Maharashtra State Electricity Distribution Co. Ltd.

Tender Details	19-05-2025 06:34:33
Tender Code	MMD/T-HTM1-07/0525
Tender Type	Procurement Tender
Type Of Bid	Two Bid
Description	Procurement of 11/0.433 kV and 22/0.433 kV 315 KVA and 630 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer and 22/0.433 kV 1000 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer with OLTC
Estimated Cost (In Lakhs)	2376
Basis of prices	Firm Price Basis
Tender Validity	120
Delivery Requirement (In Months)	6
Tender on rate contract basis	NO
Tender Fee (In INR)	25000
GST In INR (@18% on Tender Fee: SAC No.	4500
Total Tender Fee Amount including GST in INR.	29500
Contact	Kirankumar Shinde , 7045791361 ,cemmcmsedcl@gmail.com
Pre-Qualifying Req	As per tender.
Budget Type	NA
Scheme Code	null
Scheme Name	
Department	Material Management Cell
Office Type	HO
Location Type	Corporate Office
Designation	Executive Engineer(Distribution)
Pre-Bid Meeting Address	THE CHIEF ENGINEER Maharashtra State Electricity Distribution Co. Ltd. Material Management Department, Plot No. G-9, “Prakashgad” First floor, Prof. A. K. Marg, Bandra(E), Mumbai–400051.
Bid Opening Address	THE CHIEF ENGINEER Maharashtra State Electricity Distribution Co. Ltd. Material Management Department, Plot No. G-9, “Prakashgad” First floor, Prof. A. K. Marg, Bandra(E), Mumbai–400051.
Version No	1
Call for Deviation	YES
Is Annexure C1 Applicable	YES
Is Manufacturer Applicable	YES
Is Trader Applicable	NO
Minimum % of Offered Quantity	20
Is Power Supplier Applicable	NO
Tender Sale Start Date	19-05-2025 19:00
Tender Sale End Date	09-06-2025 12:00
Bid Start Date	19-05-2025 19:10
Bid End Date	09-06-2025 15:00
Pre-Bid Meeting Date	26-05-2025 16:00
Techno-Commercial Bid opening on	09-06-2025 15:30
Price Bid opening on	Will be declared later
Annexure C1 Opening Date	Will be declared later
Winner Selection Date	19-05-2025 17:35
Can Bidder opt for EMD Exemption	YES
Is Annexure-E [Consent for MSEDCL Standard Technical Specifications and GTP] Applicable ?	NO

==========

MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.

MATERIAL MANAGEMENT DEPARTMENT
MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.
Tender No. MMD/T-HTM1-07/0525

TENDER BID NOTICE

The Chief Engineer, Material Management Department (MMD), on behalf of Maharashtra State Electricity Distribution Company Limited (the Purchaser), hereby invites sealed bids from eligible bidders for procurement of 11/0.433 kV and 22/0.433 kV 315 KVA and 630 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer and 22/0.433 kV 1000 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer with OLTC. Entire bidding document is available online on https://etender.mahadiscom.in/eatApp/ as per date indicated below. Any changes in the Bid Schedule, corrigendum etc. shall also be notified via MSEDCL's website. Prospective bidders are therefore requested to regularly check the website for any updates.

Tender No. MMD/T-HTM1-07/0525

Estimated Tender Cost: Rs. 23.76 Crore inclusive of 18% GST.

Tender Fee: Rs. 25,000.00 + 18% GST

The bidder should submit non-refundable Bid Fee of Rs. 25,000.00 + 18% GST paid through online payment only, prior to the dead line for submission of bids as per the procedure laid by the MSEDCL.

Earnest Money Deposit: The bid must be accompanied with EMD @ 0.5% (Half Percent) of estimated cost of the offered item of the tender in the form of BG as per the Annexure–M enclosed with tender documents having validity of 120 days from opening of tender. Interest shall not be allowed on EMD.

The scanned copy of the online payment receipt / Demand Drafts / BG should be uploaded (in e-tendering) and the Demand Drafts/BGs should be submitted to this office on or before submission date and time.

Calendar of Events Event	Date and Time
Begin Sale of Bid Document	19.05.2025
Date and time of submission of Bids	09.06.2025 at 15:00 hrs.
Date and time of Bid Opening	09.06.2025 at 15:30 hrs.
Date and time of Pre bid meeting	26.05.2025 at 16:00 hrs. Google Meet joining info https://meet.google.com/kfo-uraj-cvb

THE CHIEF ENGINEER
Maharashtra State Electricity Distribution Co. Ltd.
Material Management Department,
Plot No. G-9, "Prakashgad" First floor, Prof. A. K. Marg,
Bandra(E), Mumbai–400051.
E-mail- cemmcmsedcl@mahadiscom.in, cemmcmsedcl@gmail.com

==========

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.

TENDER FOR

Procurement of

11/0.433 kV and 22/0.433 kV 315 KVA and 630 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer and

22/0.433 kV 1000 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer with OLTC

Tender No: MMD/T-HTM1-07/0525

OFFICE OF THE CHIEF ENGINEER,
Maharashtra State Electricity Distribution Co. Ltd.
Material Management Department,
Plot No. G-9, "Prakashgad" First floor, Prof. A. K. Marg,
Bandra (E), Mumbai – 400 051.
E-mail- cemmcmsedcl@mahadiscom.in, cemmcmsedcl@gmail.com

==========

INDEX

==========

SR. NO.	CLAUSE NO.	DESCRIPTION
46	3	MATERIAL AND COMPONENTS
47	4	ACCEPTANCE OF SUPPLIES/INSPECTION
48	5	RIGHT TO CARRY OUT INSPECTION DURING MANUFACTURING
49	6	RIGHT TO REVISE DESPATCH INSTRUCTIONS, DELIVERY SCHEDULE AND TO DEFER SUPPLIES
50	7	WAGAN LOADS/TRUCK LOADS
51	8	ROAD TRANSPORT
52	9	DESPATCH INTIMATION
53	10	BILL OF MATERIALS
54	11	PACKING LIST
55	12	REPLACEMENT OF GOODS LOST, BROKEN OR DAMAGED
56	13	REPLACEMENT OF REJECTED MATERIALS
57	14	MATERIAL DESPATCHED AND PROGRAMME
58	15	MATERIAL RECEIPT & SUBMISSION OF BILLS AT CONSIGNEE
59	16	PAYMENT OF BILLS
60	17	TAXES
61	18	DEDUCTION
62	19	GUARANTEE
63	20	(I)LIFTING OF REJECTED/DAMAGED MATERIALS FROM STORES AND (II)LIFTING OF FAILED TRANSFORMERS FROM DIVISION FILTER UNIT
64	21	LIQUIDATED DAMAGES FOR LATE DELIVERY
65	22	ORDER PLACED ON TIME PREFERENCE BASIS (WHEREVER APPLICABLE)
66	23	FORCE MAJEURE CLAUSE
67	24	ACCEPTANCE OF LOWER FORD RATE OFFERED IN SUBSEQUENT TENDER
68	25	PERFORMANCE OF CONTRACT:
69	26	CONTRACT PERFORMANCE DEPOSIT
70	27	POWER OF ATTORNEY:
71	28	SETTLEMENT OF DISPUTE
72	29	JURISDICTION:
73	30	TERMINATION OF CONTRACT
74	31	DEBAR / BLACKLISTING OF MANUFACTURER
75	32	TAX DEDUCTED AT SOURCE
76		**Section III:**
77	I	QUANTITY PROCUREMENT
78	II	QUALIFYING REQUIREMENT
79		**Formats:**
80	-	ANNEXURE B- QUANTITY, PRICE AND DELIVERY PERIOD
81	-	ANNEXURE C-1 : MATCHING RATE
82	-	ANNEXURE – D : TECHNICAL SPECIFICATION
83		ANNEXURE – E : CONSENT FOR PARTICIPATION IN TENDER AS NEW SUPPLIER
84		ANNEXURE – F : LEGAL LITIGATION UNDERTAKING BY BIDDER
85	-	ANNEXURE – G :PRICE VARIATION
86	-	ANNEXURE – H :GUARANTEED TECHNICAL PARTICULAR
87		ANNEXURE – I: DECLARATION FORMAT.
88	-	ANNEXURE – J : DISPATCH INSTRUCTIONS
89	-	ANNEXURE – K : LIST OF STORES
90		ANNEXURE – L : INSPECTION CALL FORMAT
91	-	ANNEXURE – M : BANK GUARANTEE FORMAT FOR EMD
92	-	ANNEXURE – N : BANK GUARANTEE FORMAT FOR CONTRACT PERFORMANCE DEPOSIT

SR. NO.	CLAUSE NO.	DESCRIPTION
93	-	SCHEDULE- C
94		FORMAT-1 : ANNEXURE – U-I - INDEMNITY BOND
95		FORMAT-2 : UNDERTAKING FOR NOT APPROACHED ANY ONE FOR UNDUE INFLUENCE
96		FORMAT-3 : CERTIFICATE FROM CHARTERED ACCOUNTEANT FOR NOT HAVE CONTROLLING STACK IN MORE THAN ONE ENTITY APPLIED FOR THE TENDER / BID
97		FORMAT-4 : CERTIFICATE FROM CHARTERED ACCOUNTANT FOR AVERAGE ANNUAL TURNOVER
98		FORMAT-5 : CERTIFICATE FOR NO DEVIATION

==========

SECTION-I

INVITATION TO TENDER AND INSTRUCTION TO BIDDERS

TENDER FORM (NOT TRANSFERABLE)

(TO BE SUBMITTED ONLINE DULY FILLED IN AND DIGITALLY SIGNED)

To be submitted online not later than the date mentioned in the tender details. For participating in tender opening, the bidder can login at the specified time and date of opening of the tender, if he desires so.

The bidder is requested to quote his lowest rates F.O.R. destination for the supply of materials. The material is required at various places in the State of Maharashtra. The tender documents duly filled-in and digitally signed, are to be submitted online before due time & date of the submission of tender in prescribed form.

The modifications made to the terms & conditions shall applicable to this tender only.

FOR CHIEF ENGINEER (M.M.DEPARTMENT)

==========

INSTRUCTIONS TO THE BIDDERS

I SCOPE OF WORK:

The scope of work under this tender is for design, engineering (wherever applicable), manufacture, inspection & testing before dispatch, packing and supply of material / equipment as specified in Annexure-D (Technical Specifications) at various destination sites / stores centers of the purchaser in Maharashtra.

The actual quantity that will be procured may vary depending upon the site requirement. The quantity advertised against various capacities can undergo change.

The list of various destination sites / stores centers of the purchaser is enclosed as Annexure K.

II Qualifying Requirements:

Qualifying requirement will be as per Section-III.

III PRICES:

(i) Prices are acceptable only on F.O.R. destination basis inclusive of Goods and Service Tax (GST for brevity) i.e. Integrated GST (IGST) for outside State / Central GST+ State GST (CGST+SGST) for within State, risk in transit, freight showing the break-up as desired in the Annexure 'B'. It shall be noted that quotations not conforming to F.O.R. destination basis inclusive of IGST/(CGST+SGST) etc. and to the unit as specified in Annexure 'B', shall be rejected even though the bidder's offer may be lowest. The bidder shall quote Ex-Works Price and element of freight and insurance along with applicable rate of IGST/(CGST+SGST). The F.O.R. destination price i.e. up to site or the Store Centre of the purchaser as the case may be inclusive of IGST/(CGST+SGST), risk in transit and freight will be programmatically calculated. While raising the invoices, however, IGST/(CGST+SGST) should be shown separately in the invoice raised.

(ii) For each of the items quoted, bidder shall specify offered quantity. However, the offered quantity shall not be less than 20% of the advertised quantity (Advertised quantity means the quantity required as indicated in Annexure 'B' / Price Bid) so as to deliver the said quantity within the delivery requirement of the Purchaser as indicated in the tender documents.

IV TAXES:

(i) The Purchaser shall be registered under Goods and Service Tax Act and should comply with all the statutory compliance requirements of GST Law diligently.

(ii) It is imperative for the bidder to indicate the amount of IGST/(CGST+SGST) included in their price while giving the break-up of F.O.R. destination price in Annexure 'B', failing which, the offer will be treated as ambiguous and will be rejected as per the provisions of clause X of tender form.

(iii) After awarding the contract, the supplier shall not charge any additional amount towards GST; during the currency of contract except statutory variation by Central / State Government in normal (full) rate of integrated GST. In case the GST is decreased than the rate indicated in the price bid, the benefits of the

reduction in the GST shall be passed on to the purchaser. The increase in the GST rate due to increase in turnover during the contractual delivery period shall not be charged to the purchaser.

(iv) Necessary documentary evidence for the GST claimed shall be submitted along with the bills.

V BASIS OF PRICES:

The bidder shall quote the prices on firm price basis, as has been specifically brought out in the Tender Details. For any deviation in this regard, the offer shall be summarily rejected.

VI PRICE VARIATION:

Not applicable.

VII DELIVERY:

(i) Bidder is requested to quote delivery F.O.R. DESTINATION only & only in the unit of the item specified in Annexure 'B' i.e. if the quantity is in sets or in tones or in numbers or in kilometers or in coils, the rate of delivery shall only be in the same unit.

(ii) It is mandatory on the part of the tenderer to quote the delivery on monthly basis. If the offered delivery is indicated on quarterly basis, then the delivery would be counted proportionately in three equal installments per month for liabilities of the contract including levy of liquidated damages.

(iii) Size mix for the purpose of delivery, when delivery is quoted in assorted items, shall be determined by the Purchaser while issuing the A/T or dispatch instructions and will be binding on the bidder. The Purchaser will also have the liberty of modifying the size mix for the purpose of delivery, even after the A/T is issued.

(iv) Offer shall be rejected if the commencement period and rate of delivery per month is not indicated.

(v) The scheduled delivery period is 6 months from the letter of award will be as below;

Commencement Period (CM): Min. 10% of offered quantity within 2 months.

Completion Period (CP): Balance offered quantity in 4 or less months in equated lots.

(vi) MSEDCL may issue dispatch instructions as per requirement. The quantity demanded per consignee may be less than or equal to monthly lot specified in contract. Wherever as per demand, if the quantity to be supplied to a consignee in a particular month is less than monthly lot quantity; the said quantity will be treated as lot quantity for the purpose of delivery and payment.

(vii) MSEDCL may instruct the supplier to withhold entire or part of monthly supply of material for a specified period by giving two months advance instruction.

(viii) Time being the essence of contract, the supplier shall strictly maintain monthly delivery schedule.

The bidder is advised to get their type tests & drawing approval immediately after placement of LoA from Chief Engineer (Testing & QC) so that the material is received by the purchaser well within the committed delivery period. If there is any delay in delivery of material as per schedule, the undelivered quantity as per schedule can be diverted to other good performing bidder.

VIII OFFERING THE MATERIAL:

(A) The bidder shall offer the material as per MSEDCL technical specifications as per Annexure-D and shall have to fill the entire GTP.

(B) The person / entity should not have controlling stake in more than one entity applied for the tender / bid. **Necessary certificate duly certified by Chartered Accountant to this effect shall be submitted along with the tender documents**.

(C) Factory address, from which the bidder intends to supply the material against the tender, shall be as indicated in the latest approved online vendor registration form on e-tendering through which the vendor is submitting the offer.

(D) The bidder shall offer the rates, taxes as applicable for the factory location indicated in his latest approved online vendor registration form on e-tendering through which he is submitting his offer.

IX CONFLICT OF INTEREST

A bidder may be considered to have a conflict of interest with one or more parties in a bidding process if they:

(a) Have controlling shareholders in common; or

(b) Receive or have received any director in direct subsidy from any of them; or

(c) Have the same legal representative for purposes of a bid; or

(d) Have a relationship with each other, directly or through common third parties, that puts the mina position to have access to information about or influence on a bid of another bidder, or influence the decisions of the purchaser regarding the bidding process.

Bidders found to be in conflict of interest, shall be disqualified.

X QUOTATION:

(i) Bidder shall quote his rate per unit specified in Annexure 'B' / Price Bid in figures.

(ii) Bidder's printed terms and conditions will not be considered as forming part of the tender.

XI AMBIGUITY IN QUOTATION:

The bidder is requested to please make a note that in case of ambiguous terms in respect of offered quantity in Annexure- B and schedule 'C', F.O.R. condition, GST, basis of price (i.e. firm / variable) or if the blanks are left out in the offer, the item / tender shall be rejected.

XII FILLING IN OF ANNEXURE:

The bidder is requested to ensure that the comments against each and every item/clause of Annexure shall be clearly filled in and answered. Any item/clause shall not be left

blank or unanswered. If any item /clause is not applicable, the "Not Applicable (N.A.)" check box shall be selected.

XIII ADDITIONS/ALTERATIONS PROHIBITED:

The bidder shall not make any additions, alterations or changes in the Tender Form and the Conditions of Tender & Supply (Annexure 'A') including the description of material mentioned in Annexure 'B'. They should quote rate for the material described or click the check box 'Not quoted' against each of the item in Annexure 'B'/ Price Bid.

XIV B.I.S. LICENCE AND BEE CERTIFICATE :

A scanned copy of valid BIS License & BEE certifications for offered items ratings duly sealed & signed must be uploaded and submitted along with offer, failing which, the offer shall be rejected.

In case the validity of the BIS license / BEE certifications is expiring before date of submission of tender, necessary documentary proof of having applied for renewal of validity of the BIS license / BEE certifications must be uploaded while submitting the bid. The renewed copy of the BIS License / BEE certifications shall be submitted before commencement of supply.

However, valid BIS license / BEE certifications scan copy of offered material must be submitted by the qualifying bidders before commencement of supply, failing which their order will be cancelled with financial liability on supplier.

XV MANDATORY REQUIREMENT OF SUBMISSION OF OFFER:

The offer shall be submitted online duly filled in; attaching all the required documents, completed in all respects and should be digitally signed.

XVI SUBMISSION OF DRAWING & BILL OF MATERIAL:

The bidder shall submit the drawings and bill of material conforming to the tender specification wherever applicable. In such cases, the offer without the drawings and bill of material shall not be evaluated and considered. The drawings and bill of material submitted along with the bid shall not be considered for evaluation of the offer but the drawings and bill of material of the successful bidder shall be scrutinized when the Purchaser decides to accept such bid. It may, however, be noted that Purchaser's action of evaluation of the tendered bid would not mean approval of the drawings and bill of material submitted along with the tender bid.

