

**ANDREW YULE & COMPANY LIMITED
(A Government of India Enterprise)
ELECTRICAL DIVISION, SWITCHGEAR UNIT
14, MAYURBHANJ ROAD, KOLKATA - 700023**

**TENDER DOCUMENTS
FOR
REPAIRING OF 25KVA, 63KVA, 100KVA 11000 V / 433 V DISTRIBUTION TRANSFORMERS**

ANDREW YULE & CO. LTD., Electrical Division, Kolkata Operation invites open 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 rectification of 25KVA, 63KVA, 100KVA 11KV/0.433KV Distribution Transformers, the details of which are available in **Annexure-V, "Detailed Scope of Work"** 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.

For further requirement relating to other information about drawing, technical data, please contact the persons as **Annexure - I**

Schedule of Tender

1.	TENDER NO.	AYCL/Electrical Division K0/35/19-20/ET/243
2.	MODE OF TENDER	<p>a) e-Procurement System Online submission of Part I -Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/aycl</p> <p>b) The intending bidders are required to submit their offer electronically through this e-tendering portal. No physical tender is acceptable by AYCL/MSTC</p>
3.	E-Tender No. / Event No.	AYCL/Electrical Division K0/35/19-20/ET/243
4.	Date of publication of e-Tender through publication in MSTC website	10/01/2020
5.	Date of availability of NIT to the Vendors for downloading	10/01/2020
6.	Earnest Money Deposit	<p>a) "Earnest Money Deposit" 1% of the bid value may be paid by Cash Receipt/D.D. favouring Andrew Yule & Co Ltd, payable at Kolkata.</p> <p>b) Others document as described in Annexure I, Sl. No.2</p>
7.	Last date of submission of EMD & other documents to AYCL	24/01/2020
8.	Date & time of opening of Part-II (Price Bid)	Price Bid will be opened after finalization of Techno-Commercial bid. Price bid will be opened for only the techno-commercially qualified bidders. Date & Time of opening of Price Bids will be intimated to the eligible vendor separately by email.

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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, and 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. Bhaskar Bandyopadhyay
Sr. Manager (Materials)
Ph. No: (033) 2449-1601 | 2) Mr. Somnath Majumder
Dy Manager (Materials)
Ph. No.: (033) 2449-1770, 9836530976
Email: majumder.somnath85@gmail.com |
|--|--|

Email: bhaskar.bandopadhyay@andrewyule.com

Contact person (E-Commerce, MSTC Ltd):

Mr. Pritam Biswas, Assistant Manager (ERO)
Mobile- 9903248755, email- pbiswas@mstcindia.co.in

Mr. Mayank Jain, Assistant Manager (ERO)
Mobile- 9721277969, email- mhjain@mstcindia.co.in

Mr. Vikash Kumar Jaiswal, Regional Manager (ERO)
Mobile- 9903042449, email- vikash@mstcindia.co.in

HELP LINE NO. (033) 2290 1004

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 updates 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)

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

Within specified Date & time the vendor must submit the following documents to Sr. Manager (Materials) Electrical Division, Andrew Yule & Co. Ltd., 14, Mayurbhanj Road Kolkata-23. Off-line.

- Earnest Money by Cheque/DD favoring Andrew Yule & Co. Ltd. Payable in Kolkata.
- General information, under Annexure-II complete in all respect along with desired document.
- In case of failure to submit the EMD within the stipulated time, the Tender may be rejected.
- Part-II: Online Bid submission: On the basis of submission of EMD and other Documents at Andrew Yule & Co. Ltd, the list of vendors who will participate in online Techno commercial and price bid submission will be finalized. Only those qualified bidders will be eligible to submit Online Techno-commercial and price bid.

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 Schedule of Tender.
- 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 Andrew Yule and those qualified bidders can only submit their Techno Commercial Bids and Price Bid through internet in MSTC website 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.
- i. During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- j. The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
- k. Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can download Technical Comparative statement.
- l. Price bid will be opened electronically on specified date and time given in the NIT. Bidder(s) can download Price Comparative statement.
- m. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- n. 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**.
- o. It is mandatory that all the bids are submitted with Digital Signature Certificate otherwise the same will not be accepted by the system.
- p. 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.

- q.** 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.
- r.** 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.

General Information

The following are to be submitted to Sr. Manager (Materials), Andrew Yule, Electrical Division, Kolkata Operation, Switchgear Unit, in a sealed envelope.

1. EMD

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

Our Bank details for making RTGS payment.

