

## Maharashtra State Electricity Distribution Co. Ltd.

Tender Details		21-08-2024 06:26:03
Tender Code	MMD/T-HTM2-04/0824	
Tender Type	Procurement Tender	
Type Of Bid	Two Bid	
Description	Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class	
Estimated Cost (In Lakhs)	518	
Basis of prices	Firm Price Basis	
Tender Validity	120	
Delivery Requirement (In Months)	5	
Tender on rate contract basis	NO	
Tender Fee (In INR)	10000	
GST In INR (@18% on Tender Fee: SAC No.	1800	
Total Tender Fee Amount including GST in INR.	11800	
Contact	Ramesh Vitthal Dethe , 9773287777 ,cemmcsedcl@gmail.com	
Pre-Qualifying Req	As per Section III Special Terms & Conditions Clause no.I of Tender Document	
Budget Type	Capex	
Scheme Code	NA	
Scheme Name	NA	
Department	Material Management Cell	
Office Type	HO	
Location Type	Corporate Office	
Designation	Executive Engineer(Distribution)	
Pre-Bid Meeting Address	OFFICE OF CHIEF ENGINEER, Maharashtra State Electricity Distribution Co. Ltd., Material Management Department,Plot No. G-9, "Prakashgad", First Floor, Prof. A. K. Marg, Bandra (East)-Mumbai-400051	
Bid Opening Address	OFFICE OF CHIEF ENGINEER, Maharashtra State Electricity Distribution Co. Ltd., Material Management Department,Plot No. G-9, "Prakashgad", First Floor, Prof. A. K. Marg, Bandra (East)-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	50	
Is Power Supplier Applicable	NO	
Tender Sale Start Date	21-08-2024 19:50	
Tender Sale End Date	11-09-2024 12:00	
Bid Start Date	21-08-2024 19:55	
Bid End Date	11-09-2024 15:00	
Pre-Bid Meeting Date	29-08-2024 16:00	
Techno-Commercial Bid opening on	11-09-2024 15:30	
Price Bid opening on	Will be declared later	
Annexure C1 Opening Date	Will be declared later	
Winner Selection Date	Will be declared later	
Can Bidder opt for EMD Exemption	YES	
Is Annexure-E [Consent for MSEDCL Standard Technical Specifications and GTP] Applicable ?	YES	

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class



MATERIAL MANAGEMENT DEPARTMENT  
MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO.  
LTD.  
Tender no. MMD/T-HTM2-04/0824

### BID NOTICE

The Chief Engineer, Material Management Department (MMD), on behalf of Maharashtra State Electricity Distribution Company Limited (the Purchaser), hereby invites online bids from eligible bidders for procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class. 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-HTM2-04/0824**

**Estimated Tender Cost:** Rs. 518 Lakhs. (With GST)

**Tender Fee:** Rs. 10,000.00 + 18% GST

The bidder should submit non-refundable Bid Fee of Rs. 10,000.00 + 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 of @ 0.5 % (Half Percent) value of the offered quantity of tender in the form of Demand Draft/ 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	21/08/2024
End Sale of Bid Document	11/09/2024
Date and time of submission of Bids	11/09/2024 up to 15:00 hrs
Date and time of Bid Opening	11/09/2024 at 15:30 hrs
Date and time of Pre bid meeting	29/08/2024 at 16:00 hrs Online Pre-Bid meeting link : <a href="http://meet.google.com/zcz-nxhu-sgo">http://meet.google.com/zcz-nxhu-sgo</a>

**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](mailto:cemmcmsedcl@mahadiscom.in)/[cemmcmsedcl@gmail.com](mailto:cemmcmsedcl@gmail.com)

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.**

TENDER FOR

**Procurement of 20 Positions 3 Ph. Fully Automatic Testing  
Bench with reference standard of 0.02S accuracy class**

Tender no: **MMD/T-HTM2-04/0824**



**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](mailto:cemmcmsedcl@mahadiscom.in)  
[cemmcmsedcl@gmail.com](mailto:cemmcmsedcl@gmail.com)**