The bidder shall depute his authorized representative for discussion on the drawings, either immediately on hearing from the Purchaser or after receipt of Letter of Award. The formalities like submission of drawings, bill of material etc. and getting the same approved by the Purchaser shall be completed by the successful bidder within TEN DAYS from the date of Letter of Award of the contract. The approval to drawings complete in all respects mentioned in technical specifications (Annexure-D) will be accorded within SEVEN working days thereafter. Any delay in this regard shall lead to cancellation of the Letter of Award at the risk and cost of the bidder. The supplies against the contract shall conform to the approved detailed drawings / bill of material and the detailed technical specifications.

==========

XVII NAME OF AUTHORIZED REPRESENTATIVE:

The digital certificate shall be in the name of person authorized by the firm. In case, the digital certificate is compromised or the person holding the digital certificate is no longer authorized to digitally sign the tender, it is the responsibility of the bidder to revoke this certificate and obtain the fresh certificate. While submitting the bids online only valid digital certificate shall be used. The vendors are requested to check the validity of digital signature and prior to the expiry date & they are requested to get their Digital signature key validated before expiry of the same. MSEDCL shall not be responsible for Non-submission of any of the Bids (Techno Commercial Bid, Deviation Bid, Price Bid, Annexure - C-1) by vendors due to expired/Invalid Digital signature.

The bidder is responsible for all the contractual liabilities and responsibilities thereof.

In case the bidder authorizes the representative to deal on behalf of the bidder, the name and address of such person should be informed to the purchaser. The bidder shall submit the power of Attorney in favour of representative duly executed before the Notary. In the absence of the Power of Attorney, the purchaser shall not deal with the representative.

XVIII (A) Offer of Micro & Small Enterprises: (If matching is called)

The bidder registered with Directorate of Industries of Government of Maharashtra for manufacturing the items tendered/offered and those who have attached valid certificate at the time of vendor registration shall be considered for concessions applicable and procurement of reserved items as per GoM G. R. dtd. 30-10-2015 amended up to date. These benefits shall be available only to those items approved during the registration process and subsequent updates in registration up to the submission of this tender.

Based on concession of Central Government's Micro &Small Enterprises office order dtd. 23-03-2012, 241 items are being kept reserved. As per above reservation of items 100% reserved items to be purchased from Micro & Small Enterprises out of which 20% reserved items to be purchased from S.C./S.T. enterprises. Reservation is applicable for a limited period unless & until re-examined. If Micro & Small Enterprises participated in the tender and the tendered item is not reserved, then 20% order with L-1rate to be given to Micro & Small Enterprises and out of this 20%, 4% to be given to S.C./S.T. enterprises.

If there are any specific Government Directives such as reservation of items for units in Maharashtra, non-eligibility of preference to SSI units etc. for particular items, price and purchase preference etc. the same would be applicable irrespective of the fact that it has not been specifically incorporated in the tender notice and/or tender documents.

(B) PREFERENCE TO INDUSTRIAL UNITS LOCATED IN MAHARASHTRA AND OFFERS BY MATCHING RATES WITH LOWEST ACCEPTABLE BIDDER

The lowest acceptable rate will be the unit rate worked out without considering IGST/(CGST+SGST) as applicable and the same rate will be considered as applicable to the respective bidder who has agreed to accept order at lowest acceptable rate.

==========

(C) Matching of rates:

The confirmation for acceptance of the order at the lowest acceptable rate indicated as above shall be given in the format as per Annexure 'C-l' of the tender documents. The same should be submitted online on or before the due time and date of submission of Annexure 'C-1'. The confirmation shall be opened online on due time and date of opening of Annexure 'C-1'. Schedule for submission and opening of Annexure 'C-1' shall be communicated separately by e-mail and on the website. Though confirmation in Annexure `C-1' as above is called from all the qualified bidders, the bidders, who quoted rates within the range of 5% in comparison with the lowest acceptable rates, shall only be considered and their Annexure `C-1' will be opened on the date and time intimated subsequently in the presence of bidders who chose to be present. Provided, however, that the Annexure `C-1' of the bidders, who have quoted above the range of 5% in comparison with the lowest acceptable rates, shall also be considered in case the aforesaid bidders within the range of 5% are unable to fulfill the quantity requirement. In that case also, the date of opening of Annexure `C-1' will be intimated to the bidders

1) In the above confirmation, if the bidder indicates any rate, then the confirmation given by the bidder will not be considered as valid.
2) The prices indicated in the original offer shall not be considered as valid once offer for acceptance of order by matching rates is given. In the event of withdrawal of offer by matching rates within the validity period, the entire offer against the tender shall become invalid and shall be summarily rejected and the earnest money paid by the bidder shall be forfeited.
3) The lowest acceptable rate is known only on the date of decision by the Competent Authority, hence the lowest acceptable rates of the tender cannot be declared in advance, however lowest acceptable rate of the tender would be equal to or more than the lowest rate received in the tender.

XIX QUANTITY ALLOCATION:

1) If L-1 bidder is within Maharashtra State and if total tender quantity for quoted item is offered by L-1 then 100% quantity will be awarded to L-1 bidder for quoted item.
2) If L-1 bidder is within Maharashtra State and offered quantity is less than the tender quantity for quoted item then,
    a) Quantity allotted to L-1 bidder will be equal to quantity offered by him.
    b) Balance quantity after allotment as (a) above, will be distributed among Maharashtra State bidders as per their price ranking (if ready to match with L-1 rate) subject to maximum 50% of total tender quantity for quoted item to Maharashtra State bidders including L-1 bidder.
    c) Any balance quantity after allotment as (a) & (b) above, will be distributed as per their price ranking (if ready to match with L-1 rate) irrespective of bidder is Maharashtra or out of Maharashtra state bidder including partial allotment if any to Maharashtra bidder in (b) above.
3) If L-1 bidder is outside Maharashtra State then,

a) If the L-1 bidder offered more than 50% of tendered quantity for quoted item then maximum of 50% of tender quantity for quoted item will be allotted to L-1 bidder.

b) If the L-1 bidder offered less than 50% of tendered quantity for quoted item then quantity equal to offered quantity for quoted item will be allotted to L-1 bidder.

c) Balance quantity after allotment as (a) or (b) above, will be distributed among Maharashtra State bidders as per their price ranking for 50% of required quantity (if ready to match with L-1 rate).

d) Any balance quantity after allotment as (a), (b) & (c) above, will be distributed as per their price ranking (if ready to match with L-1 rate) irrespective of bidder is Maharashtra or out of Maharashtra state bidder including partial allotment if any.

e) If all bidders including L-1 bidder are from outside Maharashtra state and if the offered quantity of L-1 bidder is 100 % then entire quantity will be allotted to L-1 bidder. If quantity offered by L-1 bidder is less than 100 %, then after allotting to L-1 bidder balance quantity will be allocated to remaining bidder who matched the L-1 rates as per price ranking & quantity quoted.

f) In spite of above the quantity allocation will be at the sole discretion of MSEDCL.

4) If new suppliers are allowed then maximum 20% of tender quantity will be reserved for new supplier as per their price ranking.

XX EARNEST MONEY DEPOSIT (EMD):

The bidder should pay the Earnest Money @ 0.5% (Half Percent) value of the estimated cost of offered item of the tender in the form of Demand Draft or Bank Guarantee as per the Annexure–M enclosed with tender documents having validity of 120 days from opening of tender. Interest shall not be allowed on EMD. EMD shall be forfeited (i) in case the bidder withdraws the tender / offer during the validity period (ii) in case the bidder fails to pay the performance deposit if the contract is awarded.

However, bidders from the following categories are exempted from payment of earnest money deposit.

1) All Government and semi Government institutions under Govt. of Maharashtra and Zilla Parishad in Maharashtra and fully owned undertaking of any State Govt. and Govt. of India only for the items manufactured by such institutions.

2) Micro and Small Enterprises registered under Micro, Small and Medium Enterprises Development Act-2006 only for the items mentioned in their permanent registration certificate at the time of vendor registration.

3) The bidder registered with N.S.I.C. and those who have attached valid N.S.I.C. Registration Certificate for the items mentioned in their permanent registration certificate at the time of vendor registration.

The benefits mentioned in (1) to (3) above shall be available only to those items approved during the registration process and subsequent updates in registration up to the date of submission of this tender.

Exempted bidders should upload a latest valid certificate issued by any approved body of 'Ministry of Small & Medium Enterprises' (MSME) such as 'National Small Industries Corporation' (NSIC) or 'Udyam registration' for EMD exemption.

XXI SIGNING OF THE TENDER DOCUMENTS:

Offer shall be submitted along with the tender documents and duly filled in with all Sections / Annexures / Appendixes / Schedules etc. The offer shall be signed with valid digital signature.

XXII SUBMISSION / SUPERSCRIBING OF THE TENDER DOCUMENTS:

The offer is to be submitted as follows.

(a) **Online Submission:**

(i) Techno-Commercial Bid (Part-I): This part shall contain all technical and commercial aspects of the bid and documents supporting the same except the Price Bid.

The bidder is requested to please make a note that in case of the Price Bid (Part-II) is submitted instead of Techno-Commercial Bid in Part-I or submitted Price Bid (Part-II) along with Techno-Commercial Bid in Part-I, the offer shall be rejected.

(ii) Price Bid (Part-II)

This part shall contain only the Price Bid strictly in the prescribed format, i.e. Annexure'B'.

(b) Off line Submission:

Physical submission of documents (Part-III) – Not mandatory.

Envelope for this part shall contain documents like Type Test Reports, Drawings, Bill of Material, Catalogues etc. wherever applicable as per technical specification and they shall be scanned and these scanned documents to be taken into PDF format on CD media (2 sets) and are to be submitted to Executive Engineer (HTM-1) in the office of Chief Engineer, Material Management Department in sealed envelope on or before due date & time of submission.

METHOD OF SUBMISSION OF PART-III AND THEIR OPENING:

This envelope shall be individually sealed and shall be superscribed with the name and address of bidders and the following information before posting or delivering the same:

i. Tender No.

ii. Due date and time of submission.

iii. Due date and time of opening.

Envelope as above shall be submitted on or before the prescribed due date and time of submission and shall be opened on due date and time of opening as prescribed.

In case of bidders whose techno-commercial bid is acceptable, their Price Bids will be opened at a later date. This date shall be intimated to such bidders separately.

XXIII TIMELY SUBMISSION OF OFFER:

(a) The bid is to be submitted online on or before due date and time of submission to the Purchaser at website.

(b) It is advisable to submit the digitally signed offer sufficiently in advance of due date and time so as to avoid last minute congestion of network / server.

(c) Offer received after the due date and time of submission shall not be accepted.

(d) In case, the due date of opening of tender happens to be holiday, the offer shall be opened on the next working day at the same time.

XXIV PURCHASERS RIGHT:

The Purchaser reserves the right to reject any offer without assigning any reason whatsoever.

The Purchaser reserves the right to make any changes in terms & condition at any stage of the process without assigning any reason whatsoever.

If any type of legal litigation against MSEDCL is pending in any court/Forum against/by the bidder or its sister concern/Director/Partner/Proprietor, then purchaser reserves the right to reject partly or fully their bid without assigning any reasons thereof.

Bidder has to submit the declaration as per Annexure-F regarding no any type of legal litigation against MSEDCL is pending in any court/Forum against/by the bidder or its sister concern/Director/Partner/Proprietor.

XXV DISREGARD OF TENDER CONDITIONS:

Tender containing any deviations / additions / alterations / changes in the conditions of the tender and supply as stated in Annexure 'A', 'B', 'C-I', 'D', 'E' and schedule 'C' shall not be acceptable.

The bidder having digitally signed all the tender documents indicates any deviations / additions / alterations / changes in the covering letter, unrelated annexure and schedules of the offer or elsewhere, the same shall be ignored and the offer shall be treated as meeting with all specified tender conditions.

XXVI PROHIBITION FOR POST TENDER CORRESPONDENCE:

The Bidder should note that no correspondence shall be entertained or considered after the due date and time of submission of tender unless otherwise sought by the Purchaser.

The Bidder should also note that no correspondence shall be entertained or considered after the placement of LoA/AT unless otherwise sought by the Purchaser.

XXVII RIGHT TO ORDER OUT QUANTITY IN VARIANCE TO OFFERED QUANTITY:

The Purchaser reserves the right to order out / procure any quantity in excess of the offered quantity with change in delivery period with mutual consent. The quantity specified may be for dispatch to one destination or several places.

==========

XXVIII ACCEPTANCE OF TENDER:

The Purchaser does not bind itself to accept the lowest or any tender; neither will any reasons be assigned for the rejection of any tender or part of tender. It is also not binding on the Purchaser to disclose any analysis report on tender/samples. The bidder on his part binds himself to supply any item or items selected from his offer in part or whole at the option of the Purchaser.

XXIX NOTIFICATION OF AWARD:

Notification of Award of contract will be made by a letter of Award, to be sent by registered post or given by hand or by E-mail to the successful bidder by the Purchaser. It could also be made by e-mail ~~or by Fax~~ to be confirmed in writing by registered post to the successful bidder by the Purchaser.

XXX EARNEST MONEY OF UNSUCCESSFUL BIDDER:

Earnest money deposit will be returned to the unsuccessful bidder by RTGS within 7 (seven) working days after the tender has been decided and on submission of receipt of E.M.D. payment to the G.M. (F&A-SB), MSEDCL, Prakashgad, Prof. A.K. Marg, Bandra (East), Mumbai-400051. Earnest money deposit in the form of BG will be returned to the unsuccessful bidder within 7 (seven) working days by Chief Engineer, Material Management Department after the tender has been decided.

XXXI VALIDITY OF OFFERS:

The bidder shall keep the offer valid for acceptance up to and including last date of calendar month, covering the date of completion of 120 days (one hundred and Twenty days) from the date of opening of the tender and shall also agree to extend the period of validity required by the Purchaser. The bidder shall not be allowed to modify or change the conditions of the tender while extending the period of validity.

XXXII DECLARATION FROM BIDDER:

In order to ensure participation of reliable and honest bidders / contractors / vendors, etc. the bidder shall submit the declaration along with the bid in Annexure-I.

XXXIII CORRUPT OR FRAUDULENT PRACTICES:

The Maharashtra State Electricity Distribution Company Ltd. and the State require that bidders / suppliers / contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, MSEDCL:

(a) defines for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and / or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among bidders (prior to or after

bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

(b) will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded an MSEDCL contract if at any time it determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, an MSEDCL contract.

XXXIV INFLUENCE:

Any efforts by the bidders to influence the owner during evaluation process before order placement will be rejected. Similarly deviation in the term of payments, penalty, performance deposit, delivery period will be treated as non-responsive quotation/offer and will not be considered for evaluation/order placement.

Bidder shall submit the undertaking certifying that they have not approached any one for undue influence.

XXXV TENDER FEES EXEMPTION:

Tender fee to be paid at the time of uploading / online submission of the tender. Bidders from the following categories are exempted from payment of Tender fees:

1) All Government and semi Government institutions under Govt. of Maharashtra and Zilla Parishad in Maharashtra and fully owned undertaking of any State Govt. and Govt. of India only for the items manufactured by such institutions.

2) Micro and Small Enterprises registered under Micro, Small and Medium Enterprises Development Act-2006 only for the items mentioned in their permanent registration certificate at the time of vendor registration.

3) The bidder registered with N.S.I.C. and those who have attached valid N.S.I.C. Registration Certificate at the time of vendor registration.

The benefits mentioned in (1) to (3) above shall be available only to those items approved during the registration process and subsequent updates in registration up to the date of submission of this tender.

The tender fee paid against the particular tender shall not be refunded / transferred /adjusted at all.

XXXVI PRE-BID MEETING:

1) The bidder or its official representative is invited to attend pre-bid meeting (s) which will take place at the place, date and time designated in the Bidding Data.

2) The purpose of the pre-bid meeting(s) will be to present the salient features of the bidding documents to the bidders, including the bid submittal requirements, the Conditions of Contract (including payment terms and conditions), the technical features of the project, and to clarify issues and to answer questions on any matter that may be raised by the bidders.

3) The bidder is advised to visit the Site and study the bid document thoroughly, and is requested to submit any questions in writing or by E-mail, to reach the Employer not later than one week before the pre-bid meeting.

==========

4) Minutes of the meetings, including the text of the questions raised and the responses given will be transmitted without delay to all the prospective bidders through the website https://etender.mahadiscom.in/eatApp/. Any modification of the bidding documents listed which may become necessary as a result of the pre-bid meetings shall be made by the Purchaser exclusively through the issue of an Addendum pursuant to Clause and not through the minutes of the pre-bid meetings.

5) Non attendance at the pre-bid meeting will not be a cause for disqualification of a bidder. Nevertheless, senior representatives of the bidders are strongly encouraged to participate in the pre-bid meeting to help ensure that they fully understand the key concerns of the Employer and the Employer's requirements.

XXXVIICLARIFICATION ON DEVIATIONS:

The purchaser, if necessary, shall obtain clarifications on deviations within 1 or 2 working days by requesting for such information from any or all the bidders in writing, as may be necessary.

The same should be submitted online on or before the due time and date of submission of Deviation Bid. The clarification shall be opened online on due time and date of opening of Deviation Bid.

The Schedule for submission and opening of Deviation Bid shall be communicated by auto generated e-mail of the e-tender website.

CERTIFICATE:

I / We agree to supply the materials at the rates herein tendered by me / us subject to the conditions of tender and supply in Annexure 'A' of this tender which I / We have carefully read and which I / we have thoroughly understood and to which I / we agree. I / we hereby agree to keep this offer open up to the date mentioned in tender details and shall be bound by communication of acceptance dispatched within the validity period.

Seal & Signature of bidder

==========

MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.

SECTION-II

Annexure "A"

CONDITIONS OF SUPPLY

1) EFFECT OF CONTRACT:

The contract shall be considered as having come in to force and shall be in operation for a period of 9 months from the date of Notification of Award. The bidder whose offer is accepted is hereinafter called "the supplier".

2) QUALITY OF SUPPLIES:

All materials supplied shall be strictly as per specification laid down by MSEDCL and in accordance with the approved standard Guaranteed Technical Particulars (GTP), drawings and type test reports.

3) MATERIAL AND COMPONENTS:

The material and components not specifically stated in this specification but which are necessary for satisfactory operation of the equipment / items specified, shall be deemed to be included unless specifically excluded and shall be supplied without any extra cost.

4) ACCEPTANCE OF SUPPLIES / INSPECTION:

i) The supplier shall normally offer at a time, the entire quantity required to be delivered every month as per the delivery schedule indicated at Annexure 'B' of A/T for the purpose of inspection by the Purchaser.

