & AYCL. If agreed please ATTACH & UPLOAD copy of <b>Exemption Request Letter</b> and write UPLOADED in the remarks field.	REMARKS



6.4	EMD amount to be waived as our <b>turnover more than Rs 50crore.</b> if agreed Please mention the turnover of last year in the remarks field. Also attach & upload supporting document ( <b>Balance Sheet &amp; Profit-Loss A/c</b> ).	REMARKS
6.5	EMD amount to be waived as per our attached <b>MSME</b> certificate. If agreed, Please mention "Exemption for MSMED in the remarks field. Also Attach & Upload the <b>MSME certificate</b> as supporting document.	REMARKS
6.6	You have to agree to <b>any one</b> of the above options for EMD / EMD Exemption.	AGREE
6.7	Tender fees of <b>Rs 500/=</b> to be paid by <b>RTGS / NEFT</b> within the schedule date. Please ATTACH & UPLOAD copy of UTR details.	REMARKS
7.0	<b>ELIGIBILITY CRITERION :</b> <ol style="list-style-type: none"> <li>1) Bidder should be capable of supplying <b>transformer oil</b> for AVR , Transformer. Bidders should have a minimum turnover of Rs. 5 Crores per annum. Bidders should enclose copy of last 3 year's Balance sheets and Profit &amp; Loss A/C to evaluate the financial ability (** Note)</li> <li>2) .Bidders should submit copies of purchase orders executed during Year 2018-2019, for having supplied transformer oil for AVR, Transformers . (** Note).</li> <li>3) Performance Certificate from reputed Organisation needs to be submitted. (** Note).</li> <li>4) Offers received without copies of performance certificate will be rejected</li> <li>5) Bidders organization should be certified ISO 9001-2008 edition. A copy of the certificate should be submitted.</li> <li>6) Bidders who have obtained BIS Certificate for the product. A copy of the certificate should be submitted with the latest test report from CPRI/ERDA conforming to IS 335/2018</li> </ol>	AGREE
8.0	<b>UPLOADING DOCUMENTS :</b> Please upload the following documents and write UPLOADED in the remarks field of AGREED WITH REMARKS. <ol style="list-style-type: none"> <li>1) EMD – Attach copy of UTR details/Exemption document</li> <li>2) Tender Fees of Rs. 500/- Attach copy of UTR details</li> <li>3) Vendor form as per Annexure – II , (**Note)</li> <li>4) Customer list. (** Note)</li> <li>5) Copy of valid ISO 9001 - 2008 edition certificate.</li> <li>6) Balance sheets and P&amp;L Account. (** Note)</li> <li>7) Copies of purchase orders &amp; Performance Certificate. (** Note)</li> <li>8) Copy of the certificate for having tested your Oil as per IS 335/2018 at CPRI / ERDA</li> <li>9) Copy of BIS Certificate for the Product</li> <li>10) Trade License. (** Note)</li> <li>11) A copy of Banker's Certificate. (** Note)</li> <li><b>12) GST DETAILS as per Annexure – VIII</b></li> </ol>	AGREED WITH REMARKS

	13) Any other relevant certificate or documents referred in our NIT (** Note) Those bidders who had participated and qualified in our earlier tender or bidders in AYCL-Kolkata approved vendor list need not submit the documents.	
9.1	<b>GST</b>	AGREE
9.2	<b>GST RULES</b> : You have to abide by the GST Rules and regulations	AGREE
9.3	<b>GST RATE AS %</b>	REMARKS
9.4	<b>GST REGISTRATION NUMBER</b>	REMARKS
9.5	<b>HSN DESCRIPTION &amp; CODE</b>	REMARKS

**NOTE: NO DEVIATION FOR THE "AGREE FIELD" FOR ABOVE TECHNO-COMMERCIAL TERMS FOR TRANSFORMER OIL(ANNEXURE-III) IS ACCEPTABLE.ANY DEVIATION WILL BE CONSIDERED AS DISQUALIFICATION OF YOUR PARTICIPATION IN BIDDING PROCESS AND YOUR PRICE BID WILL NOT BE OPENED FOR FURTHER PROCESSING OF THE TENDER.**