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

## **Table of Contents**

BID NOTICE .....	1
SECTION-I: INVITATION TO TENDER AND INSTRUCTION TO BIDDERS .....	7
INSTRUCTIONS TO THE BIDDERS .....	8
I. SCOPE OF WORK: .....	8
II. QUALIFYING REQUIREMENTS: .....	8
III. PRICES: .....	8
IV. TAXES: .....	8
V. BASIS OF PRICES: .....	9
VI. PRICE VARIATION: .....	9
VII. DELIVERY: .....	9
VIII. OFFERING THE MATERIAL: .....	10
IX. CONFLICT OF INTEREST: .....	10
X. QUOTATION: .....	10
XI. AMBIGUITY IN QUOTATION: .....	11
XII. FILLING IN OF ANNEXURE: .....	11
XIII. ADDITIONS/ALTERATIONS PROHIBITED: .....	11
XIV. B.I.S. LICENCE: (Not Applicable) .....	11
XV. MANDATORY REQUIREMENT OF SUBMISSION OF OFFER: .....	11
XVI. SUBMISSION OF DRAWING & BILL OF MATERIAL: .....	11
XVII. NAME OF AUTHORIZED REPRESENTATIVE: .....	12
XVIII. (A) OFFER OF MICRO & SMALL ENTERPRISES AND OTHER UNITS: .....	12
(B) PREFERENCE TO INDUSTRIAL UNITS LOCATED IN MAHARASHTRA AND OFFERS BY MATCHING RATES WITH LOWEST ACCEPTABLE BIDDER .....	13
(C) MATCHING OF RATES: .....	13
(D) QUANTITY ALLOCATION: .....	13
XIX. EARNEST MONEY DEPOSIT (EMD): .....	14
XX. SIGNING OF THE TENDER DOCUMENTS: .....	15
XXI. SUBMISSION / SUPERSCRIBING OF THE TENDER DOCUMENTS: .....	15
XXII. TIMELY SUBMISSION OF OFFER: .....	16
XXIII. PURCHASERS RIGHT: .....	16
XXIV. DISREGARD OF TENDER CONDITIONS: .....	16
XXV. PROHIBITION FOR POST TENDER CORRESPONDENCE: .....	17
XXVI. RIGHT TO ORDER OUT QUANTITY IN VARIANCE TO OFFERED QUANTITY: .....	17
XXVII. ACCEPTANCE OF TENDER: .....	17
XXVIII. NOTIFICATION OF AWARD: .....	17
XXIX. EARNEST MONEY OF UNSUCCESSFUL BIDDER: .....	17

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

XXX.	VALIDITY OF OFFERS:.....	17
XXXI.	DECLARATION FROM BIDDER:.....	17
XXXII.	CORRUPT OR FRAUDULENT PRACTICES: .....	18
XXXIII.	INFLUENCE:.....	18
XXXIV.	TENDER FEES EXEMPTION:.....	18
XXXV.	PRE-BID MEETING:.....	19
XXXVI.	CLARIFICATION ON DEVIATIONS: .....	19
	CERTIFICATE:.....	19
	(SECTION II) : ANNEXURE 'A' :CONDITIONS OF TENDER AND SUPPLY .....	20
1)	EFFECT OF CONTRACT:.....	20
2)	QUALITY OF SUPPLIES:.....	20
3)	MATERIAL AND COMPONENTS: .....	20
4)	(A) ACCEPTANCE OF SUPPLIES / INSPECTION:.....	20
5)	RIGHT TO CARRY OUT INSPECTION DURING MANUFACTURING: .....	21
6)	RIGHT TO REVISE DESPATCH INSTRUCTIONS, DELIVERY SCHEDULE AND TO DEFER SUPPLIES: .....	22
7)	WAGON LOADS / TRUCK LOADS:.....	22
8)	ROAD TRANSPORT:.....	22
9)	DESPATCH INTIMATION:.....	22
10)	BILL OF MATERIALS: (WHEREVER APPLICABLE).....	22
11)	PACKING LIST:.....	23
12)	REPLACEMENT OF GOODS LOST, BROKEN OR DAMAGED:.....	23
13)	REPLACEMENT OF REJECTED MATERIALS: .....	23
14)	TOLERANCE IN QUANTITY TO BE SUPPLIED: .....	24
15)	MATERIAL DESPATCHED AND PROGRAMME:.....	24
16)	MATERIAL RECEIPT & SUBMISSION OF BILLS AT CONSIGNEE: .....	24
17)	PAYMENT OF BILLS: .....	25
18)	TAXES:.....	26
19)	DEDUCTION: .....	27
20)	GUARANTEE:.....	27
21)	LIFTING OF REJECTED/DAMAGED MATERIALS FROM STORES:.....	27
22)	LIQUIDATED DAMAGES FOR LATE DELIVERY:.....	28
23)	ORDER PLACED ON TIME PREFERENCE BASIS (WHEREVER APPLICABLE): .....	29
24)	FORCE MAJEURE CLAUSE: .....	29
25)	ACCEPTANCE OF LOWER FORD RATE OFFERED IN SUBSEQUENT TENDER : .....	29
26)	PERFORMANCE OF CONTRACT:.....	30
27)	CONTRACT PERFORMANCE DEPOSIT: .....	30
28)	POWER OF ATTORNEY:.....	30