Time being the essence of contract; the supplier shall strictly maintain the monthly delivery schedule.

ii) Materials shall be inspected by the Purchaser's Executive Engineer / or the representative authorized by the Purchaser before dispatch. An intimation in the prescribed Proforma about the date on which materials shall be ready for inspection, indicating quantity, shall have to be given to the Executive Engineer / or the representative authorized by the Purchaser before dispatch so as to reach him 10 working days in advance, failing which, the supplier shall be responsible for delay in delivery on account of inspection.

The intimation in the prescribed proforma (Inspection call) shall be forwarded on MSEDCL Material Inspection Portal i.e. https://mip.mahadiscom.in/InspectionPortal/. Inspection calls sent via any other media will not be entertained and the supplier will be responsible for delay in delivery on account of inspection.

The inspection call should reach to MSEDCL maximum 7 days prior to date of readiness. On receipt of such intimation, the materials shall be inspected within 10 working days from the date of receipt of inspection call. The materials shall be dispatched only after inspection and approval of same by the Inspector. The inspection approval letter shall be valid for a period of 30 days from the date of issue of letter to enable the supplier pack the material and arrange transportation thereof so that material should be reached at the respective consignee within scheduled delivery period.

After this period of 30 days, the validity of this inspection approval letter will lapse. If the material is not reached within scheduled delivery period to respective consignees, the approval of purchaser is to be sought by the supplier for revalidation of inspection approval letter at the sole discretion of MSEDCL.

For quantity supplied beyond contractual delivery period, statutory variations is applicable only when the delayed delivery is attributed to MSEDCL.

iii) The supplier shall notify the names of the consignees as per DI, to whom the inspected lot would be dispatched. The supplier shall get the copies of inspection approval letter together with witness certificate duly signed by the concerned Inspecting Officer and also mention reference or inspection approval letter on the challan / invoice, failing which any delay occurred in getting the S.R. Notes from the consignees would be solely to supplier's account. The inspection report shall be filled in online on the same day by the Inspector from the site on MSEDCL web portal after the inspection.

iv) Factory address, from which the bidder has to supply the material, shall be as indicated in the latest approved on line vendor registration form on e-tendering through which the bidder has submitted the offer.

v) The supplier shall offer inspection call intimation of readiness of material as per the monthly schedule only. In the event, during the inspection by the Purchaser's Inspecting Officer, if it is observed that the quantity actually offered for inspection is less than the quantity indicated for inspection in the inspection call, the Purchaser shall be entitled to recover from the supplier, the actual expenses incurred for arranging the inspection, and the supplier shall not dispute the amount to be recovered.

vi) The supplier shall submit the test certificates / reports from any NABL approved laboratory or the laboratory of his own for the respective quantity of material, before dispatch. The material shall not be dispatched unless and until the test certificates are approved by the Purchaser.

vii) All the necessary help shall be extended by the supplier to the authorized representative of the Purchaser to carry out testing of equipment / materials. Testing equipment's shall be arranged by the supplier.

viii) MSEDCL may issue the dispatch instructions (DI) to deliver the ordered quantity to the bidders in Maharashtra within same districts of factory location of the supplier. However, it will not be binding on the MSEDCL; supplier has to deliver the material in other districts as per MSEDCL requirement. Further outside Maharashtra bidders have to deliver the material as per MSEDCL requirement to the designated consignee.

ix) MSEDCL on its sole discretion may get material / equipment inspected and tested by third party NABL lab.

5) RIGHT TO CARRY OUT INSPECTION DURING MANUFACTURING:

The Purchaser at its option, will inspect the material ordered during its process of manufacturing including the inspection of raw materials and will request the supplier to carry out such tests as may be necessary to ensure proper quality of the material. The samples of components of the material shall be subject to quality check by the inspecting officer during manufacturing.

==========

6) RIGHT TO REVISE DESPATCH INSTRUCTIONS, DELIVERY SCHEDULE AND TO DEFER SUPPLIES:

i) The Purchaser reserves its right to revise the dispatch instructions issued along with the order, at the time of giving final clearance for dispatch after inspection of the material. If such change in destination is not intimated at the time of inspection approval or waiver of inspection, the supplier shall dispatch the material as per the dispatch instruction in accordance with A/T. indicated by him in the inspection call letter.

ii) The Purchaser reserves its right to change the delivery schedule of the contract either by reducing the monthly lot up to 60% of the agreed lot or by increasing the same up to 120% of the agreed lot with prior two months' notice and the Purchaser shall not be liable to pay any compensation/damages on account of such change in delivery schedule.

iii) The Purchaser reserves its right to defer the balance supply to be received against the order by giving two months' notice for a maximum period of 6 months. In such an event, the delivery period for the deferred material shall be deemed to be extended proportionate to the period of deferment and the Purchaser shall not be liable to pay any compensation/damages on account of such deferment of deliveries.

7) WAGON LOADS / TRUCK LOADS:

Quantity to be dispatched to consignee should be minimum in two full truck loads and may be part load as per the Purchaser's requirements may not necessarily be in full wagon load / truck load and may be part load as per the Purchaser's requirement.

8) ROAD TRANSPORT:

In case the supplier prefers to dispatch the materials by road transport at his risk and cost and without any extra cost to the Purchaser, the materials shall be accepted only during office hours on working days. The supplier should ensure that the goods reach the stores in first half so as to arrange their unloading during office hours, failing which, the Purchaser shall not be liable for delay in unloading and for inconvenience caused to the transport contractor in the form of detention etc. Unloading at stores will be arranged by the consignee.

9) DESPATCH INTIMATION:

The supplier shall inform by e-mail to the consignee details of dispatch along with e-way bill receipt in hard & soft format giving RR / LR No., Wagon / Truck No., Type of wagon, craneable consignment or otherwise, total value of consignment, etc. to facilitate the consignee to arrange for clearance of goods on cemmcmsedcl@mahadiscom.in or cemmcmsedcl@gmail.com.

10) BILL OF MATERIALS: (WHEREVER APPLICABLE)

The supplier shall furnish bill of materials for each type of equipment / material offered which should be consistent with the drawing, specification and guaranteed technical particulars. The copies of the bill of materials should always be enclosed along with the bill submitted by the supplier for payment wherein he should specifically mention the materials / components dispatched out of the bill of materials, if the equipment is not sent in totality. Where the equipment / material to be supplied consist of more than one component, the supplier claiming payment for equipment / materials shall certify that all components of the equipment / material have been supplied in full for the quantity indicated in the invoice. Part payment shall not be allowed.

==========

11) PACKING LIST:

Each package shall contain, in waterproof cover, the detailed list indicating the order reference, date, list of content and reference to the approved bill of materials. Each item contained in the package shall be described sufficiently to enable identification of the quantity, weight etc. There should not be any alteration in the packing list incorporated in the order, soft copy of the packing list should be sent to all the consignees and hard copy to G.M. (F&A-SB) should be enclosed with the bills along with other documents.

12) REPLACEMENT OF GOODS LOST, BROKEN OR DAMAGED:

Notwithstanding anything herein contained, the supplier undertakes to be responsible for the safe arrival of the materials in good condition and without any loss or damage at the final destination and until the same be actually delivered to and received by the Purchaser at its stores or other place of final destination and for this purpose, materials carried by railways or other carrier shall be deemed to be so carried at the risk of the supplier. In case of transit damage / shortages, the payment shall be made only for the quantity received in good and working condition and the consignee shall lodge claims with carriers and transfer the same to the supplier with all necessary documents for settlement of the same with carriers at the supplier's end. The transit damages / shortages / losses reported by the consignee shall be repaired / replaced by the supplier duly inspected, free of cost, within one month from the date of such intimation of breakages / shortages / losses without waiting for settlement of the claims from carrier or insurance co. etc.

However, rectification of minor defects at store locations are allowed for following minor defects only.

i. Leakages.

ii. Bushing replacement

iii. LA replacement

iv. Nut bolt tightening etc.

13) REPLACEMENT OF REJECTED MATERIALS:

If, on inspection at the final destination, the Purchaser discovers any loss in the materials supplied or that they are received in damaged condition or that in the opinion of the Purchaser, they are not of the contracted quality or specification, the Purchaser shall be entitled (notwithstanding that the property in the materials shall have passed on to the Purchaser) to refuse to accept or reject the materials altogether and claim damages or cancel the contract and buy its requirements from any of its suppliers stipulating earliest possible delivery and in accordance with its tender system against the supplier and recover the damages if any, from the supplier from any outstanding sums that may be due to the supplier from the Purchaser against this contract or against any of the contract entered into with the supplier, without prejudice to other rights and remedies available to it in law and reserving always to itself the right to forfeit the performance deposit placed by the supplier for the due fulfillment of the contract.

In case the stores / materials are found not in accordance with the prescribed specifications and / or the approved sample, the same will be rejected and the supplier shall replace the rejected stores / materials free of cost within one month from the date of intimation. The replacement of goods shall also have to be got inspected as per inspection clause. Further if the stores / equipment supplied becomes incomplete on account of either

rejection or short supply of its components, the complete cost of the stores / equipment shall be recovered from supplier's bills without notice.

14) MATERIAL DESPATCHED AND PROGRAMME:

A statement as under indicating dispatches effected during every month shall be furnished to this office along with the programme of manufacturing / dispatches during the following two months. In the event of no dispatch, the statement shall contain nil information.

MONTHLY STATEMENT:

I. Name of Supplier:

II. Reporting Month:

Sr. No.	A/T No.	Material	Item No. as Per A/T	Consignee	RR / LR Delivery Challan No. With date	Date of Actual Receipt of Material	Qty. Dispatched Between 26th of Preceding Month and 25th of the Reporting month	Programme of supply during the next 2 months
1	2	3	4	5	6	7	8	9

Consolidated details of the above information shall be furnished to office of the Chief Engineer (M.M. Dept.) after completing the supplies of a particular order. The copy of this consolidated information shall invariably be forwarded to the respective consignees, failing which; security deposit paid against the contract shall not be released.

15) MATERIAL RECEIPT & SUBMISSION OF BILLS AT CONSIGNEE:

On receipt of material at destination of consignee as per DI, Additional Executive Engineer (MM DEPT.) of respective store should ensure the receipt of material in good & healthy condition. While receiving the material, store in charge should ensure the receipt of material as per Dispatch Instructions issued by MM Dept. Further, the store in charge should ensure the receipt of original & scan copies of following documents:

a) Tax invoice.

b) Detailed packing list.

c) Bill of Material.

d) Delivery challan.

e) E-way bill receipt.

f) Dispatch document (RR/LR).

On confirmation & validity of above documents, store in charge will generate Provisional SR Note through ERP system immediately for receipt of material at stores thereof.

Where required by the Purchaser, the successful bidder must send the operation and maintenance manuals, test certificates, drawings etc. for the material ordered. These should be sent immediately after dispatch of material and a statement to that effect should be made in the invoice.

==========

After successful RST of supplied each lot, store in charge will generate final SR note through ERP system immediately from receipt of RST report at stores.

16) PAYMENT OF BILLS:

(a) Terms of payment:

a. The Bidder shall be paid 100% payment within 60 days from the date of receipt of material in good condition, against Stores Receipt Notes (S.R. Notes) issued by the concerned consignee.

b. However, in respect of only those entities which qualify for 45 days payment period under the Micro, Small and Medium Enterprises Development Act, 2006, 100% payment of the Contract price will be paid within 45 days from the date of receipt of material at Consignee Store in good condition, against Stores Receipt Notes (S.R. Notes) issued by the concerned consignee.

c. In respect of Micro, Small and Medium Enterprises, best efforts will be made for payment within 45 days from date of submission of invoice along with requisite documents after the delivery of entire lot. However, no claim for interest will be entertained in case of delay in payment beyond 45 days. The Micro, Small and Medium Enterprises who are ready to accept this payment term may only quote. No dispute in this regard will be entertained. After completion of order, the claims of whatsoever nature lodged after 30 days from the last date of payment will not be entertained.

d. The payment shall be effected by A/C payee cheques / RTGS. Following documents as required in terms of order, will have to be forwarded to the G.M. (F&A-SB), Maharashtra State Electricity Distribution Co. Ltd., Prakashgad, Station Road, Bandra (East), Mumbai - 400 051 along with bills in triplicate to facilitate payment with a copy to the Chief Engineer of respective Zone.

(i) Invoice (on the basis of rates accepted as per A/T) issued in accordance with the provisions of GST Invoice Rules.

(ii) Inspection and Test Certificate approval.

(iii) E Way Bill

(iv) Copy of Acceptance letter of Permanent Bank Guarantee / Security Deposit Certificate.

(v) Packing list.

(vi) Approved Bill of Material.

(vii) Certificate of having dispatched Operation & Maintenance Manual, copies of Test Certificates and approved drawings / Bill of Material to consignees wherever applicable.

The supplier shall forward the original R.R. / L.R. direct to the consignee along with relevant documents. The original bill shall be forwarded to The G.M. (F&A-SB), MSEDCL, Prakashgad, Bandra (E) and marked ORIGINAL. The bill should indicate the GST registration no. and date held by him under the GST Law. The Purchaser shall not be responsible for delay in payment of bills if the supplier fails to comply with any of the above requirements.

Supplier's copy of S.R. Note will be forwarded by the consignees through their

respective Common Stores for supplier's record towards acknowledgement of receipt of material. Accounts copy of S.R. Note will be forwarded by the respective Common Stores to G.M. (F&A-SB) for payment.

Wherever the payment is to be effected against Material Receipt Intimation (MRI) and if the supplier fails to forward the documents such as inspection report, bill of materials, approved drawings, etc. wherever required along with the invoice to the respective consignees and no payment shall be made against the said MRI.

The whole of the first lot as well as monthly lot when delivered in installments, the date of delivery and due date of payment will be counted after the receipt of the entire lot.

Any amount more than Rs. One Lakh can be transferred to the bank Account of the supplier electronically. For this RTGS (Real Time Gross Settlement) provision, following information is to be furnished by the bidder in the required documents of the online offer.

1. Name of the Company
2. Name of the Bank & Branch with address where the amount is to be transferred.
3. Current Account Number (15 digits)
4. RTGS No. / (IFSC Code) (Indian Financial Security Code)
5. MICR Code of the Bank
6. Company's email ID
7. Contact Name & Telephone No.

17)TAXES:

(A) Notwithstanding the fact that contract price is inclusive of GST:

(i) GST shall be paid at actual on the basis of due date of delivery or actual date of supply whichever is lower against documentary evidence.

(ii) Variation in GST on bought out items shall not be entertained.

(B) Structural changes in and due to 'Input Tax Credit' Scheme: -

(i) In the event of any structural change occurred in the Input Tax Credit Scheme after the date of submission of the tender till the currency of the contract, the benefit out of such change shall be passed on to the purchaser.

(ii) In the event of 'Input Tax Credit' being extended by the GST Law which were otherwise ineligible for claiming Input tax credit thereof, the seller should advise the purchaser about the additional benefits accrued or any variation thereof, through a letter containing such details and computation within such time as may be agreed between both the parties i.e. Supplier & MSEDCL.

18)DEDUCTION:

Any amount or amounts which become payable by the supplier to the purchaser under a particular contract, shall be deducted by the purchaser from any amount/amounts due or becoming due to the supplier under the same or any other contract and shall be adjusted against dues to the Purchaser.

==========

19)GUARANTEE:

Material offered shall be guaranteed for a period 66 months from the date of receipt at the consignee's Stores Center or 60 months from the date of commissioning, whichever is earlier. In case of failure of material within the above guarantee period, tenderer shall make available other new conditioned / repaired material / equipment, free of cost at Division / Stores for replacement within 45 days from the date of intimation from Division filter unit / Stores and lift the failed material / equipment for repair rejected material after replacement. For this purpose, bidder shall maintain spare stock in adequate quantity of ordered ratings of material / equipment. If the defective material is not replaced / repaired within the specified period as above, the Maharashtra State Electricity Distribution Company Ltd. shall retain an equivalent end cost of material plus 15% supervision charges from any of the bills of the supplier or encashing available performance bank guarantee submitted against guarantee period or through any available sources, till the return of the equipment. No interest will be paid on the amount so retained / recovered. In case of material / item not returned duly repaired within 45 days, penalty shall be imposed @ 0.5% per week or part thereof maximum up to 10% of the cost of undelivered material / equipment beyond specified time limit. In case of material / item not returned duly repaired within 5 months, total cost of the material / item along with penalty will be adjusted / recovered from the pending bills of the supplier or encashing available performance bank guarantee submitted against guarantee period or through any available sources with MSEDCL.

The guarantee period failed material / equipment will be made available at MSEDCL filter unit. Loading and unloading of guarantee period failed material / equipment should be arranged by the supplier.

The clause itself shall be the notice to the supplier about encashment of PBG to adhere to the timelines.

The outage period, i.e. the period from the date of failure till unit is repaired / replaced shall not be counted for arriving at the guarantee period. Thus supplier has to extend the guarantee period by outage period.

Further, in case of repeated failures of equipments / material, the Purchaser reserves the right to debar / disqualify the supplier for future tenders / orders.

20) LIFTING OF MATERIALS:

A) LIFTING OF REJECTED/DAMAGED MATERIALS FROM STORES:

(a) On failure to replace or repair the transit damaged or rejected material within one month from the date of intimation as required under tender, it shall be deemed to have concluded that such material is finally rejected. The damaged / rejected material shall be lifted by the supplier within 30 days from the date of receipt of notice to that effect from the concerned consignee on reimbursement to the Purchaser of the cost of the material / equipment, if any, already paid in terms of payment clause in the contract and actual expenses incurred by the consignee towards handling, demurrage / wharfage / undercharges, freight, insurance premium etc. The Purchaser shall not be responsible in any case for the loss, destruction, damage, deterioration of the material after expiry of the said 30 days period.

(b) If the supplier fails to lift the material within this period, the material will remain with the Purchaser at the cost and risk of the supplier. Supplier shall, therefore, be liable to

pay ground rent @ 0.1% (Plus GST as may be applicable) per day of purchase cost of the material to be lifted from the date of intimation of rejection till the actual date of lifting.

(c) The Purchaser will give 7 days' notice for lifting of rejected material and if not lifted, will be also free to Scrap / dispose of such material, after the period of said 37 days, by Public auction/Tender notice/Destruction as may be deemed fit and storage charges @ 0.1 % (Plus GST as may be applicable) per day of purchase cost will be recovered from the date of intimation of rejection of materials till the date of realization of the sale amount/physical removal of the material besides the actual expenses incurred as referred to at (a) above. The amount received from the sale of scrap/rejected material will be adjusted in the penalty.