Bank Name and Address	IDBI BANK, GROUND FLOOR 101, PARK STREET, KOLKATA, WEST BENGAL-700016
IFSC Code	IBKL0000012
Account No	012103000000718
Account Name	ANDREW YULE & COMPANY LIMITED

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

SL NO	TERMS & CONDITIONS	VENDOR RESPONSE
1	The price quoted should be firm & FOR destination to different stores basis, Insurance & Packing will be the scope of vendor. The following costs/charges will be under the scope of vendor: 1)Collection of defective transformer from stores of CESC & transportation of the transformers from stores to the factory of vendor. 2)To undertake repairing work as per the schedule. 3) The repaired transformers are to be transported from vendor's factory to different stores of CESC. The vendor will take the responsibility of stores inspection at different CESC stores.	AGREE
2	GST rate and GST number to be indicated by the bidder.	REMARKS
3	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% subject to force majeure conditions. Please confirm acceptance.	AGREE
4	Guarantee: Material supplied should be guaranteed against all manufacturing defects, poor workmanship, and defective raw material for a minimum period of 3 months from the date of supply. During the period if the product is found defective due to any of the above reason, the bidder shall undertake to make good by replacing/repair with new material at his own cost.	AGREE
5	Payment Terms: 60 days credit from the date of receipt of "accepted challan of respective stores of CESC". How-ever acceptance of any deviation of payment will be at the sole discretion of AYCL & if the deviation is accepted price of bidders who quote other terms will be loaded as per AYCL norms. Any advance payment terms will not be accepted.	REMARKS
6	Risk purchase clause: The company reserves 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
7	Arbitration clause: All disputes relating to this offer or relating to the price of the goods supplied hereunder or otherwise arising between the seller and buyer shall be subject to and referred to the court or competent jurisdiction situated within the limits of the city of Kolkata neither the seller nor the buyer shall take or adopt any legal proceedings to enforce any claim against the order relating to this order or arising there from in any court other than the court of competent jurisdiction within the limit of the city of Kolkata.	AGREE
8	Validity of offer: Offer should be valid for a minimum period of 6 months from bid submission date.	AGREE
9	Validity of price: Your quoted rate & commercial terms should be valid for a minimum period of 12 months from the date of tender opening (Rate Contract).	AGREE

10	Proper loading in the price shall be made by us for important terms e.g. "payment terms" cost of deliver to the destination, GST, others having financial implication.	AGREE
11	EMD to be paid by DD/RTGS within scheduled date. Please mention DD no. or RTGS details in the remarks.	REMARKS
12	EMD to be adjusted against the outstanding dues between the bidder & AYCL. Please write accepted in the remarks field if agreed.	REMARKS
13	EMD to be waived as bidder's turnover more than Rs50crore. Please mention the turnover of last year in the remarks. Also upload supporting document.	REMARKS
14	EMD to be waived as per vendor's attached MSME certificate. Copy of certificate to be attached.	REMARKS
15	AYCL reserves the right to terminate the contract at any time if the bidder fails to deliver the goods within schedule delivery period or major contract terms & conditions are violated by the supplier/bidder.	AGREE
16	Copy of Test certificate must attach with Tax In-voice.	AGREE
17	As per attached Vendor Registration Form, New Vendor has to register with AYCL. However, Existing vendor needs no further registration.	AGREE

Annexure-IV

GENERAL TERMS AND CONDITIONS

1)EMD: By way of Cash Receipt/ Demand Draft drawn in favour of M/S ANDREW YULE & CO.LTD Payable at KOLKATA. Bank Guarantee from any Nationalized / Scheduled / Multinational Bank for the EMD amount can also be accepted.

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.

Bidders who are MSME 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)The new vendor will have to submit the following documents by end of tender submission date.

- a) Duly filled up vendor enlistment Form (Enclosed)
- b) List of Customers

- c) Annual turnover of last three years i.e. 2018-19,2017-18 & 2016-17.
- d) Copy of P/L account of last three years i.e. 2018-19,2017-18 & 2016-17.

For new vendors, vendor enlistment process will be followed by AYCL prior to finalization of techno-commercial bids.

Price bid will be opened for the techno commercially qualified bidders only.

Addendum/amendments/corrigendum

Before the last date of submission of tenders, AYCL may modify any of the contents of the tender notice, tender documents by issuing amendment/addendum/corrigendum. Any addendum/amendments/corrigendum issued by AYCL shall be part of the tender document & it shall be published in the e-procurement portal of [www://mstcecommerce.in](http://www.mstcecommerce.in). However AYCL shall bear no responsibility or liability arising out of non receipt of the same in time or otherwise. Bidders are requested to visit the site frequently to check whether there is any related corrigendum or not.

Annexure-V

DETAILED SCOPE OF WORK

1.00: Scope:

This covers technical assessment and full estimation, activities and works involved in complete repairs, testing and safe delivery of the transformers to the concerned store.