**Annexure-V**

**PRICE FORMAT FOR TRANSFORMER OIL:-**

Sl. NO	DESCRIPTION	UNIT (Quantity)	Basic Price (RS./L)
		Ltr	(a)
1	EHV GRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018 (WITH LATEST AMENDMENTS,TYPE-I, In <b>DRUMs</b>	<b>15,000</b>	
2	EHV GRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018 (WITH LATEST AMENDMENTS) TYPE-II, In <b>DRUMs</b>	<b>61,000</b>	
3	EHV GRADE TRANSFORMER OIL CONFIRMING TO IS 335/2018(WITHLATEST AMENDMENTS)TYPE-II,In <b>Tankers</b>	1,80,000	
4	<b>Freight Cost</b> : Please mention freight cost considered for free delivery at our works.(Pl ref (2.1) PRICE BASIS clause above) <b>SUPPLY IN DRUMS for IS335/2018</b>	Rs/Litre	
5	<b>Freight Cost</b> : Please mention freight cost considered for free delivery at our works.(Pl ref PI ref (2.1) PRICE BASIS clause above) <b>SUPPLY IN TANKER FOR IS 335/2018</b>	Rs/Litre	

**Note :**

The price calculation as done by MSTC is provisional.

Price comparison shall be done based on Landed cost. Final Landed Cost shall be calculated by AYCL as per their Norms.

Formula for calculation of Landed Cost = Basic +Duties +Interest cost (if any) for different payment terms etc (if any) + Any other cost having financial impact Less CREDIT availed through GST

L-1 vendor will be judged after taking proper credit and other terms having financial impacts. The landed cost & L-1 shall be decided accordingly.

The above calculations are based on the prevailing rates and taxes applicable. However, in case of introduction of any other taxes or tax structure the calculation may vary accordingly.

**Important Instructions for E-procurement**

This is an e-procurement event of ANDREW YULE & COMPANY 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](http://www.mstcecommerce.com/eprochome/aycl)

- 1) Vendors are required to register themselves online with [www.mstcecommerce.com](http://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. Pradip Majumder  
Manager (Procurement)  
Ph. No: (033) 6550-0348,9831001118  
Email: [pradip.majumder@andrewyule.com](mailto:pradip.majumder@andrewyule.com)

**Contact person (E-Commerce, MSTC Ltd):**

1. Mr. Pritam Biswas,  
Assistant Manager (ERO)  
Mobile- 9903248755,  
email- [pbiswas@mstcindia.co.in](mailto:pbiswas@mstcindia.co.in)
- 2) Mr. Mayank Jain,  
Assistant Manager (ERO)  
Mobile- 9721277969,  
email- [mhjain@mstcindia.co.in](mailto:mhjain@mstcindia.co.in)
- 3) Mr. Vikash Kumar Jaiswal,  
Regional Manager (ERO)  
Mobile- 9903042449,  
email- [vikash@mstcindia.co.in](mailto:vikash@mstcindia.co.in)

**Landline: (033) 22901004**

A helpdesk service (with call recording facility) having the number **(033) 2290 1004** which is operational on all working days from **10 AM to 6PM**

**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](http://www.mstcecommerce.com) once)**

**2. Part-I: Submission of EMD & other Documents:**

**Within specified Date & time the vendor must UPLOAD the following documents at [www.mstcecommerce.com/eprochome/aycl](http://www.mstcecommerce.com/eprochome/aycl)**

- **Earnest Money of Rs.50,000.00 (Rupees Fifty thousand only) favouring Andrew Yule & Co. Ltd. Payment should be made through RTGS/NEFT and the UTR details should be uploaded. If the EMD exemption is sought the necessary documents (MSME certificate/turnover details) should be uploaded**
- **Tender fees of Rs. 500.00 (Rupees five hundred only) should be made through RTGS/NEFT and the UTR details should be uploaded.**
- **General information, under Annexure-II complete in all respect along with desired document.**
- **Acceptance of Techno-Commercial Terms for Transformer Oil, under Annexure-III along with desired information/Data under Annexure-II(A).**

**In case of failure to submit the EMD /Exemption request within the stipulated time, the Tender may be rejected.**

**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) who have submitted the above fees and submitted documents to Andrew Yule will be short listed by Andre Yule and those qualified bidders can only submit their Techno Commercial Bids and Price Bid through internet in MSTC website [www.mstcecommerce.com](http://www.mstcecommerce.com) →**

e-procurement → Psu / Govt depts. → Login under AYCL → My Menu → Auction Floor Manager  
→ live event → Selection of the live event.