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

29)	SETTLEMENT OF DISPUTE:.....	30
30)	JURISDICTION: .....	30
31)	TERMINATION OF CONTRACT .....	31
32)	DEBAR OF MANUFACTURER FROM PARTICIPATION IN TENDERS OF MSEDCL:.....	31
33)	TAX DEDUCTED AT SOURCE:.....	31
SECTION-III: SPECIAL TERMS & CONDITIONS AND INSTRUCTIONS TO THE TENDERES .....		32
(A) SPECIAL TERMS & CONDITIONS:.....		32
I.	QUALIFYING REQUIREMENTS:.....	32
II.	QUANTITY FOR PROCUREMENT : .....	35
ANNEXURES: .....		36
ANNEXURE - "B" : PRICE SCHEDULE .....		36
ANNEXURE 'C-I': CONFIRMATION FOR ACCEPTING ORDER BY MATCHING RATES WITH LOWEST ACCEPTABLE BIDDER.....		37
ANNEXURE- 'D' : TECHNICAL SPECIFICATION .....		38
ANNEXURE-E: CONSENT FOR SUPPLYING THE MATERIAL AS PER MSEDCL STANDARD TECHNICAL SPECIFICATIONS & STANDARD GTP.....		39
ANNEXURE-F: DECLARATION NO PENDING LEGAL LITIGATION OF ANY TYPE AGAINST MSEDCL IN ANY COURT/FORUM. ....		40
ANNEXURE – H : GUARANTEED TECHNICAL PARTICULARS .....		41
ANNEXURE- I: CERTIFICATE REGARDING NOT BEEN DEBARRED BY ANY MINISTRY OF GOI / GOM / STATE OWNED ELECTRICITY DISTRIBUTION UTILITY & NOT BEEN GUILTY OF MALPRACTICES DURING THE LAST 5 YEARS. ....		42
ANNEXURE- J : DISPATCH INSTRUCTIONS .....		43
ANNEXURE- K : LIST OF STORES.....		44
ANNEXURE-M : BANK GUARANTEE FORMAT : EARNEST MONEY DEPOSIT BANK GUARANTEE AGAINST TENDER.....		45
ANNEXURE-N: BANK GUARANTEE FORMAT: FORM OF BANK GUARANTEE FOR THE PERFORMANCE OF THE EQUIPMENT .....		46
FORMATS:.....		49
FORMAT – 1: QUANTITY & DELIVERY SCHEDULE:.....		49
FORMAT-2: UNDERTAKING FOR NOT APPROACHED ANY ONE FOR UNDUE INFLUENCE. ....		50
FORMAT-3: FORMAT OF CERTIFICATE FROM CHARTERED ACCOUNTANT FOR NOT HAVE CONTROLLING STAKE IN MORE THAN ONE ENTITY APPLIED FOR THE TENDER/BID. ....		51
FORMAT-4: FORMAT OF CERTIFICATE FROM CHARTERED ACCOUNTANT FOR AVERAGE ANNUAL TURNOVER.....		52
FORMAT-5: FORMAT FOR NO DEVIATION FORM .....		53
FORMAT-6 : FORMAT OF EXPERIENCE .....		54
FORMAT-7: FORMAT OF LIST OF ORDER IN HAND .....		55
FORMAT-8: PRE-BID QUERY FORMAT .....		56
FORMAT-9: FORMAT FOR –READINESS OF MATERIAL FOR INSPECTION .....		57