Repairer will have to make their own arrangement for to and fro transportation of men, materials and machines etc. including loading and unloading / lifting / shifting at their own expense under this contract. Repairer will also be responsible for safe keeping of materials at their own cost.

2.00: Repair Work:

The repair work shall involve opening of transformer covers, de-tanking core & coil assembly, cleaning / washing of dust and dirt from all parts including core, tank, radiators etc., replacement of defective / damaged parts, with new ones, re-assembly of transformer, filling oil etc. and making the transformer ready for all routine test.

3.00: Location of different distribution transformers:

i) The defective transformers are lying in different stores of CESC, Karnataka. ii)
The followings are different stores and approximate no. of defective transformers.

a) V V Mohalla,	25KVA – 2
	63KVA – 1
b) Chamrajnagar,	25KVA – 3
	100KVA – 1
c) Kollegala,	25KVA – 1
	100KVA – 5
d) Hasaan,	25KVA – 3
	63KVA – 3
	100KVA – 1
e) H N Pura,	25KVA – 4
f) C R Patna,	25KVA – 1
	100KVA – 2
g) Madekari,	63KVA -- 1
TOTAL	---28 Nos.

4.00: Material:

- a) Transformer Oil – Shall be purchased by the repairer.
- b) Bushing and Metal parts – Shall be procured from reputed firms, conforming to relevant IS.
- c) Winding -- HV / LV defective coil / coils shall be replaced by new coils, corresponding to the original design of the transformer and identical voltage, so that electrical / mechanical characteristics of the repaired transformers shall remain same as that of original transformers.
- d) Sundry Items -- These items and all other small items not covered in price schedule shall be treated as included in the sundry items.
- e) Painting -- All metallic surfaces exposed to weather and requiring paint shall be given suitable primary coat and two coats of finished paint.

5.00: Inspection and testing:

All the tests and inspections shall be conducted at the works of the repairer. Each and every repaired transformer shall be tested for all the routine tests after repairs as per standard.

ASSESSMENT AND ESTIMATES OF THE REPAIRS

1.00: Assessment:

- a) The firm shall make necessary arrangements to lift the transformers immediately on receipt of intimation, but not later than 7 days from the intimation.
- b) The joint inspection shall be carried out at repairer premises where transformers are dismantled. The repairer shall ensure that his engineer is always present for joint inspection. He will also ensure that particulars of coils are mentioned in the report.
- c) On the basis of joint inspection report, a cost estimate for the inspected whole lot shall be prepared by AYCL on the basis of unit rate and it should be countersigned by the repairer.
- d) The joint inspection report shall clearly indicate whether a particular item being provided is against replacement of defective or damaged or missing part / parts.

2.00: Approval:

- a) One copy of approved cost estimate shall be retained by him for his record and second copy shall be attached by him along with the bill after satisfactory repairs and testing to facilitate verification of the bills.
- b) The repairer should ensure that the repairs have been carried out strictly as per estimate and identical original design of the transformers.
- c) Based on approved Cost Estimate, final Purchase Order will be issued to L1 bidder.

Annexure-VII**PRICE SHEET**

a) As per below format: (25, 63, 100KVA)

Sl. No.	Description of Work	Qty	UOM	Unit Rate (Rs.)
	<u>25 KVA- 14 NOS</u>			
1	H V Bushing (each)	1	Nos	
2	L V Bushing (each)	1	Nos	
3	H V Connector (inner connection of H V Bushing) (each)	1	Nos	
4	L V Connector (inner connection of L V Bushing) (each)	1	Nos	
5	HT Gasket (each)	1	Nos	
6	LT Gasket (each)	1	Nos	
7	Top Cover Gasket (each) for 25 kVA DT	1	Nos	
8	Replacement of each L V Coil after deducting salvage value of old coils for 25 kVA DT	1	Nos	
9	Replacement of each H V Coil after deducting salvage value of old coils for 25 kVA DT	1	Nos	
10	Supply of transformer oil for top-up (Rs. Per Litre)	1	Litres	
11	Oil filtering (Rs. Per litre)	1	Litres	
12	Ovening Charges per DT for 25 kVA DT	1	Nos	
13	Testing Charges in-house and customer end, if any per DT for 25 kVA DT	1	Nos	
14	Material handling charges including transport per DT for 25 kVA DT	1	Nos	
15	Labour Charge for total assembly per DT for 25 kVA DT	1	Nos	
16	Painting Charges per DT for 25 kVA DT	1	Nos	
	<u>63 KVA – 5 NOS</u>			
17	H V Bushing (each)	1	Nos	
18	L V Bushing (each)	1	Nos	
19	H V Connector (inner connection of H V Bushing) (each)	1	Nos	
20	L V Connector (inner connection of L V Bushing) (each)	1	Nos	
21	HT Gasket (each)	1	Nos	
22	LT Gasket (each)	1	Nos	
23	Top Cover Gasket (each) for 63 kVA DT	1	Nos	
24	Replacement of each L V Coil after deducting salvage value of old coils for 63 kVA DT	1	Nos	
25	Replacement of each H V Coil after deducting salvage value of old coils for 63 kVA DT	1	Nos	
26	Supply of transformer oil for top-up (Rs. Per Litre)	1	Litres	