- d. The bidder should allow to run an application namely en Apple 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](http://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](http://www.mstcecommerce.com/eprochome/mstc) of MSTC Ltd. to familiarize them with the system before bidding.

**ANDREW YULE & COMPANY LIMITED  
Brentford Unit, Electrical Division-Kolkata**

**General Information**

Ref. Tender No.: AY/BU/PU/108/TRF OIL/19-20/ET

**(This document should be dully filled up and attached along with EMD)**

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 Details  
(a) Name of the Bank :

(b) Name of the Branch :

(c) Account No.

(d) IFSC Code : :

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

6. GST Registration DETAILS.  
(a) GST REGISTRATION NO. :  
(b) HSN CODE :  
(c) GST % :

7. I. T. Permanent Account No.:

8. Financial Capacity : Year (2018-2019)

(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. (Electrical Division) & have the sole discretion to reject or accept my/our candidature.

(Signature of the Applicant)  
Office Stamp/Seal.

Place :

Date ;

List of Enclosures :

- Trade License
- A copy of Banker's Certificate

#### **Annexure II (A)**

**The following documents are to be uploaded online at**

[www.mstcecommerce.com/eprochome/aycl](http://www.mstcecommerce.com/eprochome/aycl)

1. EMD Rs:50000/= \* by RTGS / NEFT.

\*Bidder may request for exemption from submitting EMD (Refer details given in SI No 1 of Annexure-IV, General terms & condition).

2. Tender fees of Rs: 500 /= by RTGS/NEFT
3. Vendor form as per Annexure – II (See \*\*Note)
3. Customer List. [See \*\* Note]
4. Copy of valid ISO 9001 - 2008 edition certificate.
5. Balance sheets and P&L Account. (2015-2016 , 2016-2017 & 2017-2018,). [See \*\* Note]
6. Copies of purchase orders & Performance Certificate from at least three reputed transformers manufacturers for having supplied Transformer Oil for transformers for 11/33 KV rating. Offers received without copies of performance certificate will be rejected. [See \*\* Note]
7. Copy of the certificate for having tested your Oil as per IS 335/2018 at CPRI / ERDA.
8. Copy of BIS Certificate for the Product
9. Trade License. (\*\* Note)
10. A copy of Banker's Certificate. (\*\* Note)
- 11. GST DETAILS as per Annexure – VIII**
12. Any other relevant certificate or documents referred in our NIT



**[\*\* Note] :** Those bidders who had participated and qualified in our earlier tender or bidders in AYCL-Kolkata approved vendor list need not submit the documents.】

Our Bank details for making RTGS payment.

<b>Bank Name and Address</b>	<b>IDBI BANK SIDDHA POINT, GROUND FLOOR. 101, PARK STREET KOLKATA – 700 016</b>
<b>IFSC Code</b>	<b>IBKL0000012</b>
<b>Account No</b>	<b>012103000000718</b>
<b>Account Name</b>	<b>ANDREW YULE &amp; COMPANY LIMITED</b>

#### **Annexure-IV**

#### **GENERAL TERMS AND CONDITIONS**

- 1 EMD : Rs.50,000/- (Rupees Fifty Thousand only) by way of RTGS / NEFT. Bank Guarantee from any Nationalised / Scheduled / Multinational Bank for the EMD amount can also be accepted and the BG should be as per the specimen enclosed and reach AYCL before due date.

For bidders already enlisted with AYCL- Electrical Division, 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 attaching 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. Bidder should have tested their Oil as per IS 335/2018 & IEC 60296/2012 at CPRI / ERDA and obtained the certificate .A copy of the certificate should be submitted.
3. Bidders organization should be certified for ISO 9001 - 2008 edition. A copy of the certificate should be submitted.
4. Bidder should have been obtained BIS Certificate for the Product. A copy of the certificate should be submitted.