Notwithstanding what is contended in the foregoing clauses, the supplier shall be liable to pay the Purchaser the cost and expenses incurred by the Purchaser, if any, including ground rent and the same shall be appropriated and recovered from the sale proceeds.

B) LIFTING OF FAILED MATERIAL / EQUIPMENT FROM DIVISION FILTER UNIT:

a) If the supplier fails to lift the failed material within specified period, the material will remain with the Purchaser at the cost and risk of the supplier (By recovering end cost of failed transformer). The Purchaser will be also free to dispose of such material, after the period of 5 months from the date of intimation of failure by Public auction / Tender notice / Destruction as may be deemed fit or repaired departmentally and recovered cost will not be refunded to supplier.

b) Process for lifting of rejected / damaged / failed materials from Divisions / Stores:

i. The communication / correspondence shall only be made by specified e-mail id cemmcmsedcl@gmail.com by MSEDCL field offices / the supplier.

ii. As soon as the material/equipment is failed within guarantee period, the concerned Executive Engineer of O&M Division / Stores-in-charge shall inform the intimation of such failure immediately to Supplier as well as Material Management Department, Head Office on specified e-mail id in Format A (failure report).

iii. The Material Management Department will forward the format A to SB Section, Head office to withhold the payment equivalent to the cost of material/equipment with 15% supervision Charges from any of the bills of the supplier. If the supplier fails to return repaired transformer at concern O&M Division / Store within 45 days from the date of intimation, penalty to be imposed @ 0.5% per week or part thereof maximum up to 10%.

iv. On receipt of material/equipment against replacement or repairs, the Executive Engineer, O&M Division / Store-in-charge will issue Format C (Rectification report) to concern supplier with copy to Material Management Department Head Office through specified e-mail id.

v. The supplier shall note that the guarantee period for the delayed period taken for replacement / repairing of material/equipment will be automatically extended.

vi. Material Management Department Head Office shall inform the SB Section, Head office to release the payment withheld against that material/equipment.

vii. From the date of intimation, if supplier fails to return repaired material/equipment at O&M Division / concern store within 5 months, concerned Executive Engineer of O

& M Division / Stores-in-charge shall inform the intimation of such failure immediately to Material Management Department, Head Office on specified e-mail id.

viii. The Material Management Department Head Office shall forward the same to SB Section, Head office to recover the payment equivalent to the cost of material/equipment from any of the bills of the supplier with penalty to be imposed @ 0.5% per week or part thereof maximum up to 10% for final recovery as per clause 19.

21) LIQUIDATED DAMAGES FOR LATE DELIVERY:

In case the materials are not delivered within the period stipulated in the order, the supplier shall be liable to pay at the discretion of the competent authority of the Purchaser, the liquidated damages to the Purchaser @ 1% per week or part of week on the value of delayed material / unexecuted quantity plus taxes as applicable, if any on the price subject to a maximum of cumulative ceiling of 10% reckoned on the contract value of such complete portion or section of the plant, equipment or material delayed and also the portion supplied which could not be brought into commission due to any part thereof not having been delivered in time. In addition to above if bidder fails to supply the material within contractual delivery period continuously for 3 lots, then the order shall be liable for cancellation.

Due consideration may be given in the levy of liquidated damages for reasons absolutely beyond the control of the supplier, for which documentary evidence shall be produced to the satisfaction of the competent authority of the Purchaser.

The Purchaser shall be entitled to deduct/recover the amount of liquidated damages from the current bill payable to the supplier or any other amount due or payable to him against this or any other contract.

For computing the liquidated damages for delayed supplies, the date of railway receipt or the date of receipt of materials at stores in case of road transport, shall be the date of delivery.

In case the Purchaser does not arrange for inspection of material within 10 days from the date of receipt of inspection call to MSEDCL wherever applicable, the period of more than 10 days till inspection will not be considered for levy of liquidated damages. For computing the period taken for inspection in such cases, the relevant date mentioned in the inspection certificate issued by the inspecting officer would be considered.

22) ORDER PLACED ON TIME PREFERENCE BASIS (WHEREVER APPLICABLE):

In case of order on time preference basis (i.e. orders given at higher rate on delivery period considerations only) if order is given at higher rate of L-2 (or L-3 etc.), then the payment at higher rates will be made provided the firm makes supplies within the stipulated time period. In case of delay in supplies, the payment will be made at the rates offered by L-1. In addition, Clause No.21 above for Liquidated Damages for late delivery will also be applicable. However, the quantity allocation for order under this clause shall be at the sole discretion of MSEDCL & the specified quantity allocation for this tender will not be applicable in this case.

23) FORCE MAJEURE CLAUSE:

If, at any time, during the continuance of this contract the performance in whole or in part by either party of any obligation under this contract shall be prevented of delayed by reason of any war, hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, strikes, lock-outs or acts of God (herein after referred to as “events”), provided notice of happening of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such

event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance; and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the purchasing officer as to whether the deliveries have been so resumed or not, shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract PROVIDED ALSO that it the contract is terminated under this clause, the purchaser shall be at liberty take over from the contract at a price to be fixed by the purchasing Officer which shall be final all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion thereof as the purchaser may deem fit accepting such material, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

24) ACCEPTANCE OF LOWER FORD RATE OFFERED IN SUBSEQUENT TENDER :

During contractual delivery period of supply, the quoted rates shall remain the same, however for same specification of material if the rates will receive lower in another subsequent tender in extended period of contract then it is binding on the supplier to supply the same material at lower rate for balance quantity of material i.e. in case if price bid of next subsequent tender of similar technical specification is opened and FORD rate found lower than the ongoing contracts this FORD rate shall be made applicable for the balance quantity beyond contractual delivery period. Further the purchaser reserves the right to allow the supplier to deliver the quantity or otherwise beyond the contractual delivery period.

However other stipulations of clause No. 23 of Section-II i.e. Annexure-A will remain unchanged.

25) PERFORMANCE OF CONTRACT:

The Purchaser will not be in any way liable for non-performance either in whole or in part of any contract or for any delay in performance thereof in consequence of strikes, shortage, non-availability of raw materials, combination of labour or workmen or lockout, breakdown or accident to machinery or accidents of whatever nature, failure on the part of the railways to supply sufficient wagons to carry essential raw materials etc. and finished products from the stores, subject to the provision and stipulation made in condition No. 21 as stated above i.e. Liquidated damages for late delivery.

26) CONTRACT PERFORMANCE DEPOSIT:

a) The supplier will have to furnish contract performance deposit as per Annexure - N in the form of unconditional & irrevocable BG within 15 days from the date of issue of LoA, as mentioned in Clause 26.2.

b) The contract performance deposit shall be an amount equal to 5% of the contract value and shall be valid for a period of 90 days beyond guarantee period of the last lot of the equipment supplied.

c) The contract performance deposit shall be refunded within 90 days from the date of expiry of the guarantee period of the equipment supplied. The purchaser shall not be liable to pay any interest or compensation to the contractor for retaining the deposit after the end of the said period.

d) The contract performance deposit is intended to secure the performance of the contract for guarantee period of the equipment supplied. However, it is not to be construed as limiting the damages stipulated in other clauses of the contract.

27)POWER OF ATTORNEY:

It will be obligatory on the supplier to communicate the revocation of Power of Attorney, if any, after submission of offer till the execution of contract failing which the act/s & action done by the agent / representative shall be deemed to be the valid act/s & action of the bidder / supplier.

28)SETTLEMENT OF DISPUTE:

Permanent Dispute Resolution Committee (PDRC) comprises of Chief Engineer (MM Dept.), one member of Accounts Department and representative of supplier will resolve the dispute arise if any.

29)JURISDICTION:

Any disputes or difference arising under, out of or in connection with this tender or contract if concluded, shall be subject to the exclusive jurisdiction of the "Courts" in Mumbai.

30)TERMINATION OF CONTRACT

1) The decision of the Purchaser shall be final as regards the acceptability of the stores supplied by the supplier and the Purchaser shall not be required to give any reason in writing or otherwise at any time for the rejection of the stores/materials.
2) In case the contractor/supplier fails to deliver the stores/material or any consignment thereof within the contracted period of delivery as per delivery schedule or in case the stores/materials are found not in accordance with the prescribed specification and the performance of the supplied material is not found satisfactory, the Purchaser shall exercise in discretionary power either,
   a) To purchase from elsewhere, after giving 15 days due notice to the contractor, at the risk of contractor, such stores/material not so delivered or other of similar description, without cancelling the contract in respect of consignment not yet due for delivery,

      OR

   b) To cancel the contract reserving Purchaser's right to recover damages Plus GST as may be applicable.
   c) notwithstanding that the powers under (a) and (b) referred above are in addition to the rights and remedy available to the Purchaser under the General Law of India relating to contract.
   d) Purchaser reserves right to recover damages against risk purchase or 10% value of non-supplied material plus applicable taxes, if any whichever is higher.

   In the event of risk purchase of stores of similar description, the option of the Purchaser shall be final. In the event of action taken under (a) or (b) above, the supplier shall be liable for any loss which the Purchaser may sustain on that account but the supplier shall not be entitled to any saving on such purchases made against default.
3) Further contract can be terminated in case of sub-standard /poor quality material.

==========

31) DEBAR / BLACKLISTING OF MANUFACTURER:

In the event of fraudulent practices / non-compliance / non fulfillment of any obligation as required by MSEDCL at any stage of tendering or execution, the bidder is liable to be debarred / blacklisted at the discretion of MSEDCL.

32) TAX DEDUCTED AT SOURCE:

The purchaser shall deduct tax at source in accordance with the provisions of the laws as and when the same is notified.

==========

SECTION-III

I. Quantity procurement :

The quantity for procurement is as below.

Material Code	Material Details	Quantity (Nos.)	Estimated Cost (Rs. Crore)
20456302533	11/0.433 kV, 315 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer	50	7.74
20456302613	22/0.433 kV, 315 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer	15	2.60
20456302703	11/0.433 kV, 630 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer	20	4.46
20456302883	22/0.433 kV, 630 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer	25	6.35
20456303003	22/0.433 kV, 1000 KVA Three Phase, Copper Wound, Dry Type, Indoor Distribution Transformer with OLTC	5	2.60
Total (rounded off)		115	23.76

II. Qualifying Requirements:

1. The bidder shall be an Original Equipment Manufacturer (OEM) and possess valid BIS license (If applicable) and BEE certificate (If applicable) as per clause no XIV.

   Upload:

   a) BIS License and BEE certification.

2. The bidder should have experience for supply of similar or higher rating of material / equipment of any voltage level for Energy Efficient Level-1 or Energy Efficient Level-II to any Electricity Distribution Utility, Electricity Distribution Franchisee or Public Sector Undertaking and should have executed orders of 30% of tender quantity for offered item during last three (3) financial years.

   Bidders who supplied the material in MSEDCLs projects viz; INFRA - II, IPDS, DDUGJY, DPDC, DDF, Non DDF, HVDS or any other scheme will be considered & bidder shall produce the order completion / quantity supplied certificate from concern Superintending Engineer (Infra/O&M).

   Upload:

   a) Copies of orders executed by the bidder and the Certificate from the purchaser with regards to successful execution of the order / supply of quantity for preceding three financial years.

   b) List of orders in hand.

3. For all tendered material, valid Type test certificates (If applicable) as per MSEDCLs technical specifications (Annexure-D) which are carried out within 5 years prior to the

date of opening of tender from NABL accredited lab such as CPRI / ERDA shall be uploaded in the bid. Bids without the Type test certificates shall not be considered for further evaluation.

Upload:

a) Type test certificates from NABL accredited lab such as CPRI/ERDA valid for a period of five years.

4. Average Annual Turnover – The Average annual turnover of last three financial years of the bidder shall be 30% of the tender estimated cost of offered item. The bidder has to submit the annual turnover certificate of the company of last three financial years duly certified by Chartered Accountant.

Upload:

a) Documentary evidence showing annual turnover of last 3 years, certified by Chartered Accountant for preceding three financial years. (As per attached Format-4)

5. The bidder should have in-house testing facilities for conducting acceptance & routine tests in accordance with the procedures laid down in relevant IS /IEC amended up to date.

Upload:

a) List of in house manufacturing and testing facilities as well as quality control set up.

6. The bidder shall have ISO certification for quantity management system & environmental management system.

Upload:

a) ISO for quality management system.

b) ISO for environmental management system.

7. The bidders who quoted under New Suppliers category are exempted from experience and turn over criteria. Bidder has to submit the Annexure-O regarding declaration of participation as New Supplier in the tender failing to which it will be presumed that bidder has participated in the tender as Regular Supplier. Once the Annexure-O is submitted in the offer it will not be changed at any stage of process and qualification will be done as per Annexure-O only.

Upload:

a) Annexure-O regarding declaration of participation as New Supplier in the tender.

8. Following Documents should be submitted by the bidder along with the bid.

Upload:

a) Documentary evidence (for e.g. Udyam Registration/NSIC/Chartered Accountant/Engineer Certificate) for manufacturing capacity to cover the quantity offered by the bidder and considering orders in hand.

b) Certificate from Charted Accountant for not having controlling stake in more than one entity as per attached Format-3.

==========

c) Annexure-F regarding declaration of legal litigations.

d) Annexure-I regarding debar undertaking.

e) Self-undertaking on bidders letter head for not approaching any one for undue influence as per attached Format-2.

f) GST registration certificate.

g) EMD receipt (Bank Guarantee or Demand Draft)

h) Power of attorney.

i) Certificate for No Deviation as per attached Format-5.

Note: If there is any ambiguity in other terms & conditions, this Section-III prevails.

==========

ANNEXURE - "B"

QUANTITY, PRICE AND DELIVERY PERIOD

ANNEXURE - "B" to be submitted online against commercial bid; attached separately

==========

ANNEXURE'C-I'

[To be submitted later on as per as per Clause XVIII (B) of Instructions]

CONFIRMATION FOR ACCEPTING ORDER BY MATCHING RATES WITH LOWEST ACCEPTABLE BIDDER

APPLICABLE FOR INDUSTRIAL UNITS FROM MAHARASHTRA ONLY Marketing Assistance and Purchase Preference to the units from Maharashtra (refer Clause XVIII of Instructions to Bidders):-

1. (a) In case your unit is located in Maharashtra and the lowest acceptable rate received against the tender is from the unit outside Maharashtra, please confirm whether you are agreeable to accept order at that lowest acceptable rate limited to 50% (fifty percent) of our requirement. .....

APPLICABLE FOR ALL BIDDERS INCLUDING THOSE ELIGIBLE UNDER THE ABOVE CLAUSES:

1. (b) Please confirm whether you are agreeable to accept order at the lowest acceptable rate received against the tender. .....

[Industrial units from Maharashtra can give option under 1(b) above for balance quantity]

Note:-

1. If the bidder gives the above confirmation for the quantity less than as indicated in Clause X (iii) of the Instructions to the Bidders, then the above confirmation shall not be acceptable.
2. Bidders may confirm matching for one or more items originally tendered.
3. Any withdrawal of confirmation for order by matching rate within validity of offer will render the entire offer invalid and shall be summarily rejected and Earnest Money Deposit shall stand forfeited.
4. A bidder will not be entitled to the benefit of offers by matching rates and will not be considered for orders if his original offer is rejected on the ground of ambiguity or because of not accepting /noncompliance of the terms & conditions of the tender.
5. In the above confirmation, if the bidder indicates any rate, then the above confirmation given by the bidder will not be considered as valid.

==========

ANNEXURE- 'D'

TECHNICAL SPECIFICATION

As Indicated in E-Tendering

==========

ANNEXURE-O

(On bidders' letter head)

CONSENT FOR PARTICIPATION IN TENDER AS NEW SUPPLIER

I/We, …….. have understood and checked the tender documents for supply of ---------- ---------- and have not found any errors in them.

I/We hereby declare and confirm that we are participating in the tender no……..as New Supplier / Regular Supplier for particular rating as specified in the following table and agree to supply the material as per terms and conditions of the said tender.

Sr. No.	Item Description	Regular Supplier (Yes/No)	New Supplier (Yes/No)
1	----------		
2	----------		

Note: 1) Bidder has to provide only one "Yes or No" against particular rating.

2) If for any particular rating bidder has given the option "Yes" for both the types (Regular & New Suppliers) then option for "Regular Supplier" will be considered and evaluation will be carried out as per Regular Suppliers criteria only.

3) If for any particular rating bidder has given the option "No" for both the types (Regular & New Suppliers) then it will be presumed that bidder has not quoted for that particular rating.

Yours faithfully,

Signature & Seal of company,

In the capacity of duly authorized to sign bids for and on behalf of

Address:

==========

Annexure-F

(On supplier's Letter Head)

I, ... certify that,

The business dealings with our firm / agency M/s…….. and its sister concern/Director/Partner/Proprietor have no any type of legal litigation against MSEDCL is pending in any court/Forum against/by the bidder or its sister concern/Director/Partner/Proprietor.

If it is found at any stage of tendering and order execution process then as per the tender conditions our offer will be rejected and I /We don't have any objection on the same.

I hereby certify that I am duly authorized representative of M/s.---------- whose name appears above my signature.

Bidders Name:

Authorized representative's signature:

Authorized representative's Name:

Seal of the company

Name and address of the Bidder

Date:

==========

Annexure-G

PRICE VARIATION CLAUSE

Not Applicable

==========

Annexure - H

GUARANTEED TECHNICAL PARTICULARS

As indicated in E-Tendering GTP Parameter

==========

Annexure- I

(On supplier's Letter Head)

I, ... certify that,

a. The business dealings with our firm / agency M/s…….. have not been debarred by any Ministry of GoI / GoM / state owned electricity distribution utility and still in force.

b. The Directors, Proprietors, Partners, Employee(s) or owner of our firm / agency M/s…….. have not been either jointly or severally guilty of malpractices in relation to its business dealings with the Government or MSEDCL during the last five years.

I hereby certify that I am duly authorized representative of M/s.---------- whose name appears above my signature.

Bidders Name:

Authorized representative's signature:

Authorized representative's Name:

Seal of the company

Name and address of the Bidder

Date:

==========

Annexure- J

(On MSEDCL Letter Head)

Dispatch Instructions

BY R. P. A. D. / ORD. POST /E-MAIL

(SAP CONTRACT No: ----------)

To,

M/s. ----------

Email: ----------

Sub: Supply of ---------- against A/T No. ---------- dt. ----------

Ref: Final Inspection Call letter No. ---------- dt. ----------.

(I.W. Regn. No. ------- dt. ----------)

Your readiness of material letter no. …….. dtd……..