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

FORMAT-10: FORMAT FOR –INSPECTION APPROVAL ..... 59

**ANNEXURE – ‘U-I’**..... 61

FORMAT-11: POWER OF ATTORNEY BY BIDDER IN FAVOUR OF AUTHORIZED REPRESENTATIVE  
DULY EXECUTED BEFORE THE NOTARY.....62

FORMAT-12: LAND BORDER DECLARATION CERTIFICATE.....64

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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, installation and commissioning at respective laboratories as specified in Annexure-D (Technical Specifications) & Annexure-B (Price Schedule) at various destination sites / stores centres 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 centres 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 be 50% 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

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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 kilometres 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 5 months from the letter of award will be as below;

Commencement Period (CM): Min. 50 % of offered quantity within 3 months  
from the date of LOA/AT.

Completion Period (CP) : Balance offered quantity in 2 or less months in  
equated lots.

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.

- (vi) 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- (vii) 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 so that the material is received by the purchaser well within the committed delivery period and It shall be the sole responsibility of the bidder to get the type test & drawing approval well in time. 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 may offer the material as per MSEDCL standard technical specifications as per Annexure-D. In case the material is being offered as per MSEDCL Standard Technical Specifications, the bidder does not have to fill the entire guaranteed technical particular (GTP). The bidder shall only submit the consent in this regard as given in Annexure-E and submit the type test reports & drawings for approval of MSEDCL. However; the bidders, who do not want to offer the material as per MSEDCL Standard Technical Specifications and have deviations in lieu of Indian Standards, will 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, 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: (Not Applicable)**

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

However, valid BIS license 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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 AND OTHER UNITS:**

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-1 rate 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

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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.**

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.

**(C) MATCHING OF RATES:**

The confirmation for acceptance of the order at the lowest acceptable rate shall be given in the format as per Annexure -'C-1' of the tender documents by the bidder other than L-1. 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'. Item wise and bidder wise schedule for submission and opening of Annexure 'C-1' shall be communicated separately by auto generated e-mail and on the website. MSEDCL reserves the right to call & open the Annexure 'C-1' of limited bidders as per their price ranking and preference to industrial units located in Maharashtra.

In the above confirmation, if the bidder indicates any rate, then the confirmation given by the bidder will not be considered as valid.

Above confirmation for the quantity less than as indicated in Clause III (ii) (offered quantity shall not be less than 50 %) of Instructions to the bidder shall not be acceptable.

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.

The lowest acceptable tenderer would be considered for awarding order for quantity subject to his capacity and capability as under.

**(D) 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- 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 maximum 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.

#### **XIX. EARNEST MONEY DEPOSIT (EMD):**

The bidder should pay the Earnest Money @ 0.5 % (Half Percent) value of the offered quantity of tender in the form of Demand Draft /BG as per the Annexure-M enclosed with tender documents having validity of 120 days from opening of tender. Reference to the tender no. should be given in case the EMD is paid by demand draft before the due date of the tender and the relevant deposit amount mentioned in the 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- 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 UDYAM 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 'District Industries Centre' (DIC) for EMD exemption.

**XX. 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.

**XXI. 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 (HTM2) in the office of Chief Engineer, Material Management Department in sealed envelope on or before due date & time of submission.



*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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.

**XXII. 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.

**XXIII. 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.

**XXIV. 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' etc, 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

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

of the offer or elsewhere, the same shall be ignored and the offer shall be treated as meeting with all specified tender conditions.

**XXV. 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.

**XXVI. 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.

**XXVII. 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.

**XXVIII. 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. Acceptance of the same to be conveyed within 3 working days by the supplier.

**XXIX. 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.

**XXX. 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.

**XXXI. 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.

**XXXII. 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.

**XXXIII. 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.

**XXXIV. 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 UDYAM 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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.

**XXXV. 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.

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.