5. Bidder should submit/upload copies of purchase orders & Performance Certificate from at least three reputed transformers manufacturers for having supplied Transformer Oil for transformers up to 5 MVA rating during the year 2017-2018. Offers received without copies of performance certificate will be rejected. (\*\* Note)
6. 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. (2015-2016, 2016-2017, 2017-2018).
7. Bidders should pay the amount of Rs: 500 /= RTGS / NEFT towards cost of tender document.
8. **THE RIGHTS OF THE COMPANY**
  - a) The company reserves the right to accept or reject any or all the tenders or to waive any informality, minor deviation or omission or based on their past performance without assigning any reasons whatsoever.
  - b) Bidders who have quoted other payment terms & Conditions having financial implications, price bids will be opened at the sole discretion of Andrew Yule & price will be loaded as per Andrew Yule's norms. Any advance payment terms will not be accepted.
  - c) The actual landed cost shall be calculated after Proper Loading in the Price as per Andrew Yule norms for important parameters having financial implications. L-1 shall be determined based on landed cost calculated by Andrew Yule.
  - d)
9. Please note the following and adhere to the instructions given below related to GST
  - 1) Our provisional ID (West Bengal) : **19AACCA4245Q1Z9**
  - 2) Place of business (**West Bengal**)
  - 3) Address :  
**ANDREW YULE & COMPANY LIMITED**  
 P-25, Transport Depot Road, Kolkata 700 088  
**And**  
**ANDREW YULE & COMPANY LIMITED**  
 14, MAYURBHUNJ ROAD, (Electrical Division) , KOLKATA -700 023
- 4) All vendors / Supplier / Contractors / Service providers, please note the following
  - a. For existing orders issued to you shall be governed by GST rule.
  - b. You have to get your organisation registered with GST regime.
  - c. You have to furnish the copy of
    - i. GST registration
    - ii. Status of registration ie Normal or Comprehensive
    - iii. Place of business.
- 5) With implementation of GST, GST number must be mentioned in all documents
  - a. Tax invoice
  - b. Supply challan
  - c. Dr & Cr notes
  - d. Supplementary / revised invoices
  - e. Receipt voucher
  - f. Refund voucher
  - g. Payment voucher
- 6) All the goods to be despatched on or after 1st July 2017 must contain GST number in their invoices.
- 7) All the invoices raised on or after 1st July 2017, regarding supply of services to our company must contain GST number in their invoices.

- 8) All goods despatched or to be despatched , Service provided or to be provided to Andrew Yule & Company Limited on or after 1st July 2017 must contain our GST number for materials supplied or service provided in the respective invoices.
- 9) All the invoices received or issued must be in accordance with the prescribed format proposed by GST act. (Format Enclosed)

Note: In case of Non-Registered vendors / Suppliers / Contractors / service providers , declaration has to be given in the invoice regarding non-registration

## GST DETAILS TO BE SUBMITTED

## Annexure –VII

**May not be submitted in case you have already supplied the same information in our earlier tender.**

Sl. No.	Particulars	Your Reply	Documents Required
1	Andrew Yule Vendor Code (Please mention if available) :		-
2	Organisation's Name:		-
3	Constitution of your organisation		A copy of your partnership deed or MOA:
4	Location of your plants / supply points		-
5	Location where do materials Yule of you to places supply Andrew		-
6	Your GST Registration No		-
7	Contact Person's name:  (From Finance/Taxation)		-
8	Contact Person's E-mail id:  (From Finance/Taxation)		-

9	Contact Person's Mobile Number: (From Finance/Taxation)		-
10	PAN Number:		-
11	Service Tax Number:		-
12	VAT number:		-
13	Central Excise Number:		-
14	Are you aware of GST implementation(Yes/No)		-
15	Are you aware that in the GST regime we will not get the credit for taxes until you file your returns and you pay your taxes. (Yes/No)		-
16	Whether there has been any delay in filing of return in the past. (Yes/No)		-
17	Whether there has been any delay in payment of taxes in the past. (Yes/No)		-
18	Whether there has been any ITC mis-match case(s) earlier. (Yes/No)		-
19	Who is the person in Andrew Yule with whom you connect on a regular basis		-

20	GST classification of products which are supplied to Andrew Yule with product details		-
21	SAC classification of services rendered to Andrew Yule		-
22	Your Migration details to GST net		The ARN No. and a copy of the Enrollment form
23	Your Bank details		-
	Bank Name		-
	IFSC		-
	Branch		-

### BANK GUARRANTY SPECIMEN

(To be typed on Rs.100/- non-judicial stamp paper)  
BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