Dear Sir,

With reference to the above, you are requested to dispatch …….. transformers as given below:

Sr. No.	Consigned to	Meant for Circle	Meant for Zone	Qty. in Nos.

Further, you are requested to contact concerned S.E. (O&M) Circle / E.E. (O&M) Division / Addl. E.E. (MM Section) before dispatching / unloading the above material.

This is issued without prejudice to all other terms and conditions of the order.

Yours Sincerely,

Chief Engineer (M M Dept.)

Copy f.w.cs.to: The C.E., MSEDCL, ----------.

Copy to:

The G.M. (F & A – SB), MSEDCL, Mumbai.

The E.E. (IW), MSEDCL, Mumbai.

The E.E. (O & M Division), MSEDCL, ----------

The Addl.E.E. (MM Section), MSEDCL, ----------

==========

Annexure- K

List of Stores

Sr. No.	Name of Stores	Address
1	Common Stores Ahmednagar	Nagar-Pune Road, Opp. Arti Hotel, Kedgaon, Ahmednagar.
2	Common Stores Airoli	Power House, Thane-Belapur Road, Airoli, Navi Mumbai.
3	Common Stores Akola	Major Store Babhulgaon NH No 6 Akola.
4	Common Stores Amravati	Major Store MSEDCL Power House, Mulshi Road, Amravati.
5	Common Stores Aurangabad	MIDC Plot No. J-13, Opp. Garware Stadium, Naregaon Phata, Chikhalthana, Aurangabad.
6	Common Stores Beed	Near 132 kV Sub-station, Idgah Nagar, Nalvandi Naka, Beed.
7	Common Stores Chandrapur	Near Vidyut Bhavan, Bagala Chaowk, Babu Peth, Chandrapur.
8	Common Stores Jalgaon	Old MIDC Area, Behind Ajanta Lawns, Ajanta Road, Aurangabad Highway, Jalgaon.
9	Common Stores Kalyan (Netivali)	MIDC Phase 1, Near Tata Power House, Kalyan - Dombivali Road.
10	Common Stores Kamptee	Maldhakka Godown, Behind Railway Station Kamatee, Nagpur.
11	Common Stores Khamgaon	Manav Dharm Bld. Near 132 kV Sub-Station, Shegaon Road, Khamgaon, Dist. Buldhana.
12	Common Stores Kolhapur	Kaneri Math Road, A/P Gokulshirgaon, Tal. Karveer, Dist. Kolhapur.
13	Common Stores Kudal	Malwan Road, MIDC Pinguli-Nerur, Kudal, Sidhudurg.
14	Common Stores Latur	MIDC Plot No. P-21/P, In Front of Kirti Gold Oil Mill, Latur.
15	Common Stores Mulshi	Phursungi-Saswad Road, Near Overhead Bridge, Mulshi/ Phursungi, Dist. Pune.
16	Common Stores Nanded	Taroda Naka Main Road, Nanded.
17	Common Stores Nashik	Aringale Plot, Hanuman Nagar, Jail Road, JunaSaykheda Road, Panchak, Nasik.
18	Common Stores Osmanabad	Near MSEDCL Rest House, Tuljapur Road, Osmanabad.
19	Common Stores Palghar	Near 33/11 kV Sub-Station, MSEB Coloney, Boisar Road, Palghar.
20	Common Stores Parabhani	Old Power House Jintur Road, Parbhani.
21	Common Stores Ratnagiri	MIDC Area Mirjole, Kuwarbav, Ratnagiri.
22	Common Stores Sangli	Near Walchand Engineering College, VishramBaug, Sangli.
23	Common Stores Satara	A/P Satara, Tal. Koregaon, Dist. Satara.
24	Common Stores Solapur	Plot No P-4, MIDC Chincholi, Behind Post Office, Solapur
25	Common Stores Tumsar	Near Power House, Nakaq Dongari Road, Old Bus Stop, Tumser, Bhandara.
26	Common Stores Yavatmal	MIDC Lohara, Yavatmal.

==========

ANNEXURE – L

Format for Inspection Call Readiness of Material

Ref. No. **Date:**

To,
The CE (MMD),
Prakashgad, Bandra (E),
Mumbai - 400051.

Sub: Inspection Readiness of material against A/T No. ---------- dated. ---------- for Supply of ----------.

……

1. Brief description of the material Offered for inspection:
2. Reference of drawing Approval :
3. a) Reference of approval of type test:
   b) Reference of approval of balance type test (If applicable):
4. Whether it is a joint inspection with Testing SE (TQA) etc. (if applicable):
5. a) Whether Performance Deposite has been paid against the order:
   b) if paid, please give details:
6. Sr. No. of the items as per A/T:
7. Total Quantity of the items Ordered:
8. Total quantity of the items inspected so far:
9. a) Quantity monthly committed in delivery schedule:
   b) Lot No. for which the Quantity is offered for inspection now:
   c) Due date of delivery as per A/T for offered quantity:
10. Date of readiness of Material:
11. Complete address of the factory where materials is to be inspected:
12. Name of the person to be contacted in connection with inspection & his Office/Factory/Residence Tel. No.:
13. Staggering holiday of Factory/Office at the place of inspection:
14. a) Whether Dispatch Instructions are available (Say Yes or No):
    b) Quote Letter No.:
    c) Brief destination & Qty. per consignee of this present lot offered:
15. Last visit of our Inspecting Officer:
16. a) Whether the entire material is dispatched against last inspection. (Our EE[IW] will ensure before inspection of this lot that the earlier inspected lot is already dispatched)
    b) Quantity dispatched
17. Further programme of production Quantity likely to be offered & by what date:

Authorized Signature
For (Name of the Firm).

==========

ANNEXURE – M

BANK GUARANTEE FORMAT

EARNEST MONEY DEPOSIT BANK GUARANTEE AGAINST TENDER

B.G. No. & DATE:

The Bank of _____(full address of Branch) hereby agree unequivocally and unconditionally to pay, at Mumbai within 48 hours, on demand in writing from the MAHARASHTRA STATE ELECTRICITY DISTRIBUTUION CO. LTD. (name of the company formerly known as M.S.E.B.) on behalf of M/s _____(Address as per MSEDCL REGISTRATION) who have tendered and/or contracted or may tender or contract hereafter for supply of materials. Equipments or services to the MAHARASHTRA STATE ELECTRICITY DISTRIBUTUION CO. LTD. against Tender No. ---------- dated ---------- total value of Tender is Rs. ----------

This agreement shall be valid and binding on this Bank up to and including validity (date) and shall not be terminable by notice or any change in the constitution of the Bank or the firm of contractors or any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made given conceded or agreed with or without our knowledge or consent by or between parties to the said within written contract. The validity of this Bank Guarantee will be extended by us for the further period of six months, one month prior to its present validity period at the request of MAHARASHTRA STATE ELECTRICITY DISTRIBUTUION CO. LTD.(name of the company-formerly known as M.S.E.B.).

In case of any dispute arising out or it connection with the extension or encashment of Bank Guarantee, the Courts in Mumbai will have jurisdiction.

Our liability under this Guarantee is restricted to Rs.----------/- (Rupees---------- only). Our Guarantee shall remain in force until (date). Unless a suit or action to enforce a claim under the guarantee is filed against us within six months from the aforesaid date, all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liability there under.

Place:

Date: Sign----------

For----------

(Banker's Rubber Seal & Bank Code No. of signatory)

Please note that:

1. The value of non-judicial stamp paper for this Bank Guarantee is Rs.200/- should be purchased in the name of Guarantor Bank.
2. The Bank Guarantee should be furnished from any Scheduled Bank/Nationalized Bank.
3. Please state the full and complete postal address of the Bank undertaken the guarantee.
4. The Bank Guarantee may be valid as per terms and condition of A.T.
5. B.G. should be submitted along with covering letter of Bank.

==========

ANNEXURE – N

BANK GUARANTEE FORMAT

FORM OF BANK GUARANTEE FOR THE PERFORMANCE OF THE EQUIPMENT

B.G. No.& Date:

This deed of Guarantee is made this ……..day of……. By……branch having at H.O. at…….. (here in after called "the Surety" which expression shall where the context so admits include its permitted assign) in favour of MAHARASHTRA STATE ELECTRICITY DISTRIBUTUION COMPANY LTD. (name of the company formerly known as M.S.E.B.) being a government company formed as per the provisions of the Maharashtra Electricity Reforms Transfer Scheme. 2005 having its registration no. U40109 MH 2005 SGC 153645 (here in after called the "Creditor" which expression shall include its permitted assigns). WHERE AS M/s. (Name of Party)…….. (Postal address as per A/T) have entered into a contract to supply (Name of Material) to the MAHARASHTRA STATE ELECTRICITY DISTRIBUTUION COMPANY LTD. (Name of the Company formerly known as M.S.E.B.). vide contract No. ……dtd……..on the terms and conditions in the said contract. (here in after for brevity sake called "the said contract").

In accordance with terms of the said contract, the creditor has agreed to pay to M/s……..(|Name of Party)……. the said sum representing the 5% of the total contract price for the Rs……../- and WHEREAS M/s. …….. (Name of Party)…….is required under the terms of contract to furnish a Bank Guarantee for Rs……../- (Rupees:…….Only) the said sum representing the 5 % …….price as given in the said contract.

The surety as he requests of M/s. ……(Name of Party)…. has agreed to give this guarantee.

NOW THEREFORE THIS DEED WITNESS AS FOLLOWS:

1. In consideration of the creditor agreeing to make to the debtor at Mumbai the payment of Rs…….. (Rupees……only) being the value of 10% of the total contract ……price as given in the said contract on supplying the complete material as per the contract by the debtor failing which the surety does undertake to pay to the creditor on demand such amount of amounts as the surety may be called upon to pay not exceeding in the aggregate sum of Rs. ……../- (Rupees……..only).
2. The surety hereby guarantee to the creditor the due performance and observance by the debtor of the terms and conditions of the contract.
3. The surety also agrees that it shall not during the currency of the guarantee herein given or during the period of its execution revoke the same even by giving notice to the creditor.
4. On account of the non-fulfillment of the contractual obligation by the debtor or in case the surety or contractor do not renew this guarantee bond as herein provided, the surety will on simple demand from the creditor, pay at Mumbai the creditor, the sum of Rs……..(Rupees …… .only) as indicated under clause -1 above, without demure and without the creditor to invoke any legal remedy that may be available to them to compel the surety to pay the same even if the debtor consider such demand of the creditor unjustified.
5. The surety agrees and declares that notwithstanding anything contained in Section 133 to 135 of the Indian Contract Act 1872 (IX of 1972) or any other rule of law or equity in the view of any variance in the terms of the said contract shall not operate as a discharge of

his obligations hereunder or shall any composition made by the creditor with debtor in respect of any breach of the terms and conditions of the said contract operate as a discharge of the surety's obligation and surety further expressly agrees and declares that though as between the creditor and surety, the surety shall be liable for sum payable or falling due hereunder equally with the debtor and the surety save as otherwise herein provided hereby waives all his rights which he might as guarantor be entitled to claim and enforce.

6. The decision of the creditor that any sum has become payable shall be final and binding on the surety.
7. The guarantee shall come into force on supply of material shall remain in force till the end of ……(date) ….The surety, at the request of the creditor shall extend the validity of the Bank Guarantee for a further period of 12 months, one month prior to its present validity period.
8. In case of any dispute arising out of or in connection with the extension or encashment of the Bank Guarantee, the courts in Mumbai will have the jurisdiction.
9. The guarantee herein contained shall not be effected, by the change in the constitution of the surety or the debtor.
10. Our liability under this guarantee is restricted to Rs. ……..(Rupees……only) and our guarantee shall remain in force until (Date….) unless a claim under this guarantee is lodged with us within six months from the date of expiry of guarantee i.e. on or before ..(date)…all your rights under this guarantee shall be forfeited and we shall be relieved and discharged from all our liabilities there under.

IN WITNESS WHERE OF THE surety has executed this deed in presence of

Place: Signature……..

Date: for……..

(Banker's Rubber Seal & Code No. of signatory)

Witnessed (2 witness is required from bank only)

1) Name & Address

   Signature

2) Name & Address

   Signature

Please Note:

1. The value of non-judicial stamp paper for this bank guarantee is Rs. 200/- should be purchased in the name of Guaranteed Bank.
2. The bank guarantee should be furnished from any Scheduled bank
3. Please state the full and complete postal address of the bank undertaking the guarantee.
4. B.G. may be valid as per terms of A/T including guarantee period of material.
5. B.G. should be submitted along with covering letter of Bank.

==========

SCHEDULE C

Quantity Offered at Column No. 6 of Annexure-'B' (Price Schedule):

Sr. No.	Item Code	Material Description	Quantity Tendered in Nos.	Quantity Offered at Column No. 6 of Annex-'B'(Price Schedule) in Nos
1	2	3	4	5
1				
2				
3				

Seal & Signature of Supplier

==========

FORMAT 1

ANNEXURE – U-I

"INDEMNITY BOND"

UNDERTAKING TO BE SUBMITTED BY THE PARENT COMPANY SITUATED ABROAD IN CASE OF THE PARTICIPANT BIDDER WHO IS AN INDIAN BASED SUBSIDIARY ON GENERAL STAMP OF `200.00.

The Chief Engineer,
Maharashtra State Electricity Distribution Co. Ltd.,
Material Management Department,
1st Floor, Prakashgad, Bandra (E),
Mumbai – 400 056.

Dear Sir:

Sub: Undertaking against Tender No. _____ for procurement of _____

We, M/s. _____ having registered office at _____ are the Parent Company of M/s. _____ who have participated against your tender no. _____ for procurement of _____.
We have carefully read and have thoroughly understood and agree to the terms and conditions of the subject tender.

We hereby undertake that in case of placement of order against the subject tender on our subsidiary company, M/s. _____, in the event of we accept all the responsibilities and liabilities for supply of quality equipments as per specification of the tender and execution of the contract. We further hereby undertake that we shall be responsible for any liability arising out of the contract placed on M/s. _____ and to pay MSEDCL on demand the sum of rupees as per agreement in the event of any breach of condition of the purchase order, loss and damage of the material till expiry of guarantee period as stipulated in the order.
Our liability here under shall not be impaired or discharged by extension of time or variation or alteration made with or without our knowledge or consent by or between the parties to the said contract. This undertaking shall be valid and binding on us upto and including the execution and guarantee period of the order and shall not be terminable by notice or change in the constitution of any of the companies. In case of any dispute arising out of or in connection with this tender or contract, if concluded, the same shall be subject to the exclusive jurisdiction of the **"Court in Mumbai (India)."**

Yours faithfully,

(Authorised Signatory)
For _____

==========

FORMAT-2

Undertaking for not approached any one for undue influence.

(To be submitted on letter head of the bidder)

Tender No. MMD/T-…… for supply of ……..

TO WHOM SO EVER IT MAY CONCEREN

I / We _____ hereby submit the undertaking that our firm or our partners or directors have not approached any one for undue influence against the Tender/Bid.

If it is found that we have given wrong or misleading information then our offer shall be summarily rejected.

Date:
Place:

(Signature, Name of Authorized Representative & Company Seal)

==========

FORMAT-3

Format of Certificate from Chartered Accountant for not have controlling stake in more than one entity applied for the Tender/Bid.

(To be submitted on Letter Head of the Chartered Accountant)

Tender No. MMD/T-…… for supply of ……..

TO WHOM SO EVER IT MAY CONCEREN

I _____ hereby certify that the firm M/s _____or its partners or directors does not have controlling stake in more than one entity applied for the Tender/Bid.

If it is found that they have given wrong or misleading information then their offer shall be summarily rejected.

Date:
Place:

(Seal, Signature & Name of C.A.with Regn. No. & UDIN No.)

==========

FORMAT-4

Format of Certificate from Chartered Accountant for Average Annual Turnover
(To be submitted on Letter Head of the Chartered Accountant)

Tender No. MMD/T-…… for supply of ……..

TO WHOM SO EVER IT MAY CONCEREN

We have examined the audited financials of M/s_____, having its registered office at _____, for the financial years. Based on our examination, we hereby certify that Annual Turnover for respective financial year mentioned below is in accordance with the audited financial statements:

Financial Year	Assessment Year	Annual Turnover Amount In Rupees Lakhs.
Total. Rs.		
(Rs. .. …Figure in words)		
Average Annual Turnover Of Last Three Financial Years		

This certificate is given on the basis of copy of audited financial reports for profit/loss account and balance sheet.

Date:
Place:

(Seal, Signature & Name of C.A. with Regn. No. & UDIN No.)

==========

FORMAT-5

Format for No Deviation Form

(To be submitted on letter head of the bidder)

Tender No. MMD/T-…….. for supply of ……..

CERTIFICATE FOR NO DEVIATION

We, (Bidder's Name), hereby certify that there is no technical or commercial deviation from the Conditions mentioned in Tender Document and I am agreeing to all the terms and conditions mentioned in the Tender Specification.