- 4) 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.

**XXXVI. CLARIFICATION 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

**(SECTION II) : ANNEXURE 'A' :CONDITIONS OF TENDER AND 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 5 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) (A) 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.

On receipt of such intimation, the materials shall be inspected within 10 working days. 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

For quantity supplied beyond contractual delivery period, statutory variation 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 inspected and tested by third party NABL lab.

**(B) RANDOM SAMPLE TESTING: (Not Applicable)**

**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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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 [cemmcsedcl@mahadiscom.in](mailto:cemmcsedcl@mahadiscom.in) or [cemmcsedcl@gmail.com](mailto:cemmcsedcl@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

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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. (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



*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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) TOLERANCE IN QUANTITY TO BE SUPPLIED: (Not Applicable)**

**15) 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 26 <sup>th</sup> of Preceding Month and 25 <sup>th</sup> 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/ contract performance deposit paid against the contract shall not be released.

**16) 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- 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 concerned stores/lab 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 installation and commissioning of test bench at respective laboratories, store in charge will generate final SR note through ERP system within 7 working days from Commissioning. Concerned Executive Engineer of the Testing

### **17) PAYMENT OF BILLS:**

#### **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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- (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.

**18) 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: -

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- (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.

**19) 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.

**20) GUARANTEE:**

Material offered shall be guaranteed for satisfactory performance for a period of 66 months from the date of receipt of material at concern stores/ consignee in good condition or 60 months from the date of satisfactory commissioning, whichever is earlier. In case of failure of material within the above guarantee period, tenderer shall make available other new material free of cost at stores for replacement within 30 days from the date of intimation from stores and lift the rejected material after replacement. If the defective material is not replaced/repared within the specified period as above, the Maharashtra State Electricity Distribution Company Ltd. shall recover/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 material. No interest will be paid on the amount so retained / recovered. In case of material / item not replaced 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 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 material is replaced shall not be counted for arriving at the guarantee period.

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

**21) 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

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

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.

## **22) 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 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

In case the Purchaser does not arrange for inspection of material within 10 days from the date of receipt of inspection call in its office wherever applicable, the period of more than 10 days 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.

**23) 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.22 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.

**24) 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 or 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 if 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.

**25) 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

However other stipulations of clause No. 22 of Section-II i.e. Annexure-A will remain unchanged.

**26) 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. 22 as stated above i.e. Liquidated damages for late delivery.

**27) CONTRACT PERFORMANCE DEPOSIT:**

- 27.1 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 27.2.
- 27.2 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.
- 27.3 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.
- 27.4 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.

**28) 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.

**29) 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.

**30) 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.

**31) 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 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.

**32) DEBAR OF MANUFACTURER FROM PARTICIPATION IN TENDERS OF MSEDCL:**

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.

**33) 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: SPECIAL TERMS & CONDITIONS AND INSTRUCTIONS TO THE TENDERES****(A) SPECIAL TERMS & CONDITIONS:**

The Tenderers are requested to take note of the following points in respect of commercial/Technical terms and conditions etc. Further if any of the following clauses is contradicting/deviating from the clauses appearing elsewhere in the tender specification, then the Clauses in the tender specification shall be treated as amended as under only. The offers not complying with this section shall be rejected.