27	Oil filtering (Rs. Per litre)	1	Litres	
28	Ovening Charges per DT for 63 kVA DT	1	Nos	
29	Testing Charges in-house and customer end, if any per DT for 63 kVA DT	1	Nos	
30	Material handling charges including transport per DT for 63 kVA DT	1	Nos	
31	Labour Charge for total assembly per DT for 63 kVA DT	1	Nos	
32	Painting Charges per DT for 63 kVA DT	1	Nos	
	<u>100 KVA – 9 NOS</u>			
33	H V Bushing (each)	1	Nos	
34	L V Bushing (each)	1	Nos	
35	H V Connector (inner connection of H V Bushing) (each)	1	Nos	
36	L V Connector (inner connection of L V Bushing) (each)	1	Nos	
37	HT Gasket (each)	1	Nos	
38	LT Gasket (each)	1	Nos	
39	Top Cover Gasket (each) for 100 kVA DT	1	Nos	
40	Replacement of each L V Coil after deducting salvage value of old coils for 100 kVA DT	1	Nos	
41	Replacement of each H V Coil after deducting salvage value of old coils for 100 kVA DT	1	Nos	
42	Supply of transformer oil for top-up (Rs. Per Litre)	1	Litres	
43	Oil filtering (Rs. Per litre)	1	Litres	
44	Ovening Charges per DT for 100 kVA DT	1	Nos	
45	Testing Charges in-house and customer end, if any per DT for 100 kVA DT	1	Nos	
46	Material handling charges including transport per DT for 100 kVA DT	1	Nos	
47	Labour Charge for total assembly per DT for 100 kVA DT	1	Nos	
48	Painting Charges per DT for 100 kVA DT	1	Nos	

- b) L1 will be evaluated based on summation of cost of 16 items from SI No 1 to 16 for 25KVA distribution transformer repairing. Similarly, for 63KVA transformer repairing, L1 will be determined on the basis of summation of cost of items from SI no 17 to 32. Also for 100KVA transformer repairing, L1 will be determined based on summation of cost of items from SI No 33 to 48. To & fro transportation cost will be taken into account for determination of L1 for repairing of 25KVA, 63KVA & 100KVA transformers respectively. After L1 determination, the transformers will be taken by the L1 bidder at their cost from the different stores of CESC & the transformers will be accumulated at their factory for joint inspection.
- c) For each item, unit quantity is mentioned. Total quantity of defective transformers =28 nos. Therefore, actual item wise quantity requirement shall be ascertained only after joint inspection of all the defective 28 nos transformers in presence of AYCL representative.

Annexure-VIII

DRAWINGS AS REFERENCE FOR QUOTING

4	3	2	1
DRG NO: AY011303 043 00		MATL: PORCELAIN AS PER:	
FINISHED WT=		FINISH: DEP. μ	
ASSY DRG NO:			

TENDER PURPOSE ONLY

AS PER IS : 3347 - 1979
QTY. - 4 NOS. / TR.

CODE NO. - 0236046

SL.NO.	DRG.NO.	DESCRIPTION	A	B	C
			QUANTITY		
THIS DRAWING IS CONFIDENTIAL AND IS THE PROPERTY OF ANDREW YULE & CO.,LTD. IT MUST NOT BE DISCLOSED TO A THIRD PARTY, COPIED OR LENT WITHOUT THE WRITTEN CONSENT OF ANDREW YULE & CO., LTD.					
		 ANDREW YULE AND CO., LTD. SWITCHGEAR UNIT ELECTRICAL DIVISION			
		25 KVA TRF.	BUSHING PORCELAIN LV FOR 25 KVA TRF.		
MOD.	QTY.	ZONE	INITIALS	DATE	
APPROVED			AC	10.08.13	
CHECKED			AD	10.08.13	
DRAWN			GDG	10.08.13	
GEN.TOLERANCE		3RD ANGLE PROJECTION		DRG NO	
ALL DIM. IN mm				AY011303 043 00	
		NO. OF SHEETS 2		SHEET NO. 1	
				SCALE:-	