Bidders Name:
Authorized representative's signature:
Authorized representative's Name:
Seal of the company
Name and address of the Bidder
Date:

Annexure 'B'(Price Schedule)

Sr.No	Item Code	Material Description	Unit	Quantity Required	HSN	Quantity Offered	Unit ExWorks including packaging charges but excluding duties & taxes etc (In Rupees)	Freight Charges Per Unit (In Rupees)	Transit Insurance Charges Per Unit (In Rupees)	Integrated GST for outside State Transaction on (Ex-Works Price+Freight Charges + Transit Insurance Charges)(In Rupees)	Central GST for within State Transaction on (Ex-Works Price + Freight Charges + Transit Insurance Charges)(In Rupees)	State GST for within State Transaction on (Ex-Works Price + Freight Charges + Transit Insurance Charges)(In Rupees)	Free Door Delivery Price Per Unit by Road upto Destination/Stores/Sub Station (In Rupees)
1	2	3	4	5	6	7	8	9	10	11	12	13	14=(8+9+10+11+12+13)
1	20456302533	315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP	NO	50	85042100								
2	20456302613	315KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP	NO	15	85042100								
3	20456302703	630KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP	NO	20	85042100								
4	20456302883	630KVA,22/0.4KV3phDT/ID/Cu/DryType/	NO	25	85042100								

Annexure 'B'(Price Schedule)

Sr.No	Item Code	Material Description	Unit	Quantity Required	HSN	Quantity Offered	Unit ExWorks including packaging charges but excluding duties & taxes etc (In Rupees)	Freight Charges Per Unit (In Rupees)	Transit Insurance Charges Per Unit (In Rupees)	Integrated GST for outside State Transaction on (Ex-Works Price+Freight Charges + Transit Insurance Charges)(In Rupees)	Central GST for within State Transaction on (Ex-Works Price + Freight Charges + Transit Insurance Charges)(In Rupees)	State GST for within State Transaction on (Ex-Works Price + Freight Charges + Transit Insurance Charges)(In Rupees)	Free Door Delivery Price Per Unit by Road upto Destination/Stores/Sub Station (In Rupees)
1	2	3	4	5	6	7	8	9	10	11	12	13	14=(8+9+10+11+12+13)
		5yGP											
5	20456303003	1000KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP	NO	5	85042100								

Delivery Details
[Delivery must in the units specified for the items as per Price Schedule]
First lot of ___ in assorted sizes will be delivered within 2 Months from the date of LOA Award.After this period supply will be completed at the rate of ___ in assorted sized per month

Confirmation Details
We Confirm The Following :
I) Goods and Services Tax(GST) i.e Integrated GST / (Central GST+ State GST):
The GST is included in our prices quoted in price bid (Central GST+ State GST) for within Maharashtra State/Integrated GST for outside State and we shall not charge any additional amount towards Integrated GST / (Central GST+ State GST), during currency of contract except statutory variation by Central / State Government in normal (full) rate of Integrated GST / (Central GST+ State GST), in case of Integrated GST / (Central GST+ State GST) Rate is increased. In case the Integrated GST / (Central GST+ State GST) is decreased than the rate indicated in the price bid, the benefits of the reduction in the Integrated GST / (Central GST+ State GST) shall be passed on to the Purchaser.The increase in the Integrated GST / (Central GST+ State GST) rate due to increase in turnover during the contractual delivery period shall not be charged to the Purchaser .If the Integrated GST / (Central GST+ State GST) is not payable at present,we shall not charge the same, if it becomes applicable during the currency of contract due to expiry / withdrawal of tax concessions and incentives during the currency of contract except for statutory variation by Central / State Government.
(i) Necessary documentary evidence for the GST claimed by us shall be submitted along with the bills.
(ii) We here by declare that while quoting the price in the Price Bid, we have taken into account the entire credit on inputs available under the GST Act.

Technical Specification Item: 315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP

Maharashtra State Electricity Distribution Company Limited

SPECIFICATION NO.MMC: MSC/DB/01 /2018

TECHNICAL SPECIFICATION

For

315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP

For

DISTRIBUTION SYSTEM

IN

MSEDCL

MATERIAL SPECIFICATIONS CELL

TECHNICAL SPECIFICATION

OF

100 KVA ,200kVA, 315kVA, 630 kVA, 1000 KVA ,1250 KVA , 1600 kVA,2000 KVA and 2500 KVA , 11/0.433 kV & 22/0.433 kV DRY-TYPE (VPI) DISTRIBUTION TRANSFORMERS (Indoor and Outdoor)

TECHNICAL SPECIFICATION OF 100 kVA to 2500 kVA , 11/0.433 kV & 22/0.433 kV DRY-TYPE (VPI) DISTRIBUTION TRANSFORMERS (Indoor and Outdoor).

I N D E X

1 Scope:

1.1 The specification covers design manufacture, testing packing and delivery of 3 phase 50 Hz, Dry Type (VPI) distribution transformer of ratings 100, 200,315,630,1000,1250 , 1600 And 2500 kVA, 11/0.433 kV & 22/0.433 KV (Indoor and Outdoor type) Natural Air Cooled (ANAN) , conforming IS 2026 (Part-11).

1.2 The equipment offered shall be complete with all necessary parts for effective and trouble-free operation in the distribution system. Such parts will be deemed to be within the scope of the supply irrespective of whether they are specifically indicated in the commercial order or not.

1.3 It is not the intent to specify herein complete details of design and construction. The equipment offered shall conform to all relevant standards and be of high quality, sturdy, robust and of good workmanship and complete design in all respects. The equipment shall be capable to perform continuous and satisfactory operations in the actual service conditions at site and shall have sufficiently long life in service as per statutory requirements.

1.4 The manufactures attention in respect to the restricted cooling/air circulations available and poor ventilation inside vaults/basement and enclosed rooms where the transformers are required to be installed. The maximum surrounding temperature at these locations is about 55 ^{o}C.

1.5 The insulating materials shall be suitably processed such that in effect they act as fire retardant.

1.6 The Tenderer /supplier shall bind himself to abide by these considerations to the entire satisfaction of the purchaser and will be required to adjust such details at no extra cost to the purchaser over and above the tendered rates and prices.

1.7 Tolerances:

Tolerances on all the dimensions shall be in accordance with provisions made in the relevant IEC/Indian standards and in these specifications. Otherwise the same will be governed by good engineering practice in conformity with required quality of the product.[

2 System Particulars:-

2.1 The transformers shall be suitable for outdoor/indoor installation with following system particulars and should be suitable for service under fluctuations in supply voltage as permissible under Indian Electricity Act & Rules thereunder.

2.2 Nominal System Voltage : 11kV or 22kV

2.3 Corresponding Highest System Voltage : 12kV or 24kV

2.4 Neutral Earthing : Solidly earthed.

2.5 Frequency : 50 Hz with ± 3 %Tolerance

3 SERVICECONDITIONS:

3.1 Equipment to be supplied against the specification shall be suitably design to work satisfactorily under following tropical conditions:-

i Max. ambient air temperature : 50 °C

ii Max. daily Avg. ambient air temperature : 40 °C

iii Max. relative humidity : 100 %

iv Max.annual rain fall : 1450 mm

v Max. wind pressure : 150 kg/sq.m.

vi Max. altitude above mean sea level : 1000 mtrs.

vii Isoceraunic level :50

vii Seismic level (Horizontal acceleration) : 0.3 g.

viii Climatic Condition Moderately hot and humid tropical climate conducive to rust and fungus growth.

ix Reference Ambient Temperature for temperature rise 50 °C.

3.2 The climatic conditions are prone to wide variations in ambient conditions and hence the equipment shall be suitably designed to work satisfactorily under the all conditions.

4. Applicable Standards:-

i The design, manufacture and performance of the equipment shall comply with all currently applicable statutes, regulations and safety codes.

Nothing in this specification shall be construed to relieve the tenderer off his responsibilities.

ii The transformers shall conform to IS 2026 (Part-11) amended upto date or other International Standards for equal or better performance.

iii Unless otherwise specified, the equipment offered shall conform to the latest applicable Indian, IEC, British or U.S.A. Standards and in particular, to the following:-

a.	IS 2026 amended upto date	Specification for power Transformer
b.	IS:2026 (Part-11) amended upto date	Specifications for Dry-type power transformers

c.	IS:2099 amended upto date	Specification for Bushings for Alternating Voltages above 1000 Volts
d.	IS:3347 amended upto date (part I to V)	Porcelain transformer bushings for use in normal and lightly polluted atmospheres
e.	IS 5	Colours for ready mixed paints and enamels.

Unless otherwise modified in this specification the Distribution Transformers shall comply with the Indian Standard Specification IS: 2026 amended up to date.

In case of conflict arising out due to variations between the applicable standard and the standards specified herein the provisions of this specification should prevail.

5 Specific Technical requirement:

5.1 Standard kVA Ratings:-

5.1.1 The standard ratings of transformers shall be 100,200, 315, 630, 1000,1250,1600,2000 & 2500.

5.2 Nominal voltage ratings

i Primary voltage - 11 kV & 22 kV

ii Secondary voltage- 0.433 kV

5.3 The windings of the transformers shall be connected to Delta on the primary side and star (Y) on the secondary side. The neutral of the LT winding shall be brought out to a separate terminal. The vector group shall be Dyn-11.

5.4 For all above rating and voltage class transformers the percentage impedance at 75 °C should be 5 % (subject to IS tolerance) up to 1000 kVA and above it should be 6.25 % (Subject to IS tolerance).

5.5 Temperature Rise:

The temperature rises of windings, core and metal parts of transformers designed for operation at altitudes not exceeding those given in 3.1, shall not exceed the limits specified in Table 4 when tested in accordance with Clause 17 of IS:2026 (Part-11).

i. As per IS:2026 (Part-11). The winding temperature rise over an ambient temperature of 50 °C shall not exceed 90 °C measured by resistance method. i.e. Max. Temperature of the winding shall not exceeds 140°C.

ii Core, metallic parts and adjacent material shall in no case reach a value that will damage these material or reduce their life expectancies.

6 Design &construction

6.1 Core

i. The core shall be of high grade cold rolled grain oriented (C.R.G.O) annealed silicon steel lamination, having low loss and good grain properties, coated with insulation, bolted together to the frames firmly to prevent vibration or noise. All core clamping bolts shall be effectively insulated. The complete design of core must ensure permanency of the core losses with continuous working of the transformers.

ii. Core Insulation shall be conforming IS: 1271/1958 ' classification of insulating material for electrical machinery and apparatus in relation to their thermal stability in service. Carlite insulation for core laminations shall be provided. The core and winding assembly shall be impregnated process under vacuum pressure in Varnish.

iii. The core is to be securely clamped with heavy structural angle and should hold the entire core and coil assembly in place to ensure most efficient magnet circuit and quiet functioning of the transformer.

iv. The successful bidder, shall be required to submit the manufacturer's test report showing the Watt Loss per kg and the thickness of the core plate, to ascertain the quality of Core materials.

v. The purchaser reserves the right to get tested at any Government recognized laboratory.

vi The transformer core shall not be saturated for any value of V/f ratio to the extent of 112.5% of the rated value of V/f ratio (i.e. 11000 / 50 or 22000/50) (due to combined effect of voltage and frequency) upto 12.5% without injurious heating at full load conditions and will not get saturated. The bidder shall furnish necessary design data in support of this situation.

6.2 Flux density:-

Flux density should not be more than 1.55 Tesla at the rated voltage and frequency. The maximum flux density at 112.5 % voltage and frequency shall not Exceed 1.9 Tesla. The value of the flux density allowed in the design shall be clearly stated in the offer along with graph.

6.3 The No Load current shall not exceed 1.5 % of the full load current. The no load current shall not exceed 3 % of the full load current in LV Winding when the applied voltage is 112.5%.

6.4 Core clamping:

a. M.S channel 125 mm x 65 mm for 100 &200 kVA, 150 x 75 mm for 315 & 630 kVA transformer and 200 X 75 mm for 1000 kVA ,1250 KVA

, 1600 Kva,2000 KVA &2500 KVA transformers on Top and Bottom.

b. 16 mm dia, 2 nos High Tensile Bolts for 200 & 315 kVA and 20 mm dia, 2 nos High Tensile Bolts for 630,1000,1250 1600,2000 &2500 kVA in parallel at each end will be used.

c. The top yoke channels to be reinforced by adequate size of M.S. flat with thickness not less than 6 mm, at equidistance if holes cutting is done for LT lead so as to avoid bending of channel.

d. MS channels are to be painted by heat resistant paint.

6.5 Tie bolts:

a. 8 nos. of tie rods of 20 mm. dia. high tensile steel in vertical formation.

b. All top and bottom yoke nut bolts, if any, shall be MS and painted with heat and corrosion resistant paint before use.

c. Drawing of the building of core to be approved before start of work.

d. The base channels of the core shall not be cut channel.

6.6 Winding

A. HV & LV winding:

i. Material – High conductivity Electrolytic copper.

ii. **LV Winding -** Conventional spiral winding should be in even layers, so that Neutral shall be formed at top.

iii. **Winding Insulation (HV/LV**) – Insulation –F-Class grade insulation paper of thickness 20 mils (0.5mm) shall be used and make should be clearly stated in the offer along with test certificates.

iv. Coil spacers and duct – For sectional winding high temperature Epoxy fiberglass or porcelain and for disc winding epoxy fiberglass (Minimum class F insulation & above) shall be used.

v. The inter –turns and end –turns of the HV & LV windings shall be insulated for protection against surges and transients.

B. Internal Connections:

a. H. V.Winding.

i. In case of H. V. winding all jumpers from winding to bushing shall have cross-section larger than winding conductor.

ii. Inter- coil connection shall be by crimping and brazing.

iii. In case of Copper Winding Delta joints shall be with Brazing only.

iv. Lead from delta joints shall be connected to bushing bus by brazing only.

v. Lead from bushing bus bar to cable box bushing rod shall be bolted.

vi. H. T. Line Bus shall be of EC grade copper flat having a cross – section of 25 X 6 sq.mm.

b. L. V.Winding.

i L. T. Star point shall be formed of Copper. Flat of sufficient length and cross section. Lead from winding shall be connected to the copper flat by brazing. Any other arrangement shall be subject to the approval of the Chief Engineer (Testing).

ii Transformer L. T. winding connection to bus bar shall be by Brazing.

iii L. T. Bus Bar used shall be suitable size & rating of Bushing /Insulator.

Lead from L. T. bus bar to cable box bushing shall be bolted. Use copper jumper of appropriate size of copper jumper. L. T. Line Bus Bar current density shall be 1.4 A /Sq. mm maximum.

6.7 Current Density:

6.7.1 Current density in HV and LV windings (Copper) should be maximum 1.4 A/sq.mm. (However, ± 5 % tolerance for LV winding is permissible).

6.7.2 ON Load Taps:

a. The standard tapping ranges, when taps are provided, shall be as follows: Winding tapped : HV

b. Number of tap positions : 7

c. Voltage variations : (+) 5 percent to (-) 10 percent in steps of 2.5 % for variation of HV Voltage.

6.7.3 For rating 1000 kVA and above ON Load tap changers shall be provided for variation of HV voltage from (+) 5% to (-)10 % in steps of 2.5 %.

6.7.4 The standard tapping range and tapping steps arrangement shall not be required up to 630 KVA capacities.

6.7.5 Tapping Method: Off circuit tap-changing arrangement shall be either by means of links or by means of an externally-operated switch with mechanical locking device and a position indicator. Arrangement for pad-locking shall be provided.

6.7.6 Tap changing shall be carried out by means of an externally operated self position switch and when the transformer is in de-energised condition switch position No.1 shall correspond to the maximum plus tapping. Each tap change shall result in variation of 2.5 % in voltage. Provision shall be

made for locking the taping switch handle in position. Suitable aluminium anodized plate shall be fixed for tap changing switch to know the position number of tap.

6.7.8 The Transformer shall be capable of being operated without danger on any tapping at the rated kVA with voltage variation ± 10% corresponding to the voltage of that tapping.

6.8 **Losses**:

6.8.1 The No Load & Full Load losses of transformers of 100,200, 315, 630, 1000 ,1250,1600,2000 &2500 KVA, 11 kV & 22kV class transformers at rated voltage at rated frequency are specified as shown in Table -1 as below subject to tolerance as per relevant IS: 2026.

TABLE - 1

Rating in KVA	Voltage Ratio in Volts			
	11000/ 433		22000/ 433	
	No load losses in watts.	Load losses in watts at 75 deg.C	No load losses in watts.	Load losses in watts at 75 deg.C
100	430	1600	480	1750
200	550	2350	600	2500
315	900	3200	950	3400
630	1250	3800	1350	4000
1000	1600	4600	1700	4850
1250	1800	6300	1900	6650
1600	2150	8300	2250	8750
2000	3000	9000	3200	9500
2500	3500	12000	3700	12600

6.8.2 The values given in G.T.P. for flux density, no load current at rated voltage, no load current at 112.5% of rated voltage and no load loss at rated voltage shall be individually meet.

6.9 Clearances:

a. The minimum electrical clearance between the winding and body of the enclosure (between inside surface of the enclosure and outside edge of

the winding) should be 100 mm. in case of 11 kV class and 150 mm in case of 22kV class transformers.

b. End insulation to earth

11 kV - 120 mm for all above rating transformers.

22 kV – 165 mm for all above rating transformers.

c. Thickness of locking spacers and thickness of comb teeth between.

HV coils – Minimum 10 mm. for 200, 315, 630 kVA and 15 mm for 1000 ,1250&1600 kVA transformers and 20 mm for 2000 & 2500 KVA , If Disc Winding between disc min 4 mm blocks

d. Tap lead shall be insulated.

Inspection of winding prior to assembly and connection shall be carried out. Manufacturing drawing for the transformer showing various clearances will have to be got approved from the M.S.E.D.C.L.

e. Minimum external Clearances of Bushing Terminals:

i) For OUTDOOR type transformers

		11 kV	22 kV
HV	PH to PH	255 mm	325
	PH to E	205mm	240
LV	PH to PH	75 mm	75
	PH to E	50 mm	50

ii) For INDOOR TYPE Transformer (as per CBIP manual)

		11 kV	22 kV
HV	Ph to Ph	130 mm	241 mm
	Ph to E	80 mm	140 mm
LV	Ph-to-Ph	25 mm.	25 mm
	Ph to E	20 mm.	20 mm

6.10 Transformer Enclosure

The T/F enclosure shall be of robust construction and shall be built of electrically welded MS sheet wire mesh or perforated sheet for ventilation. All joints of enclosure and fitting shall be tight. The enclosure design shall be such that the core and winding can be lifted freely. The enclosure plates shall be of such strength that the complete transformer may be lifted bodily by means of the lifting lugs provided. The top cover shall have no cut at

point of lifting lug.

The shape of the enclosure shall be rectangular only. No other shape will be accepted. The enclosure will be fabricated by welding at corners. The enclosure should comply with IP 43 protection as per IS: 2147/IEC 529 amended up to date. Horizontal or vertical joints in the enclosure side walls or its bottom or top cover will be allowed. The bottom plate of the enclosure shall be 2.5mm thick min and holes of 2.5 mm of diameter punched sheet for free air circulation.