**I. QUALIFYING REQUIREMENTS:**

1. Bidder should be an original equipment manufacturer/ Indian Subsidiary of offered items and must have at least 10 years of experience in supplying of similar or better equipment as on date of tender opening.
2. The operating experience of the bidder shall be more than 10 years for supplying and providing after sales support of similar or better equipment to any Govt. power utilities or Govt. NABL accredited laboratories in India. Operating experience of the bidder should be for same make as quoted against this tender. The manufacturer shall enclose necessary purchase order copies along with their bid to prove the same.
3. The bidder must also have supplied at least 10 nos. such similar or better meter test benches of accuracy class 0.02 with fixed multiple turn wounded primary Isolation Current Transformers for isolation in current circuit to test Link closed meters during last five financial years.
4. The manufacturer must have ISO 17025 approved calibration and certification facility with measurement uncertainty of not less than 50 ppm. Manufacturer must have ISO 9001 certification.
5. Bidder should submit minimum 5 performance certificates of similar or better Meter Test Benches of accuracy class 0.02 supplied during last 5 years showing satisfactory operation of meter testing benches for at least 2 years at Govt. power utilities in India or Govt. NABL accredited laboratories in India. Purchaser has right to directly contact concerned regarding performance of the Meter test benches.
6. The Bidder should declare that he or his acquired firm is not been ever black listed /defaulter by any utility/ ESCOMs/ Distribution Company/ Laboratories/ Any department of State Government or Centre Government on record of poor performance such as not properly completing the contract, inordinate delays in supply completion, not supplying the items as per commitment of contract etc. The bid should be rejected in case of providing false information on blacklisting. The Bidder or its OEM should not change name or takeover any Blacklisted firm.
7. The Bidder shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier/Class-II local supplier' as the case may be. The Bidder shall also give details of the location(s) at which the local value addition is made.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

8. The Bidder should submit a “Land Border sharing Declaration” on Bidder’s Letter Head in the given format (Format No-12).
9. Bidder should have fully equipped technical support office/laboratory for facilities of testing, calibration, diagnosis and repair of equipment in India itself. Bidder should have technical support staff permanently posted in India for technical support after sale. List of Plant and Machinery, tools and tackles to carry out service should be submitted along with offer. In support of that copy of running Annual Maintenance Contract (AMC) of minimum 7 Nos. of similar or better Energy Meter test benches from any govt. power utilities should be submitted.
10. The Major component like Source, Reference Standard Meter of Meter Test System should be only from one manufacture to provide better integrity and after sales of offered product.
11. The Testing bench & all allied 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. Further the testing bench should be capable of smart meter testing.
12. 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. The Bidder shall be responsible for providing all necessary accessories including connecting cables of proper size required for the complete and operational functionality of the Testing Bench.
13. The Bidder or their principals shall have their own service centers and trained engineers dedicated for trouble shooting and technical support permanently posted in India. The bidder shall enclose necessary proof that the firm / the manufacturer / the principal the bidder is participating for, has necessary facility to adjust and calibrate the offered measuring units within the country. The list of Plant and Machinery, tools and tackles to carry out services shall be submitted along with the offer.
14. The bidder shall arrange demonstration at manufacturer place in India of exactly the same tendered functionality of test bench within 45 days from the date of closing of tender during technical evaluation at bidder’s cost. If the bidder fails to arrange the same their bid shall not be considered for further evaluation.
15. Average Annual Turnover – The minimum annual turnover of each last three financial years(2023-24,2022-23,2021-22 or 2022-23, 2021-22, 2020-21) of the bidder shall be 15 Cr. The bidder has to submit the annual turnover certificate of the company of last three financial years.
16. Type Test : The tenderer shall furnish detailed accuracy certificates of the Reference standard meter for all the tests as relevant Indian standards/ International standards and calibration certificate of complete meter testing system (excluding the PC system)as per Cl.No.18.01 of technical specification. All the accuracy tests of Reference standard meter and calibration certificate of complete meter testing system (excluding the PC system) shall be carried out at laboratories which are accredited by the National Board of Accreditation of laboratories (NABL) of Government of India within five years of opening of the tender to prove that the instruments offered meet the requirements of specification.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

There shall be no change in the design of type tested instruments and those offered against this tender.

17. The bidder or their principals / manufacturer shall have the necessary minimum testing facilities for carrying out various acceptance and routine tests. A list of machinery / equipment and testing facility available at their Works shall also be furnished along with the offer.
18. The offers of Indian subsidiary company, whose parent company is located abroad fulfilling the qualifying requirements as above, shall be considered provided the Indian participant subsidiary company fulfils the minimum experience of 10 years of supply or manufacturing of similar or better equipment to National/ International accredited laboratories or power utilities. However, the conditions of turnover and supply of minimum quantity of similar or better equipment to National/ International accredited laboratories or power utilities as brought out elsewhere in tender documents can be fulfilled by the parent company located abroad on behalf of their Indian subsidiary company. The parent company shall furnish undertaking for accepting responsibility for supplying quality equipment as per MSEDCL'S specifications and execution of the contract on behalf of its India based subsidiary unit who has participated in the tender.