4	3	2	1
DRG NO: S-16-DT-OP-167 00		MATL: AS PER:	
FINISHED WT=		FINISH: DEP. μ	
ASSY DRG NO:			


SL.NO.	DRG.NO.	DESCRIPTION	A	B	C
			QUANTITY		
THIS DRAWING IS CONFIDENTIAL AND IS THE PROPERTY OF ANDREW YULE & CO.,LTD. IT MUST NOT BE DISCLOSED TO A THIRD PARTY, COPIED OR LENT WITHOUT THE WRITTEN CONSENT OF ANDREW YULE & CO., LTD.					
			ANDREW YULE AND CO., LTD. SWITCHGEAR UNIT ELECTRICAL DIVISION		
		16 KVA TRF.	CONNECTOR FOR LV BUSHING FOR 16 KVA TRF.		
MOD.	QTY.	ZONE	INITIALS	DATE	
APPROVED			AC	24.09.15	
CHECKED			AD	24.09.15	
DRAWN			GDG	24.09.15	
GEN.TOLLERENCE		3RD ANGLE PROJECTION		DRG NO S-16-DT-OP-167 00	
ALL DIM. IN mm					
		NO. OF SHEETS 05		SHEET NO. 01	

SCALE:-

4	3	2	1
00 891-10-91-DT-OP-168 00		AS PER:	
FINISHED WT=		DEPN. μ	
ASSY DRG NO:			

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A	B	C																					
QUANTITY																							
<p style="font-size: small;">THIS DRAWING IS CONFIDENTIAL AND IS THE PROPERTY OF ANDREW YULE & CO.,LTD. IT MUST NOT BE DISCLOSED TO A THIRD PARTY, COPIED OR LENT WITHOUT THE WRITTEN CONSENT OF ANDREW YULE & CO., LTD.</p>																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">MOD.</td> <td style="width: 15%;">QTY.</td> <td style="width: 15%;">ZONE</td> <td style="width: 15%;">INITIALS</td> <td style="width: 40%;">DATE</td> </tr> <tr> <td>APPROVED</td> <td></td> <td></td> <td>AC</td> <td>24.09.15</td> </tr> <tr> <td>CHECKED</td> <td></td> <td></td> <td>AD</td> <td>24.09.15</td> </tr> <tr> <td>DRAWN</td> <td></td> <td></td> <td>GDG</td> <td>24.09.15</td> </tr> </table>		MOD.	QTY.	ZONE	INITIALS	DATE	APPROVED			AC	24.09.15	CHECKED			AD	24.09.15	DRAWN			GDG	24.09.15	<div style="text-align: center;"> <p>ANDREW YULE AND CO., LTD. SWITCHGEAR UNIT ELECTRICAL DIVISION</p> </div>	
MOD.	QTY.	ZONE	INITIALS	DATE																			
APPROVED			AC	24.09.15																			
CHECKED			AD	24.09.15																			
DRAWN			GDG	24.09.15																			
<p style="font-size: small;">GEN.TOLERANCE</p> <p style="text-align: center;">ALL DIM. IN mm</p>		<p style="font-size: small;">3RD ANGLE PROJECTION</p>																					
<p style="font-size: small;">16 KVA TRF.</p>		<p style="font-size: small;">CONNECTOR FOR HV BUSHING FOR 16 KVA TRF.</p>																					
<p style="font-size: small;">DRG NO</p> <p style="font-size: large; font-weight: bold;">S-16-DT-OP-168 00</p>		<p style="font-size: small;">SCALE:-</p>																					
<p style="font-size: small;">NO. OF SHEETS 04</p>		<p style="font-size: small;">SHEET NO. 01</p>																					