A	Side wall thickness	2.5 mm.
B	Top and bottom plate thickness	2.5 mm
C	Lifting lugs	4 Nos. of heavy-duty eye bolt/lifting lugs suitable reinforces by vertical support shall be provided to main transformer core and winding assembly. 2 Nos. of heavy-duty eye bolt/lifting lugs of adequate size to transformer enclosure shall be provided.
D	Pulling lugs	4 Nos. of heavy duty pulling lugs shall be provided to pull the transformer horizontally.
E	Top cover-fixing bolts	GI nut bolts of ½" dia./screws with one plain washers shall be used for top cover fixing, spaced at 9"apart.
F	Bi- directional rollers of mild steel	4 Nos. 150 mm. diameter and 75mm. width for 200 & 315 transformers and 200 mm dia & - 75 mm width for 630KVA, 1000 KVA,1250 KVA, 1600 KVA , 2000 KVA & 2500 KVA Transformers
G	Transformer Base Channel	100 KVA – 75 X 40 mm MS Channel 200 KVA – 100 x 50 mm MSchannel. 315 KVA – 150 x 75 mm MSchannel. 630 KVA – 150 x 75 mm MS channel. 1000 kVA - 200X 75 mm MS Channel. 1250 KVA -200 X 75 mm MS

		Channel 1600 kVA – 200X 75 mm MS Channel. 2000 KVA – 200 X 75 mm MS Channel 2500 KVA – 200 X 75 mm MS Channel

7 H. T. & L. T. BUSHING:

7.1 a. Transformers HV and LV Bushings of Porcelain/ Epoxy of appropriate voltage and current ratings shall be mounted on opposite side of transformer tank in HV and LV cable box. The high voltage bushings (3nos.) shall be provided with R-Y-B colour coding marking & shall conform to IS 3347 amended upto date and IS 2099 amended upto date.

b. The low voltage bushings shall conform to IS 3347prat 1/sect 1up to date amended. Alternatively, the low voltage cable box shall be made suitable for adoption of single core XLPE cables for 11 kV transformers.

c. 12 kV rating & for 22 kV transformers, 24 kV rating HV Bushings shall be used and for 433 volts, 1 kV LV Bushings shall be used.

d. Bushings of the same voltage class shall be interchangeable. Bushing with same plain shades as per IS 3347 amended up to date shall be mounted on the side of the enclosure and not on the top cover.

e. All HV and LV bushing shall be remain parallel and equidistance throughout. Bushing having type tested as per IS 3347 amended up to date shall only acceptable.

7.2 Minimum creepage distance for all HV or LV bushings shall not be less than 25 mm per kV.

8 HV/LV CABLE BOXES FOR 100/200/315/630/1000/1250/1600/2000/2500 kVA

A. INDOOR TYPE TRANSFORMERS:

a. H. T. & L. T. terminal for cable connections shall be brought out through side wall mounted Bushing to a cable end box.

b. Cable end box shall be self-supporting, weatherproof, air filled type with sufficient space inside for termination and connection of cables.

c. Cable end box shall be furnished complete with removable gland plate, double compression brass glands.

d. In general, the arrangement shall be such as to permit of core & coil assembly without dismantling the cable installation.

i. Suitable arrangement for HV side box and LV side box shall be provided. The LV cable box shall be suitable for terminating the cable, which will approach the boxes vertically from the bottom. The cable box shall be suitable for being detached from the main body with suitable mounting arrangement. The HV and LV cable box shall be fixed on the opposite sides.

ii. The HV and LV cable box shall be fixed on the opposite sides.

e. Rectangular shaped, M.S. Sheet thickness 2 mm , weather , vermin and dustproof HV/LV Cable box shall be fitted on opposite sides of the tank of transformer. (Indoor application) : as per details given below.

i. For 22kV and 11kV:- Air filled cable box suitable for 3 core XLPE aluminum cables up to 300 sq.mm. & glands suitable for above cables for 0.433 kV:- Air filled Cable Box suitable to single Core 300 sq.mm. XLPE aluminum cable i.e 2 cable run/Phase & 1 cable run for neutral for 315 kVA distribution transformer.

ii. Air filled Cable Box suitable to single Core 400 sq.mm. XLPE Aluminum cable i.e 3 cable run/Phase & 1 cable run for neutral for 630 kVA dist transformer.

TABLE		
VOLTAGE	KVA	DETAILS
HV		
11000 or 22000	200,315,630,1000 ,1250 ,1600 ,2000& 2500	3 P-1G air filled cable box suitable for 3 core XLPE aluminium cables upto 300 sq.mm. & glands suitable for above cables.
LV		
433	200 & 315	4 P-2G Air filled cable box suitable to 3.5 C 240/185 sq.mm. PVC aluminum cable with copper flats fitted on LT studs to connect XLPE cable.

433	630, 1000 & 1600	4 P-3G Air filled cable box suitable to 3.5 C 300 sq.mm. PVC aluminum cable with copper flats fitted on LT studs to connect XLPE cable.

iii. for 315 kVA and above transformers, the LV Bushings shall be provided with suitable Aluminium Busbar Extensions to take off circuits with necessary nuts and bolts with resin cast support insulators. Separate Bushing for Earthing connection shall be provided to cable box with suitable wire mesh. The aluminium non magnetic gland plates shall be provided. In the case of indoor transformers, the enclosure shall be fitted with cable boxes on HV/LV sides as per the table given below.

iii. Cable gland suitable for HV/LV cable box shall be provided as follows:

Sr. No	Particulars	Cable size for H.T.	Cable size for L.T
1	200 kVA	3 core x 300 sq. mm XLPE cable	3 ½ core x 185 sq. mm. XLPE cable
2	315 kVA	3 core x 185 sq. mm XLPE cable	3 ½ core x 185 sq. mm. XLPE cable
3	630 kVA	3 core x 300 sq. mm. XLPE cable	3 ½ core x 300 sq. mm. XLPE cable
4	1000 kVA	3 core x 300 sq. mm. XLPE cable	3 ½ core x 300 sq. mm. XLPE cable
5	1600 kVA	3 core x 300 sq. mm. XLPE cable	3 ½ core x 300 sq. mm. XLPE cable

9. Bushing Terminals:

a. Brass rods 12 mm. dia. for HV Bushing terminal with necessary nuts, check nuts and plain thick tinned washers.

b. Tinned copper rods 20 mm for 100 , 200 KVA , 30 mm. dia. for 315 & 630 KVA & 40 mm dia for 1000,1250 , 1600 & 2000 kVA,& 52 mm Dia. For 2500 KVA transformer for LV Bushings terminals/extension for cable lug connections, with necessary nuts, check nuts and plain thick tinned washers.

10. <u>Terminal marking plates and ratingplates.</u>

Terminals shall be provided with terminal marking plates. The transformer

shall provide with riveted rating plate of minimum 18 SWG aluminum anodized material sheet in a visible position. The entries of the rating plate shall be indelibly marked (for example by etching, engraving or stamping).

The marking as 'M.S.E.D.C.L.' and 'Sr. No….' of Transformer will be engraved on Transformer enclosure, below L.T. Bushings.

The name of the company, order No., capacity, month and year of manufacturing shall be engraved on the enclosure of transformer just below the nameplate clearly visible. The engraving can be done on separate plate which shall be firmly welded to enclosure and shall form integral part of the enclosure.

11. Transformer Fittings:

The Fittings on the transformers shall be as under:

1	Rating and diagram plate	1 No.
2	Earthing terminals with lugs	2 No.
3	Lifting lugs	2 Nos (for enclosure) and 4 nos for core & winding assembly
4	Platform mounting channel (With holes suitable for axle of roller)	2 Nos.
5	HV & LV Bushings	3 Nos of HV and 4 Nos of L.V Porcelain/Epoxy Bushing shall be provided with P.G. clamps as per relevant IS 3347 amended up to date.
6	Rollers	4 Nos.
7	Pulling lugs	4 Nos.
8	Cable Box	Only in case of indoor type transformers , HV & LV boxes with glands and connecting sockets as per tech spec cl. 8.1 &8.2

12 Testing and Inspection:-

12.1 Routine Tests:-

i. i.All transformers shall be subjected to the following routine tests at the manufacturer's works. The tests are to be carried out in accordance with the details specified in IS 2026 (Part 11).

1. Measurement of winding resistance.
2. Measurement of Voltage Ratio, polarity and phase relationship.
3. Measurement of Impedance of voltage (principle tappings) , short circuit

impedance

4. Measurement of load losses.
5. Measurement of No load loss and current.
6. Dielectric tests (Insulation resistance).
7. Induced over voltage withstand.
8. Separate source voltages withstand.

ii. All the routine tests shall be conducted in the suppliers' laboratory at their cost.

iii Temperature Rise test of the all above rating transformers shall be conducted on selected **one** transformer from the 1st lot by Executive Engineer (Testing), MSEDCL. The temperature rise of all transformers when tested at rated current & rated voltage shall not exceed the limit. The test shall be conducted as per IS 2026 (Part-11).

iii. The calculations to confirm the thermal ability shall be submitted with the offer.

13. Type Tests:-

13.1 The transformer shall type tested successfully at laboratories accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) such as CPRI/ERDA in accordance with IS 2026 (Part-11) as amended up to date and this technical specifications, within the last 5 (five) years prior to the date of offer.

The bidder shall furnish the following type tests reports (along with Rating and Diagram Plate, General arrangement drawing, Internal Constructional drawing & Technical details (Core & Core Assembly) along with the offer.

1. Measurement of winding resistance.
2. Measurement of Voltage Ratio, polarity and phase relationship.
3. Measurement of Impedance of voltage (principle tappings) , short circuit impedance
4. Measurement of load losses.
5. Measurement of No load loss and current.
6. Induced over voltage withstand.
7. Separate source voltages withstand.
8. Lightning impulse test (on all three HV phases)
9. Temperature rise test
10. Short-circuit test
11. Partial Discharge measurement
12. Measurement of acoustic sound level.

13.2 The following type tests should be carried at the manufacturer's works invariably in the presence of M.S.E.D.C.L's representative at the time of inspection from the first lot.

i. Temperature - rise Test.

ii. Unbalanced current test – unbalanced current should not be more than 2% of full load current

13.3 The type test reports should be submitted and got approved from the Chief Engineer (Testing).

13.4 In respect of the successful bidder, the purchaser reserves the right to demand repetition of some or all the type tests in presence of the purchaser's representative. In case the unit fails in the type tests, the complete supply shall be rejected.

14. Drawings :-

14.1 A set of following drawings shall be submitted by the Bidder along with the offer:

i. General Arrangement drawing.

ii. Internal Construction

iii. Technical Details (Core & Coil assembly details) drawing.

iv. Rating & Diagram Plate Drawing.

v Details drawings of HV/LV Bushings indicating creep age distances.

vi. Dimensional drawings showing the HV & LV cable boxes.

vii. Transportation dimensions

14.2 The bidder should supply along with his offer the pamphlets/literatures etc. for fittings /accessories.

14.3 The bidder should not change design once offered as per A/T, Approved, GTP drawings and Type Test Reports.

14.4 The successful Bidders shall submit complete set of Drawings (as listed in Cl.No.23.1) of transformer indicating dimensions to CE (Testing & QC) for approval.

15 Rejection:-

15.1 Apart from rejection due to failure of the transformer to meet the specified test requirements the transformer shall be liable for rejection on any one of the following reasons.

i. No load loss and Load Losses exceeds the values mentioned in Cl.. No. 6.8 above.

ii. Impedance voltage value exceeds the Guaranteed value plus tolerances as

mentioned at Cl..No.5.4 above.

iii. If any Routine tests not passed.

iv. Type test are not carried out as per clause no. 13 of the specification.

v. Drawings are not submitted as per clause no. 14 of the specification.

vi. Any deviation in GTP submitted as per clause no. 17 of the specification.

16 Cleaning and Painting:-

i. The surface of the enclosure shall be properly pre-treated /phosphated in a seven enclosure process and shall be applied with a powder coating of 40 microns thickness. The powder coating shall be of **Aircraft Blue** colour(**shade No. 108 as per IS 5**) for enclosure of transformers. Powder coating shall be suitable for outdoor use. The seven tank process facility shall be available with supplier to enhance to ensure proper quality of powder coating.

ii The month and year of supply shall be painted in **red bold Marathi** lettering at sum conspicuous place on the transformer, which shall be clearly visible from the ground.

17 Guaranteed Technical particulars for transformers:

To be filled in and submitted by the tenderer. The specific values shall be furnished and only quoting of IS reference " as per the drawings enclosed " " as per M.S.E.D.C.L's requirement or specification" etc will be considered as details not furnished and the offer shall be rejected.

18 Testing facility

The bidder should have adequate testing facility for all routine and acceptance tests and also arrangement for measurement of losses, temperature rise, measurement of resistance, dielectric tests etc. details of which will be enumerated in the tender.

The tenderer should have **VPI plant**. M.S.E.D.C.L. Engineers will inspect and witness the process. The tenderer shall submit the details of Vacuum Pressure Impregnated (VPI) plant with offer.

The offer shall stand rejected if any of the Minimum Testing & Manufacturing Facilities as above in good working condition at the time of factory inspection are not available.

19 Stage Inspection:-

19.1 Supplier shall give 15 days' advance intimation to the Chief Engineer (MMD) and S.E. (MMD) to organize stage inspection in which assembly of core, windings and other core materials etc. would be inspected. In respect to raw materials such as core stamping, winding conductor etc. successful bidder shall use these materials manufactured/supplied by the standard manufacturers and

furnish the manufacturer's test certificates, as well as, proof of purchase from those manufacturers documentary evidence

19.2 Chief Engineer (MMD) will depute representatives from testing and inspection wing at the time of stage inspection.

19.3 10 % of the transformers from the offered lot will be tested for acceptance tests at factory, in the presence of purchaser's representative before dispatch.

19.4 The inspection may be carried out by the purchaser at any stage of manufacture. The successful bidder shall grant free access to the purchaser's representatives at a reasonable time when the work is in progress. Inspection and acceptance of any equipment under this specification by the purchaser shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications and shall not prevent subsequent rejection if the equipment is found to be defective.

19.5 The purchaser may at its option, open a transformer supplied to the Stores, in presence of supplier at site or at Stores. If any of the technical particulars are seen to be in variance than the guaranteed technical particulars, the whole lot of transformer will be rejected without any liability on purchaser.

19.6 In addition to the above, the purchaser may pick up any transformer and decide to get it type tested from any laboratory accredited by NABL at purchaser's cost. The Bidder will have to organize packing of the transformer at company's Stores for which they will be paid necessary charges. If the transformer fails to meet the requirement of type tests, the quantity of transformers ordered on them will be forthwith rejected and the purchaser may purchase these transformers at the risk and cost of the supplier.

20. Final Inspection:

1. After completion of manufacturing process of all quantity (Lot) as per MSEDCL's clearance letter, Supplier shall give intimation to the Chief Engineer (MMD) to organize final inspection.

2. After receipt of intimation from successful bidder, Chief Engineer (MMD) will depute MSEDCL's representative to visit factory of bidder for final Inspection.

3. Activities below will be carried out during final Inspection:

(a) Visual inspection of outer side, design, dimensions, color, name plate etc. of all (100%) ready transformers from offered lot.

(b) After visual inspection, Inspector will select 10% quantity of transformers at random from offered and visually inspected lot.

(c) 10 % of the transformers offered will be tested without opening the transformer for all Routine tests as per MSEDCL's technical specifications & related IS. Temprature rise test (Heat Run Test) will have to be carried out on one transformer having maximum total Losses at 100% load.

(d) Out of balance 90% distribution transformers, one transformer shall be opened and all design technical parameters should be checked as per approved GTP, approved drawings and technical specifications. Special tests as mentioned in MSEDCL's technical specifications are to be carried on the opened transformer.

(e) If any technical parameters are found deviating from the approved GTP, approved drawings & technical specifications during final inspection, whole lot shall be reoffered for final inspection after rectification.

4. After satisfactory final inspection, MSEDCL's representative will give clearance to the bidder/manufacturer for dispatch to allotted store.

21 Testing of all Distribution Transformers for no load and full load losses at stores:

After receipt of transformers at stores centers, all transformers from the lot, will be tested for no load and full load losses at all stores by MSEDCL as well as by a third party NABL lab like ERDA, etc. Supplier has liberty to be present at the time of testing.

22. Random Sample Testing (RST):

1.The tenderer should intimate to C.E. (MMD), M.S.E.D.C.L of completion of dispatches of whole lot of Distribution Transformers to stores against this tender.

2. C.E. (MMD), M.S.E.D.C.L for will select the stores for Random Sample Testing (RST) and depute E.E. (Testing) to carry out RST of the lot.

3. E.E. (Testing) will select a transformer from the lot of transformers already tested for No load & full load losses.15 days advance intimation will be given to tenderer for joint inspection.

4.The date of RST will not be altered to the convenience or request of supplier. If supplier's representative fails to attend on the date fixed for RST, the RST will be carried out in his absence and results of RST will be binding on supplier. In case the selected transformer fails in any of the tests, complete lot of transformers will be rejected.

23. Quality Assurance

The bidder shall invariably furnish following information.

a. Certificates of following materials.
   i. Copper conductor
   ii. Core
   iii. Insulating paper.
   iv. Porcelain Bushings
   5. Steel Plate used for Enclosure

b. Names of the supplier for the raw material, list of standard accordingly to

which the raw materials are tested, list of test normally carried out on raw materials in presence of bidder's representatives, copies of type test certificates.

c. Information and copies of test certificate as in (i) above respect of bought out accessories including terminal connectors.
d. List of manufacturing facilities available. In this list the bidder shall specifically mention whether lapping machine, vacuum drying plant, air conditioned dust free room with positive air pressure for provision of insulation and winding etc are available with him.
e. Level of automation achieved and list of areas where manual processing still exists.
f. List of areas in manufacturing process where stage inspection are normally carried out for quality control and details of such tests and inspections.
g. Special features provided in the equipments to make it maintenance free.
h. List of testing equipment available with the bidder to carry out all routine and acceptance tests on transformers
i. The successful bidder shall submit the Routine Test Certificate along with documentary evidence having paid for the excise duty for the following raw materials viz Copper for conductors, insulating materials, Core materials, Bushing at the time of routine Testing of the fully assembled transformer.

24. Challenge Test :

The manufacturer can also request challenge testing for any test based on specification and losses. The challenger would request for testing with testing fees. The challenge test fees are proposed at least three times the cost of testing. This is likely to deter unnecessary challenges. The challenger would have the opportunity to select the sample from the store and any such challenge should be made with in the guarantee period. The party challenged, challenger and the utility could witness the challenge testing.

The challenge testing would cover following tests:

1. Measurement of magnetizing current.
2. No load losses test.
3. Load losses test
4. Temperature rise test.

The challenge test could be conducted at NABL Laboratory, like ERDA and CPRI. If the values are within the limits the products gets confirmed else not confirmed. No positive tolerances in losses is permitted. If the product is not confirmed the manufacturer would pay the challenge fee and challenger would get the fee refunded. However as a redressal system the challenger would be allow to ask for fresh testing of two or more samples from the store and the same be tested in NABL Laboratory in presence of party challenge, challenger and the utility.

If any one of the above sample does not confirm the test, then the product is said to have failed the test. In such cases the manufacturer will be declared as unsuccessful manufacturer for the said product with wide publicity and would not

allow to complete in tenders of the MSEDCL for the period of three years and heavy penalty would be imposed.