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

**Commercial Requirements**

- (a) Format-1: Quantity & Delivery Schedule.
- (b) Format-2: Undertaking for not approached any one for undue influence.
- (c) Format-3: Certificate from chartered accountant for not have controlling stake.  
in more than one entity applied for the tender/bid as per clause no VIII (B).
- (d) Format-5: No deviation form.
- (e) Format-7: List of orders in hand certified by Chartered Accountant.
- (f) Documentary evidence (for e.g. Latest UDYAM/NSIC Certificate for Micro, Small & Medium Enterprises, Chartered Accountant /Chartered Engineer Certificate for Large Scale Enterprises) for manufacturing capacity to cover the quantity offered by the bidder and considering orders in hand.
- (g) Annexure-F: Declaration no pending legal litigation of any type against MSEDCL in any court/Forum.
- (h) Annexure- I: certificate regarding not been debarred by any ministry of GOI / GOM / State owned electricity distribution utility & not been guilty of malpractices during the last 5 years.
- (i) Tender Fees & EMD Payment/ Exemption details: Copy of online payment receipt for tender fees & Copy of Money Receipt / D.D. / BG for EMD paid or Copy of latest UDYAM/valid NSIC Certificate for Tender Fees & EMD Exemption.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- (j) Format-11-Power of Attorney (On Non –Judicial Stamp Paper of minimum value of Rs. 200 should be purchased in the name of bidder) in favour of authorized representative duly executed before the Notary.

### **Technical Requirements**

Annexure-E: Consent for supplying material as per MSEDCL's standard technical specifications if not filled the online GTP.

## **II. QUANTITY FOR PROCUREMENT :**

The quantity for procurement is as below

Item No.	Item Description	UoM	Quantity Required	Estimated Cost with GST (Rs. Lakhs)
1	20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class	No.	4	518
			<b>Total</b>	<b>518</b>

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**ANNEXURES:**

**ANNEXURE - "B" : PRICE SCHEDULE  
(QUANTITY, PRICE AND DELIVERY PERIOD)**

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

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**ANNEXURE 'C-I': CONFIRMATION FOR ACCEPTING ORDER BY MATCHING RATES WITH LOWEST ACCEPTABLE BIDDER**

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

**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 III (ii) 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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**ANNEXURE- 'D' : TECHNICAL SPECIFICATION**

As indicated in E-Tendering Technical Specification

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**ANNEXURE-E: CONSENT FOR SUPPLYING THE MATERIAL AS PER MSEDCL STANDARD TECHNICAL SPECIFICATIONS & STANDARD GTP.**

**(On bidders' letter head)**

I/We, ..... have understood and checked the tender documents for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class and have not found any errors in them.

We have submitted price bids for Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class.

We hereby declare and confirm that we accept the MSEDCL STANDARD TECHNICAL SPECIFICATIONS & STANDARD GTP and agree to supply the material as per these STANDARD TECHNICAL SPECIFICATIONS & STANDARD GTP if we are awarded the supply order.

**In view of above, I/we have not filled the online GTP.**

I/we am/ are enclosing the Type Test Report details covering all the type tests as per relevant IS as below.

Sr. no.	Details of Tests as per IS:.....	Type Test Report no. & Date
(1)		
(2)		

Yours faithfully,

Signature & Seal of company,

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

Address:



Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**ANNEXURE-F: DECLARATION NO PENDING LEGAL LITIGATION OF ANY TYPE AGAINST MSEDCL IN ANY COURT/FORUM.**

(On supplier's Letter Head)

Tender no. MMD/T-HTM2-04/0824 for supply of supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

I, ..... certify/ declare that, the business dealings with our firm / agency i.e. M/s..... and its sister concern/Director/Partner/Proprietor **have no pending legal litigation of any type against MSEDCL in any court/Forum** against/by M/s..... 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.