TO BANK GUARANTEE NO....  
M/S ANDREW YULE & CO. LTD  
ELECTRICAL DIVISION – KOLKATA OPERATION,  
14, MAYURBHUNJ ROAD,  
KOLKATA -700 023

IN ACCORDANCE WITH YOUR TENDER for supply of **Transformer Oil**, M/s (hereinafter called the "Bidder") having its Registered Office at \_\_\_\_\_, wish to participate in the said bid for the supply **Transformer Oil** AS PER OUR SPECIFICATION as an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of Rs. (Rupees.....) valid up to **30.09.2019**, is required to be submitted by the bidder as a condition precedent for participating in the said bid, which amount is liable to be forfeited by the Purchaser on (1) the withdrawal or revision of the offer by the bidder within the validity period, (2) Non acceptance of the Letter of Intent / Purchase order by the Bidder when issued within the validity period, (3) failure to execute the contract as per contractual terms and condition with in the contractual delivery period and (4) on the happening of any contingencies mentioned in the bid documents.

During the validity of this Bank Guarantee: -

We, .....(Bank name) having its registered Office at .....guarantee and undertake to pay immediately on first demand by Andrew Yule & Company Ltd., Kolkata 700 023, the amount of Rs.....(Rupees ) without any reservation, protest, demur and recourse.

Any such demand made by the purchaser shall be conclusive and binding on the Bank irrespective of any dispute or difference raised by the Bidder.

The Guarantee shall be irrevocable and shall remain valid up to **30.09.2019**. If any further extension is required, the same shall be extended to such required period on receiving instruction from the Bidder, on whose behalf this Guarantee is issued.

Notwithstanding anything contained herein:

\* Our liability under this Bank Guarantee shall not exceed  
Rs. (Rupees ....)

\* This Bank Guarantee shall be valid up to **30.09.2019**.

- We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or a demand on or before **30.09.2019**

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on .....  
day of ..... 2019 at.....

\*\*\*\*\*

IS 335 : 2018

treatment to reduce particles, water and dissolved air by vacuum procedure (*see note*), the oil shall have a high dielectric strength (breakdown voltage >70 kV).

NOTE— This treatment referred to filtration of the oil at 60 °C by vacuum (pressure below 2.5 kPa) through a sintered glass filter (with a maximum pore size at 2.5 µm).

### 6.5 Dielectric Dissipation Factor (DDF)

Dielectric Dissipation Factor is measure for dielectric losses caused within the oil. DDF values above requirements of Table 2 can indicate contamination of the oil by polar contaminants or poor refining quality. DDF shall be measured in accordance with IS 16086 at 90°C. In case of dispute, IEC 60247 at 90°C should be used.

NOTE— By agreement between parties, DDF may be measured at temperatures other than 90 °C. In such cases the temperature of measurement should be stated in the report.

### 6.6 Appearance

A visual inspection of insulating oil (oil sample in transmitted light under a thickness of approximately 10 cm and at ambient temperature) indicates the presence of visible contaminants, free water or suspended matter.

### 6.7 Acidity

Unused mineral insulating oil should be neutral and free from any acidic compound. Acidity shall be measured following IEC 62021-1.

Table 2 General Specifications  
(Clauses 4, 5.2, 6)