WINDING SHEET DETAILS									
					SHEET 1 OF 2				
					REV 0				
JOB NO : 60036/TRF		QTY.: 1	REF : - DT/025		ONAN 11/0.433/T1				
KVA : 25	INPUT / OUTPUT	11000 / 433	PHASE 3	FREQ : 50 Hz					
			SECTION NO :- 1						
NO. OF PHASE.		3							
CONNECTION.		STAR							
PHASE VOLTS.		433							
WINDING TYPE.		LAYER WOUND;							
WINDING SENSE.		NORMAL (AS PER SINGLE COIL CONSTRUCTION) ;							
COIL NO.		1							
DISC. NO.		N.A							
TURNS / COIL.		TOTAL TURNS = 148 ; 1 COIL ----> 148 T/COIL ;							
TURNS / LAYER OR DISC.		(4 L X 37 T/L) -->PLAIN COIL							
BARE ALU. STRIP. SIZE.		8.95 mm X 3.65 mm							
COND. INS. & INSULATED SIZE.		0.40 D.P.C ; 9.35 X 4.05							
COND. ARRANGEMENT.		1W X 1 D							
INTER LAYER INSULATION.		5 MIL KRAFT PAPER BET. LAYERS							
INTER LAYER DUCT.		3 MM(T) X 10 MM (W) X 362 MM(L) BETWEEN 2ND & 3RD LAYER							
WINDING LENGTH		359 / COIL ;							
EP.		2X 3 MM							
IP.		N.A							
CRT.		N.A							
TRANSPPOSITION DETAILS.		N.A							
AXIAL LENGTH.		365 MM							
RADIAL DEPTH.		30.00							
ID. & OD.		91 MM & 132 MM							
INS. ALU. WT. (Kg.)		3 x 4.7 KG							
NO. OF LEAD X LENGTH.		As per requirement.							
NOTE		Winding Direction (For front Bobin M/C) : R-L							
		Use proper fevicol adhesive & make the coil as solid as tight as possible.							
1. ALL DIMENSIONS ARE IN m.m. UNLESS OTHERWISE SPECIFIED									
2. REFER SHEET NO. 2 FOR SECTION 2									
3. INSULATE LEAD WITH 2.5 mill Kraft paper at least 3 layers & Cotton Tape									
4. Foundation Paper 10 mill retained with the coil.									
SL. NO.		REVISION		BY		DATE		ANDREW YULE & CO. LTD. ELECTRICAL DIVISION KOLKATA 700023	
							TITLE: Winding Sheet Details		
PREPARED BY		REVISION		BY		DATE	FILE	SCALE	
CHECKED BY				THIS DRAWING IS STRICTLY CONFIDENTIAL. IT IS THE EXCLUSIVE PROPERTY OF ANDREW YULE & CO. LTD. & MUST NOT BE COPIED OR REPRODUCED IN PART OR WHOLE WITHOUT COMPANY'S WRITTEN PERMISSION.		A4			
APPROVED BY									

(WINDING SHEET DETAILS)										SHEET 2 OF 2 REV 0
JOB NO :	60036/TRF	QTY	1	REF :-	DT	025	ONAN	11	0.433	T1
KVA :	25	INPUT / OUTP	11000 / 433	PHASE	3	FREQ :	50Hz			
SECTION NO :- 2										
NO. OF PHASE.	3									
CONNECTION.	DELTA									
PHASE VOLTS.	11000 ;									
WINDING TYPE.	CROSS - OVER ;									
WINDING SENSE.	NORMAL (AS PER SINGLE COIL CONSTRUCTION) ;									
COIL NO.	2, 3 ,									
DISC. NO.	N/A									
URNS / COIL.	TOTAL TURS = 6512 ; 2 COILS --> 3256 T/COIL ;									
URNS / LAYER OR DISC.	(25 L X 130.5 T/L) --> PLAIN COIL									
BARE ALU. COND. SIZE.	1.00 mm DIA									
COND. INS. & INSULATED SIZE.	0.23 mm DPC ; 1.23 mm DIA									
COND. ARRANGEMENT.	N/A									
INTER LAYER INSULATION.	3 MILEPOXY DOTTED KRAFT PAPER BET. ALL LAYERS ;									
INTER LAYER DUCT.	3 MM (T) X 163.5 MM (L) DUCT STRIP BETWEEN 12TH & 13TH LAYER- 20 NOS/CIRCLE									
WINDING LENGTH	75.0 / COIL									
EP.	N/A									
IP.	N/A									
CRT.	N/A									
TRANSPOSITION DETAILS.	N/A									
AXIAL LENGTH.	(2X164 MM) + 10 MM X 1 = 338 mm / 335 mm (SHRUNK) ;									
RADIAL DEPTH.	36 mm									
ID. & OD.	153 mm & 225 mm									
INS. ALU. WT. (Kg.)	3 x 9									
NO. OF LEAD X LENGTH.	As per requirement.									
NOTE	<p>Winding Direction (For front bobbin M/c) : R-L</p> <p>Coils to be varnished at last layers having good adhesion, binding properties</p> <p>Use sufficient Fevicol Adhesive & make the coil as solid & as rigid as possible</p> <p>1. ALL DIMENSIONS ARE IN m.m. UNLESS OTHERWISE SPECIFIED</p> <p>2. REFER SHEET NO. 1 FOR SECTION 1</p> <p>3. INSULATE ALL STARTING LEAD WITH radially 1.5 mm Kraft paper & then cover with 11 KV grade Glass sleeveings.</p> <p>4. Make the coils by highly skilled & experienced Technicians</p>									
 ANDREW YULE & CO. LTD ELECTRICAL DIVISION KOLKATA - 700083		NAME		DATE						
		PREPARED BY		A. Metya						
		CHECKED BY		A. Dutta						
		APPROVED BY		A.C						
TITLE : WINDING SHEET DETAILS										
SL. NO.	REVISION	BY	DATE	FILE	SCALE					
					DRAWING NO. A4-WS-25-OPTCL					
THIS DRAWING IS STRICTLY CONFIDENTIAL. IT IS THE EXCLUSIVE PROPERTY OF ANDREW YULE & CO. LTD. & MUST NOT BE COPIED OR REPRODUCED IN PART OR WHOLE WITHOUT COMPANY'S WRITTEN PERMISSION.					A4					