25 Qualifying Requirement: As per tender

26 Performance Guarantee:

All transformers supplied against this specification shall be guaranteed for a period of 66 months from the date of receipt at the consignee's Stores Center or 60 months from the date of commissioning, whichever is earlier. However, any engineering error, omission, wrong provisions, etc. which do not have any effect on the time period, shall be attended to as and when observed/ pointed out without any price implication

27 Schedules

a. The bidder shall fill in the following schedules which form part of the tender specification and offer. If the schedules are not submitted duly filled in with the offer, the offer shall be rejected.

Schedule `A' -Guaranteed Technical Particulars

b. The Bidder shall submit the list of orders for similar type of equipments, executed of under execution during the last three years, with full details in the schedule of Tenderer's experience (Schedule `B') to enable the purchaser to evaluate the tender.

TECHNICAL SPECIFICATION OF 100 kVA to 2500 kVA , 11/0.433 kV & 22/0.433 kV DRY-TYPE (VPI) DISTRIBUTION TRANSFORMERS (Indoor and Outdoor).

Schedule'A' - Guaranteed Technical Particulars.

For 100/200/315/630/1000/1250/1600/2000/2500 kVA Dry Type Distribution Transformers

SR. NO.	GTP PARAMETERS	REMARK
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERICAL
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN
9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC
19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT

28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT
30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT
43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 ° C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 ° C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC
54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT
65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT

67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT
78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT
89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT

92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	Text
95	Pulling Lugs provided to transformer	Text
96	Transformer Earthing terminals size and no	Text
97	Transformer Rollars size and nos	Text
98	Overall Dimensions of HV Cable box	Text
99	Overall Dimensions of LV Cable box	Text
100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

Annexure I

Unbalance Current Test

Name of

Supplier:

Order No.:

Capacity & Voltage Ratio of Distribution Transformer:_____kVA,

_____/0.433 kV

Vector GroupDyn11

Sr. No. of equipment Tested:

Date of Testing:

Reference Standard

Transformer Secondary terminals 2U, 2V & 2W are shorted. The shorted 2U, 2V & 2W is connected to 2N through Ammeter. The primary terminals 1U, 1V & 1W are connected to supply. The rated current is fed to primary and unbalance current is noted on Ammeter.

Unbalance Current Measured in Ammeter:

_____ A

Rated current in Secondary Side:_____A

Permissible limits as per specification : 2% of the Rated current in Secondary Side

% of Unbalance current with reference to Rated current in Secondary Side

$$= \frac{\text{Unbalance Current x 100}}{\text{Rated current in Secondary Side}}$$

=

=

Testwitnessed by Tested by

Annexure II

Temperature Rise Test

Name of
Supplier:
Order No.:
Capacity & Voltage Ratio of DistributionTransformer:_____kVA,
_____/0.433 kV
Vector GroupDyn11
Sr. No. of equipment
Tested: Date of Testing:
Reference Standard

H.V. Winding L. V. Winding
Rated Line Current in Amp

Guaranteed NoLoad Losses
_____watt
LoadLosses
_____watt
TotalLosses _____watt

P. T.Ratio: _____/____ =
C. T.Ratio: _____/_____ =
WattmeterConstant =
Total MultiplyingFactor(MF) =

TIME	Ambient Temp.				Line Voltage in Volts	Line Current in Amps	W1 watts	W2 watts	W3 watts	W1+W2+W3 watt	Multiplying Factor (MF)	Total Watt
	T1 °C	T2 °C	T3 °C	Average °C								

Calculation of Temperature Rise in

Winding Temperature Rise in LV

Winding=_____°C

HV Winding Resistance across1U1V at__°C =

_____ohm

Measurement of Hot Resistance of HV Winding after

ShutDown.

Time	Resistance

Hot winding Resistance at Ambient Temperature__°C (fromgraph)=

_____Ohm Temperature Rise in

H. V. Windingis

$$= \frac{\text{Hot Resistance x(235+Cold Ambient Temperature)}}{\text{Cold Resistance}} - (235+\text{Hot Ambient Temperature}$$

=

=

Results :

1) Temperature Rise in LV Winding = _____ °C

2) Temperature Rise in HV Winding = _____ °C

Test witnessed by Tested by

Technical Specification Cont	
Item	Technical Specification
315KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302613)	Refer To The Following Item Specification: 315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302533
630KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302703)	Refer To The Following Item Specification: 315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302533
1000KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP(20456303003)	Refer To The Following Item Specification: 315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302533
630KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302883)	Refer To The Following Item Specification: 315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP(20456302533

315KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP

GTP Order Sequence	GTP Parameters	Date Type
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERIC
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN
9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC
19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT
28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT

30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	NUMERIC
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT
43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 º C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 º C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC
54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT

65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT
67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	TEXT
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT
78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT
89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT
92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	TEXT
95	Pulling Lugs provided to transformer	TEXT
96	Transformer Earthing terminals size and no	TEXT
97	Transformer Rollars size and nos	TEXT
98	Overall Dimensions of HV Cable box	TEXT
99	Overall Dimensions of LV Cable box	TEXT

100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

315KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP

GTP Order Sequence	GTP Parameters	Date Type
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERIC
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN
9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC

19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT
28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT
30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	NUMERIC
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT
43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 º C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 º C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC

54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT
65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT
67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	TEXT
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT
78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT

89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT
92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	TEXT
95	Pulling Lugs provided to transformer	TEXT
96	Transformer Earthing terminals size and no	TEXT
97	Transformer Rollars size and nos	TEXT
98	Overall Dimensions of HV Cable box	TEXT
99	Overall Dimensions of LV Cable box	TEXT
100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

630KVA,11/0.4KV3phDT/ID/Cu/DryType/5yGP

GTP Order Sequence	GTP Parameters	Date Type
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERIC
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN

9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC
19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT
28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT
30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	NUMERIC
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT

43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 º C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 º C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC
54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT
65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT
67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	TEXT
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT

78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT
89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT
92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	TEXT
95	Pulling Lugs provided to transformer	TEXT
96	Transformer Earthing terminals size and no	TEXT
97	Transformer Rollars size and nos	TEXT
98	Overall Dimensions of HV Cable box	TEXT
99	Overall Dimensions of LV Cable box	TEXT
100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

630KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP

GTP Order Sequence	GTP Parameters	Date Type
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERIC
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN
9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC
19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT
28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT

30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	NUMERIC
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT
43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 º C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 º C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC
54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT

65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT
67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	TEXT
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT
78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT
89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT
92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	TEXT
95	Pulling Lugs provided to transformer	TEXT
96	Transformer Earthing terminals size and no	TEXT
97	Transformer Rollars size and nos	TEXT
98	Overall Dimensions of HV Cable box	TEXT
99	Overall Dimensions of LV Cable box	TEXT

100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

1000KVA,22/0.4KV3phDT/ID/Cu/DryType/5yGP

GTP Order Sequence	GTP Parameters	Date Type
1	Name of Manufacturer	TEXT
2	Reference Standards	TEXT
3	Transformer shall be Dry (VPI) Air Natural Air Natural (ANAN) type Yes/No	BOOLEAN
4	Transformer shall be suitable for Outdoor/ Indoor installation Yes/No	BOOLEAN
5	KVA rating of the transformer	NUMERIC
6	Primary Voltage in KV	NUMERIC
7	Secondary Voltage in KV	NUMERIC
8	Method of connection for H.V. Winding shall be Delta : Yes/No.	BOOLEAN
9	Method of connection for L.V. Winding shall be Star : Yes/No	BOOLEAN
10	Connection Symbol shall be Dyn-11 (Yes/No)	BOOLEAN
11	By resistance method Maximum temperature rise of Windings over an Ambient temp. of 50°C in °C	NUMERIC
12	The temperature shall in no case reach a value that will damage the core itself ,other parts or adjacent materials (Yes/No)	BOOLEAN
13	Estimated maximum hot spot Temperature in deg. Centigrade	NUMERIC
14	Whether neutral is solidly earthed (Yes /No)	BOOLEAN
15	Magnetizing current (in amps) at rated voltage and rated frequency & its % with full load current	TEXT
16	Magnetizing current at maximum voltage (112.5% of rated voltage) and rated frequency (in amps) & its % with full load current	TEXT
17	Flux density at normal voltage and frequency in Tesla	TEXT
18	Approximate length of the Transformer in mm	NUMERIC

19	Approximate breadth of the Transformer in mm	NUMERIC
20	Approximate height of the Transformer in mm	NUMERIC
21	Approximate length of the Transformer tank in mm	NUMERIC
22	Approximate breadth of the Transformer tank in mm	NUMERIC
23	Approximate height of the Transformer tank in mm	NUMERIC
24	Minimum thickness of the side of transformer tank plates in mm	NUMERIC
25	Minimum thickness of the bottom of transformer tank plates in mm	NUMERIC
26	Minimum thickness of the cover of transformer tank plates in mm	NUMERIC
27	Shape of main enclosure of transformer	TEXT
28	Current density of HV winding at any Tap, in Amps/sq. mm.	TEXT
29	Current density of LV winding, in Amps / sq.mm.	TEXT
30	Minimum cross section of Copper used in HV Winding	TEXT
31	Minimum cross section of Copper used in LV Winding in sq. mm	TEXT
32	Approximate Weights of Core Laminations in kgs	NUMERIC
33	Approximate Weights of Copper (Windings): kgs	NUMERIC
34	Approximate Weights of Transformer core and windings :kgs	NUMERIC
35	Approximate Weights of Tank & fittings: kgs	NUMERIC
36	Approx. Total Wight of transformer in Kgs	NUMERIC
37	Type of Core	TEXT
38	No. of H.V. disc (coils) per phase (per limb)	TEXT
39	Colour of transformer enclosure	TEXT
40	Name plate provided with all details as per the specifications (Yes/No)	BOOLEAN
41	No of steps used in CRGO Core	NUMERIC
42	Thickness of core lamination inmm	TEXT
43	Diameter of the core (in mm)	TEXT
44	Core material & grade of laminations used	TEXT
45	Effective Core Area (Sq.mm)	TEXT
46	Overload capacity of transformers for 2 hrs.	TEXT
47	No load losses at normal voltage and frequency in Watts	NUMERIC
48	Load Losses at rated voltage at 75 deg. Centigrade in Watts	NUMERIC
49	Total losses (No Load + Load Losses at 75 deg C)	NUMERIC
50	Resistance of HV winding at 20 º C in Ohm/phase	TEXT
51	Resistance of LV winding at 20 º C in Ohm/phase	TEXT
52	No of HV Turns	NUMERIC
53	No of LV Turns	NUMERIC

54	Voltage per turn used in HV/LV winding for design	NUMERIC
55	Whether end insulation is provided to the end turns	BOOLEAN
56	Percentage of voltage of end turns with reinforced insulation	TEXT
57	Type of insulation on HV conductors	TEXT
58	Type of insulation on LV conductors	TEXT
59	Type of insulation on LV to core	TEXT
60	Type of insulation on Core Bolts	TEXT
61	Type of insulation on Core Bolt Washers	TEXT
62	Type of insulation on Core Lamination	TEXT
63	Manufacturer's name of HV Bushings:	TEXT
64	Material of HVBushings	TEXT
65	Rating of HV Bushing	TEXT
66	Min. clearance between phase to earth of secondary winding	TEXT
67	Min Width of the duct between LV & HV windings (in mm)	TEXT
68	1 Minute Power frequency withstand voltage (Dry)at 50 Hz of HV Bushings	TEXT
69	1 Minute Power frequency withstand voltage (Wet) at 50 Hz of HV Bushings	TEXT
70	Impulse Flash over voltage kV (stating the wave form adopted) of HV winding	TEXT
71	Minimum Creepage Distance of HV Bushings in mm	TEXT
72	Material of LV Bushings:	TEXT
73	Rating of LV Bushing : 1 kV, 250 A.	TEXT
74	Manufacturer's name of LV Bushings:	TEXT
75	Minimum Creepage Distance of LV Bushings in mm	TEXT
76	Efficiency at 75 deg. centigrade at unity p.f at 100 % Load	TEXT
77	Efficiency at 75 deg. centigrade temperature at unity p.f at 75 % Load	TEXT
78	Efficiency at 75 deg. centigrade temperature at unity p.f at 50 % Load	TEXT
79	Efficiency at 75 deg. centigrade temperature at unity p.f at 25 % Load	TEXT
80	Efficiency at 75 deg. centigrade temperature at unity p.f at 125 % Load	TEXT
81	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 100 % Load	TEXT
82	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 75 % Load	TEXT
83	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 50 % Load	TEXT
84	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 25 % Load	TEXT
85	Efficiency at 75 deg. centigrade temperature at 0.8 p.f lag at 125 % Load	TEXT
86	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 100 % Load	TEXT
87	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 75 % Load	TEXT
88	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 50 % Load	TEXT

89	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 25 % Load	TEXT
90	Efficiency at 75 deg. centigrade temperature at 0.8 p.f leading at 125 % Load	TEXT
91	% impedance at 75 deg C	TEXT
92	Regulation at 0.8 p.f. lag (in %)	TEXT
93	Regulation at 0.8 p.f. leading (in %)	TEXT
94	Lifting Lugs provided to transformer and transformer enclosure	TEXT
95	Pulling Lugs provided to transformer	TEXT
96	Transformer Earthing terminals size and no	TEXT
97	Transformer Rollars size and nos	TEXT
98	Overall Dimensions of HV Cable box	TEXT
99	Overall Dimensions of LV Cable box	TEXT
100	The test certificates of copper conductors, core material, insulation paper, porcelainBushings, steel plate used for enclosure of the offered transformer are enclosed with the offer in physical format with soft copy (Yes/No)	BOOLEAN
101	All type test reports of type tests carried out on transformer as per IS:2026 & tech. specifications at NABL laboratory shall be submitted with the offer in physical format &with soft copy (Yes/No)	BOOLEAN
102	Unbalanced current test & temperature rise test shall be conducted at your works format enclosed with the technical specification & IS:2026 alongwith the offer with soft copy (Yes/NO)	BOOLEAN
103	Testing facility, Plant & machinery , list of order executed /under execution shall be furnished separately in physical format & with soft copy alongwith the offer (Yes/No)	BOOLEAN
104	The information required under Quality Assurance shall be submitted with the offer in physical format & soft copy (Yes/No)	BOOLEAN
105	The cost data in prescribed format shall be submitted with the offer in physical format &soft copy (Yes/No)	BOOLEAN
106	The performance Guarantee of the transformers in years	NUMERIC

Required Documents (To be uploaded online)				
Sr. No.	NAME	SECTION	ITEM	DESCRIPTION
1	Type test certificate	Technical Section	1000KVA,22/0.4 KV3phDT/ID/C	Upload Valid Type test certificates from NABL accredited lab such as CPRI / ERDA
2	BIS License	Technical Section	1000KVA,22/0.4 KV3phDT/ID/C	Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
3	Valid Type test certificate	Technical Section	315KVA,11/0.4K V3phDT/ID/C	Upload Valid Type test certificates from NABL accredited lab such as CPRI / ERDA
4	BIS License	Technical Section	315KVA,11/0.4K V3phDT/ID/C	Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
5	Upload Valid BEE certificate	Technical Section	315KVA,11/0.4K V3phDT/ID/C	Upload Valid BEE certificate or necessary documentary proof of having applied for renewal of validity of the BEE certificate as per clause no XIV (if applicable)
6	Type test certificates	Technical Section	315KVA,22/0.4K V3phDT/ID/C	Upload Valid Type test certificates from NABL accredited lab such as CPRI / ERDA
7	BIS License	Technical Section	315KVA,22/0.4K V3phDT/ID/C	Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
8	BIS License	Technical Section	630KVA,11/0.4K V3phDT/ID/C	Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
9	Type test certificates	Technical Section	630KVA,11/0.4K V3phDT/ID/C	Upload Valid Type test certificates from NABL accredited lab such as CPRI / ERDA
10	BEE certificate	Technical Section	630KVA,11/0.4K V3phDT/ID/C	Upload Valid BEE certificate or necessary documentary proof of having applied for renewal of validity of the BEE certificate as per clause no XIV (if applicable)
11	Type test certificates	Technical Section	630KVA,22/0.4K V3phDT/ID/C	Upload Valid Type test certificates from NABL accredited lab such as CPRI / ERDA
12	BIS License	Technical Section	630KVA,22/0.4K V3phDT/ID/C	Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
13	Turnover Certificate	Commercial Section		Upload Copy of latest turnover certificate for last 3 years duly certified by Chartered accountant (As per attached format-4.
14	List of orders in hand	Commercial Section		Upload List of orders in hand certified by Chartered Engineer/accountant
15	Experience Details	Commercial Section		Upload Copies of orders executed by the bidder and the certificate from the purchaser with regards to successful execution of the order for preceding five financial years
16	List of in house manufacturing and testing facilities as well as quality control set up.	Commercial Section		Upload List of in house manufacturing and testing facilities as well as quality control set up.
17	BEE certificate	Commercial Section		Upload Valid BEE certificate or necessary documentary proof of having applied for renewal of validity of the BEE certificate as per clause no XIV
18	Power of attorney	Commercial Section		Upload Power of attorney if any.

Sr. No.	NAME	SECTION	ITEM	DESCRIPTION
19	EMD receipt	Commercial Section		Upload EMD receipt (Bank Guarantee or Demand Draft)
20	GST registration certificate	Commercial Section		Upload GST registration certificate
21	Format-2	Commercial Section		Upload The bidder shall submit the undertaking certifying that you have not approached any one for undue influence (As per format-2).
22	Annexure-I	Commercial Section		Upload Annexure-I regarding declaration along with the bid that bidder is not blacklisted/ debarred by any organization for last 3 years.
23	Annexure-F	Commercial Section		Upload Annexure-F regarding declaration of legal litigations
24	Format-3	Commercial Section		Upload Certificate duly certified by C.E./C.A. that the person/entity does not have controlling stake in more than one entity applied for the Tender/Bid (As per attached format-3).
25	Classification of unit	Commercial Section		Upload Documentary evidence in respect of classification of your unit as per Micro, Small and Medium
26	Annexure-O	Commercial Section		Upload regarding declaration of participation as New Supplier in the tender
27	BIS License	Commercial Section		Upload Valid BIS License or necessary documentary proof of having applied for renewal of validity of the BIS license as per clause no XIV
28	Format-5	Commercial Section		Upload Certificate for no deviation (As per attached Format-5)
29	Profit & Loss Account and Balance Sheet	Commercial Section		Upload Copy of Profit & Loss Account and Balance Sheet for last 3 years duly certified by Chartered accountant
30	ISO certification	Commercial Section		Upload ISO certification for quality management system & environmental