Sl No.	Property	Test Method	Limits		
			Type I Transformer Oil	Type II Transformer Oil	Low Temperature Switchgear Oil
(1)	(2)	(3)	(4)	(5)	(6)
<b>A Function</b>					
i)	Viscosity at 40°C	IS 1448 (Part 25)	12 mm <sup>2</sup> /s, <i>Max</i>	15mm <sup>2</sup> /s, <i>Max</i>	3.5 mm <sup>2</sup> /s, <i>Max</i>
ii)	Viscosity at 0°C <sup>1)</sup>	IS 1448 (Part 25)	—	1 800 mm <sup>2</sup> /s, <i>Max</i>	—
iii)	Viscosity at -30°C <sup>1)</sup>	IS 1448 (Part 25)	1 800 mm <sup>2</sup> /s, <i>Max</i>	—	—
iv)	Viscosity at -40°C <sup>2)</sup>	IS 16084	—	—	400 mm <sup>2</sup> /s, <i>Max</i>
v)	Pour point	IS 1448 (Part 10/Sec 2)	-40°C, <i>Max</i> To be based on LCSET refer Table 1 <sup>1)</sup>	-10°C, <i>Max</i> To be based on LCSET refer Table 1 <sup>1)</sup>	-60°C <sup>1)</sup> , <i>Max</i>
vi)	Water content	IEC 60814	30 mg/kg <sup>3)</sup> /40 mg/kg <sup>4)</sup> , <i>Max</i>		
vii)	Breakdown voltage	IS 6792	30 kV/70 kV <sup>5)</sup> , <i>Min</i>		
viii)	Density at 20°C	IS 1448 (Part 16)	0.895 g/ml, <i>Max</i>		
ix)	DDF at 90°C	IS 16086	0.005, <i>Max</i>		
x)	Particle content	IS 13236	No general requirement <sup>10)</sup>		
<b>B Refining/stability</b>					
xi)	Appearance	—	Clear, free from sediment and suspended matter		
xii)	Acidity	IEC 62021-1	0.01 mg KOH/g, <i>Max</i>		
xiii)	Interfacial tension	ASTM D971	No general requirement <sup>6)</sup>		
xiv)	Total sulphur content	ISO 14596 or ASTM D4294 <sup>12)</sup>	No general requirement		
xv)	Corrosive sulphur	DIN 51353	Not corrosive		
xvi)	Potentially corrosive sulphur	IS 16310	Not corrosive		
xvii)	DBDS	IS 16497 (Part 1)	Not detectable (< 5 mg/kg)		
xviii)	Inhibitors according to IS 13631/IEC 60666	IS 13631	(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)		
xix)	Metal passivator additives according to IS 13631/IEC 60666	IS 13631	Not detectable (< 5mg/kg), or as agreed upon with the purchaser		

Table 2 — (Concluded)

Sl No.	Property	Test Method	Limits
xx)	Other additives		See <sup>7)</sup>
xxi)	2-Furfural and related compounds content	IS 15668	Not detectable (< 0.05 mg/kg) for each individual compound
<b>C Performance</b>			
xxii)	Oxidation stability	IS 12422 (Method C) Test duration <sup>11)</sup> (U) Uninhibited oil: 164 h (T) Trace inhibited oil: 332 h (I) Inhibited oil: 500 h	For oils with other antioxidant additives and metal passivator Additives (see 6.12)
a)	• Total acidity <sup>2)</sup>	1.9.4 of IS 12422	1.2 mg KOH/g, Max
b)	• Sludge <sup>3)</sup>	1.9.1 of IS 12422	0.8%, Max
c)	• DDF at 90°C <sup>4)</sup>	1.9.6 of IS 12422	0.500 <sup>5)</sup> , Max
xxiii)	Gassing tendency	IEC 60628, Method A	No general requirement <sup>6)</sup>
xxiv)	ECT	See 6.14	No general requirement <sup>6)</sup>
<b>D Health, Safety and Environment (HSE)</b>			
xxv)	Flash point	IS 1448 (Part 21)	135°C, Min      135°C, Min      100°C, Min
xxvi)	PCA content	IP 346	3%, Max
xxvii)	PCB content	IS 16082	Not detectable (< 2 mg/kg)

<sup>1)</sup> This is the standard LCSET for a transformer oil (see 6.1) and can be modified depending on the climatic condition of each region.  
<sup>2)</sup> Pour point should be minimum of 10°C below LCSET.  
<sup>3)</sup> Standard LCSET for low temperature switchgear oil.  
<sup>4)</sup> For bulk supply  
<sup>5)</sup> For delivery in drums and IBC.  
<sup>6)</sup> After laboratory treatment (see 6.4)  
<sup>7)</sup> Where it is used as general requirement, a limit of minimum 40 mN/m is recommended.  
<sup>8)</sup> The supplier shall declare the generic type of all additives and their concentrations in the case of antioxidant additives.  
<sup>9)</sup> To be agreed upon between supplier and purchaser.  
<sup>10)</sup> At the end of oxidation stability tests.  
<sup>11)</sup> Particle content in drums at the delivery of the oil can be agreed between supplier and customer based on a statistical reference at delivery.  
<sup>12)</sup> 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 transformers and bushings.  
<sup>13)</sup> In case of any dispute, ISO 14596 should be used.