WINDING SPECIFICATION FOR * 63KVA DISTRIBUTION TRANSFORMER
AGAINST BESCOM SPEC.**

VOL. RATIO : 110000/433	PHASE : THREE	TYPE : HV- O/D, BARE BUSHING	WOUND : DW (AL.)
VECTOR GROUP : DYN-11	RISE : 35/ 40 ° C	TAPS : NIL	COOLING : ONAN

S L	DESCRIPTION	L.V WINDING	H.V WINDING
01	URNS PER PHASE	96	4224
02	URNS PER COIL	96	1056
03	COILS PER LIMB	01	04
04	URNS PER LAYER	48	56
05	NO. OF LAYERS	02	19
06	CONDUCTOR (BARE)	2 (9.60 MMX 4.95 MM) DPC	1.73 MM DIA DPC
07	CONDUCTOR (COV.)	2(9.95 MM X 5.30 MM)	1.98 MM DIA
08	INTER LAYER INSULATION	7 MILL. KRAFT PAPER	3 MILL. EPOXY DOTTED KRAFT PAPER
09	AXIAL LENGTH	493 + 11 (T) / 510 MM	115.5 MM / 480 MM (SHRUNK)
10	INSIDE DIAMETER	112 MM	177 MM
11	OUTSIDE DIAMETER	155 MM	255 MM
12	RESISTANCE PER PH AT 75 °C	15.111 milli Ω	42.396 Ω
13	INSULATED WEIGHT	32 KG.	57 KG
14	COIL TO COIL CLEARANCE	N/A	6.4 MM
15	END CLEARANCE	10 MM	25 MM
15	CONNECTION	STAR	DELTA
17	WINDING DIRECTION(FOR FRONT FEED M/C)	R-L	R-L
18	SPACERS PER CIRCLE	6	6

PERFORMANCE FIGURES :

LOAD LOSS : 840 WATT (GUARANTED)	% Z : 4.5% +/- 10% TOL.
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TANK DETAILS :

TANK : 855 MM (L) X 340 MM (W) X 870 MM (H)	WT OF TANK & FITTINGS : 150 KG	RADIATOR: 600 X 226 X 4 F – 2 NOS. ON H.V SIDE
TRANSFORMER OIL : 170 LTR	TOTAL WEIGHT OF TRANSFORMER : 570 KG	OVER ALL : 1060 MM (L) X 910 MM (W) X 1320 MM (H)

VOL. RATIO : 110000/433	PHASE : THREE	TYPE : O/D BUSHING	WOUND : DW(AL.)
VECTOR GROUP : DYN-11	RISE : 35/40 DEG. C	TAPS : NIL	COOLING : ONAN

WINDING SPECIFICATION FOR * 100 KVA DISTRIBUTION TRANSFORMER(BESCOM)**

PERFORMANCE FIGURES :- :

LOAD LOSS :1200 W (C) / 1224W(G) :	% Z : 4.40 (C) / 4.50 +/-10% TOL.(G)
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SL	DESCRIPTION	L.V WINDING	H.V WINDING
01	URNS PER PHASE	73	3212
02	URNS PER COIL	73	803
03	COILS PER LIMB	01	04
04	URNS PER LAYER	36.5	47.3
05	NO. OF LAYERS	02	17
06	CONDUCTOR SIZE (BARE)	2(12.70 MM X 5.20MM)	2.11 MM DIA
07.	INSULATION	0.3 MM DPC	0.23 MM DPC
08	CONDUCTOR SIZE (COVERED)	2(13.0 MMX 5.50 MM)	2.34 MM DIA
09.	CONDUCTOR PLACEMENT	1W X 2D	SINGLE
07	INTER LAYER INSULATION	10 MIL KRAFT PAPER	2X2.5 MILL E.D KRAFT PAPER
08	AXIAL LENGTH	492 MM / 499 MM	114 MM (470 MM SHRUNK)
09	INSIDE DIAMETER	124.5 MM	190 MM
10	OUTSIDE DIAMETER	169.5 MM	270 MM
11	RESISTANCE PER PH AT 75 - C	8.989 milli Ω	22.957 Ω
12	WEIGHT (BARE/ COVERED)	35.8 KG/ 38.0 KG	64.74 KG / 70 KG
13	CLEARANCE BETWEEN COILS	N/A	6.4 MM
14.	END CLEARANCE	10.5 MM	25 MM
15.	TYPE OF COIL	LAYER WOUND	CROSS OVER
16.	CONNECTION	STAR	DELTA
17.	I ² R LOSS AT 75 - C & EDDY LOSS	499 WATT	637 WATT
18.	STRAY LOSS	64 WATT	