### 6.8 Interfacial Tension (IFT)

Low IFT sometimes indicates the presence of polar compounds. IFT shall be measured in accordance with ASTM D971.

### 6.9 Sulphur Content

Different organo-sulphur compounds are present in mineral oils, dependent on the crude oil origin and the degree and type of refining. Refining reduces the content of sulphur and aromatic hydrocarbons. As some sulphur compounds have an affinity to metals, they may act as natural oxidation inhibitors but they may promote corrosion on metallic components in the system.

Sulphur content is a specific requirement of 7.1.

Sulphur content shall be measured following ISO 14596 or ASTM D4294. In case of any dispute, ISO 14596 should be used.

### 6.10 Corrosive Sulphur and Potentially Corrosive Sulphur

Some sulphur compounds, for example mercaptans, are very corrosive to metal surfaces, that is steel, copper and silver (switchgear contacts) and shall not be present in new oil. Corrosive sulphur shall be measured following DIN 51353.

Some other sulphur compounds, for example dibenzyl disulphide (DBDS), may result in the deposition of copper sulphide (Cu<sub>2</sub>S) in paper insulation, reducing its electrical insulation properties (see Annex B). This has resulted in several equipment failures in service.

IS 16310 provides the best currently available method to detect potentially corrosive sulphur compounds in oil. It applies only to oils that do not contain a metal passivator additive (declared or undeclared).

For passivator – containing oils (see B-3).





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IEEMA/PVC/TR-OIL/2011

Effective from: 1<sup>st</sup> July 2011

### PRICE VARIATION CLAUSE FOR TRANSFORMER OIL

The price quoted/confirmed is based on the cost of raw materials/components as on the date of quotation and the same is deemed to be related to prices of TOBS and drum as specified in the price variation clause given below. In case of any variation in these prices, the price payable shall be subject to adjustment up or down, in accordance with the following formula:

$$P = P_0 + 1.2 (TB - TB_0) + 4.8 (D - D_0)$$

Wherein,

P = Price (in Rs/KLtr) payable as adjusted in accordance with the above formula.

P<sub>0</sub> = Price (in Rs/KLtr) quoted/confirmed for transformer oil supplied in drums and confirming to IS:335-1993 and amended from time to time.

TB<sub>0</sub> = Price of TOBS (refer notes).  
This price is as applicable on first working day of the month, ONE month prior to the date of tendering.

D<sub>0</sub> = Price of drums (refer notes).  
This price is as applicable on first working day of the month, ONE month prior to the date of tendering.

For example, if the date of tendering falls in July 2011, the applicable prices of TOBS (TB<sub>0</sub>) and drums (D<sub>0</sub>) should be prevailing as on 1st June 2011.

The above prices are as published by IEEMA vide circular reference number IEEMA(PVC)TR-OIL(R)/\_//\_ prevailing as on first working day of the month ..... i.e., ONE month prior to the date of tendering.

TB = Price of TOBS (refer notes).  
This price is as applicable on first working day of the month, ONE month prior to the date of delivery.

D = Price of drums (refer notes).  
This price is as applicable on first working day of the month, ONE month prior to the date of delivery.

For example, if the date of delivery in terms of clause given below falls in December 2011 the applicable prices for TOBS (TB) and drums (D) should be as published by IEEMA as prevailing on 1st November 2011.

The "date of delivery" is the date on which the Transformer Oil is notified as being ready for inspection/dispatch. (In the absence of such notification the date of manufacturer's dispatch note is to be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever is earlier.

IEEMA/PVC/TR-OIL/2011/1/2

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IEEMA/PVC/TR-OIL/2011

Effective from: 1<sup>st</sup> July 2011

Notes: (a) All prices of raw materials are exclusive of modvatable excise/CV duty amount and exclusive of any other central, state or local taxes. Octroi etc.

(b) All prices are as on first working day of the month.

(c) The details of prices are as under:

1. The price of TOBS considered is the average price (in Rs./KLtr) as quoted by Transformer oil manufacturers (including applicable customs duty, if imported).
2. The price of drum (in Rs) is the ex-works price as quoted by a drum manufacturer for drum of capacity of 210 liters.

  
Authorized Signatory

IEEMA/PVC/TR-OIL/2011/2/1