TANK DETAILS :-

TANK : 900MMX355 MM X 900/910 MM	CONSERVATOR : 200 MM DIA X 620 MM (L)	RAD. : 600X226X3 FINS- 4 NOS.
HT BUSHING MOUNTED : ON SIDE WALL	VOL. OF OIL : 215 LTR	RAD. POS. – 2 NOS ON LT SIDE & 2 NOS. ON HT SIDE
LT BUSHING MOUNTED : ON SIDE WALL	WT. OF TANK WITH RAD. :180 KG	TOTAL WT. OF TRANSFORMER : 720 KG.

ANDREW YULE & COMPANY LIMITED
NAME OF THE UNIT.....

Application for Enlistment Form

The application form should be submitted along with the registration fee of Rs.100/- (Rupees Hundred) only by crossed Postal Order/Bank Draft No..... dated..... in favour of Andrew Yule & Company Ltd.

- 1) Date of Advertisement for Registration :
- 2) Name of the Firm in Full :
- 3) Address of the Firm :
 - a)
 - b)
 - c)
 - d)
 - e)
- 4) Telephone/Telegram/Fax No./E-mail :
 - a)
 - b)
 - c)
 - d)
 - e)
- 5) Status of the Organization :
- 6) Whether Manufacturer/Contractor/Fabricator/Sub-Contractor/Stockist/Agent/Dealer :
- 7) Item for which enlistment is sought :
- 8) Banker's Name :
 - a)
 - b)
 - c)

Note: *Confidential Report of financial position will be requested for by AY & Co. Ltd from the Bankers*

- 9) Trade License No. :
(Please attach a Xerox copy)
- 10) Factory License No. :
(Please attach a Xerox copy)
- 11) Whether registered as an SSI Unit. :
If yes, Registration No.
(Please attach a Xerox copy)
- 12) Sales Tax Registration No. :
a)
b)
(Please attach a Xerox copy of Registration :
Certificate)
- 13) I.T. Permanent Account No. :
- 14) Photo copies of current I.T. & Tax clearance :
Certificates are to be attached
- 15) Whether the applicant is already enlisted in this :
enterprise. If so, the details are to be furnished
stating the types of jobs executed, etc. i.e.

(a) Description of the job (b) Year (c) Amount & :
(d) Authorized by
- 16) Whether the applicant is enlisted with any other :
Public Sector Undertaking/other reputed
manufacturers.
If so, the details are to be furnished
- 17) Financial Capacity (Year) :
a)
b)
(Copies of Balance Sheet & Profit & Loss A/c for :
last 3 years should be attached)
- 18) Technical capacity :
(i)
(ii)

- 19) Manpower on Rolls :
Total Manpower in Roll:
a)
b)
c)
d)
e)
- 20) Name & Residential address of :
Partners/Directors/Proprietors, as the case may
be
- 21) Whether any Govt. Servant(s) or dismissed :
Employee(s) of Andrew Yule & Co. Ltd/any other
Govt. Undertaking is in employment under the
applicant
- 22) Whether the applicant or any of its :
Partners/Directors has been banned or removed
from the approved list of suppliers by the
Enterprise or Undertaking/any other Enterprise
or Undertaking in the past

I/We hereby certify that the particulars furnished by me/us above are true to the best of my/our knowledge and belief and misrepresentations of facts will render me/us liable to any action as may be deemed fit by Andrew Yule & Co. Ltd.....Unit/Division have the sole discretion to reject or accept my/our candidature for enlistment.

Place:

(Signature of the Applicant)
Office Stamp/Seal

Date:

FOR OFFICE USE ONLY

- (a) Technical assessment of capabilities to perform as per Units's /Divisions's requirements.
(To be done and signed by Technical Dept.)
- (b) Financial Strength analysis to be made and signed by Finance.
- (c) Comments to Banker's Confidential Report to be made and signed by Finance (to be attached)
- (d) Purchase Dept's Recommendation (to be made by Purchase Dept.)
- (e) Tender Committee's comments for approval.

Sd/-

(Signature of the members of
Tender Committee)

TO BE ALLOTTED BY PURCHASE DEPT.

Reg.....

Folio Ref. No.....

Enlistment Register