Authorized representative's Name:

Authorized representative's signature:

Name and address of the Bidder:

Seal & signature of the company

Date:

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**ANNEXURE – H : GUARANTEED TECHNICAL PARTICULARS**

As indicated in E-Tendering GTP Parameter

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**ANNEXURE- I: CERTIFICATE REGARDING NOT BEEN DEBARRED BY ANY MINISTRY OF GOI / GOM / STATE OWNED ELECTRICITY DISTRIBUTION UTILITY & NOT BEEN GUILTY OF MALPRACTICES DURING THE LAST 5 YEARS.**

(On supplier's Letter Head)

Tender no MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

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.

Authorized representative's Name:

Authorized representative's signature:

Name and address of the Bidder:

Seal & signature of the company

Date:

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**ANNEXURE- J : DISPATCH INSTRUCTIONS**

(On MSEDCL Letter Head)

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 ..... as given below:

Sr. No.	Consigned to	Meant for Circle	Meant Zone for	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 faithfully,

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, -----

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**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 Chh. Sambhaji Nagar	MIDC Plot No. J-13, Opp. Garware Stadium, NaregaonPhata, Chikhalthana, Chh. Sambhaji Nagar.
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 Dharashiv	Near MSEDCL Rest House, Tuljapur Road, Dharashiv.
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-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.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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 5 % 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

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

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

Bank employee code number

2) Name & Address

Signature

Bank employee code number

Please Note:

- 1) The Bank Guarantee should be furnished from any Nationalized Bank/ Scheduled Bank along with covering letter of Bank.
- 2) The minimum value of non-judicial stamp paper for this Bank Guarantee is Rs.200/-.



*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

- 3) The stamp paper is to be purchased in the name of Guarantor Bank i.e. Bank Guarantee issuing Bank Only.
- 4) Please state the full and complete postal address of the Bank undertaking the guarantee.
- 5) Signature & Bank employee code number of two signing authority are required on the Bank Guarantee document.
- 6) The correct contract number (A/T No.) and date, amount in Rs. is to be mentioned correctly in the Bank Guarantee document.
- 7) Name & Full address of the company is to be mentioned correctly in the Bank Guarantee document.
- 8) B.G. should be valid as per terms of A/T including guarantee period of material.

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMATS:**

**FORMAT - 1: QUANTITY & DELIVERY SCHEDULE:**

Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

So. No.	Material Description:	MSEDCL requirement In No.	Offered quantity in No.	Commencement Period (CM)	Completion Period (CP)	
				Min. 50% of offered quantity Within 3 months from the date of LOA/AT	4 <sup>th</sup> Month lot quantity	5 <sup>th</sup> Month lot quantity
				Lot-1	Lot-2	Lot-3
1	20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class	04				

(Signature, Name of Authorized Representative & Company Seal)

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**FORMAT-2: UNDERTAKING FOR NOT APPROACHED ANY ONE FOR UNDUE INFLUENCE.**

(To be submitted on letter head of the bidder)

Tender no MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class.

**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)

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing  
Bench with reference standard of 0.02S accuracy class

**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.)

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**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-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing  
Bench with reference standard of 0.02S accuracy class

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 (i.e. 2021-22, 2022-  
23 & 2023-24 or 2020-21, 2021-22 & 2022-23). 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.)

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**FORMAT-5: FORMAT FOR NO DEVIATION FORM**  
(To be submitted on letter head of the bidder)

Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

**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:

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-6 : FORMAT OF EXPERIENCE**

(To be submitted on letter head of the bidder)

Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

I/we am/ are enclosing the Order Copies & Order Completion Certificate of the utilities for offered item/s as below:

Sr. No.	Financial Year	Utility Order Completion Certificate Letter no.	Date	Name of Electricity Distribution Utility, Electricity Distribution Franchisee or Public Sector Undertaking	Order No.	Date	Name of Item	Order Quantity in No..	Supplied Quantity in No.
<b>(A)</b>	<b>2023-24</b>								
1									
2									
...									
....									
<b>(B)</b>	<b>2022-23</b>								
1									
2									
...									
....									
<b>(C)</b>	<b>2021-22</b>								
1									
2									
...									
....									
<b>(D)</b>	<b>2020-21</b>								
1									
2									
...									
....									
<b>(E)</b>	<b>2019-20</b>								
1									
2									
...									
....									

**(.... & so on for Year 2018-19,2017-18,2016-17,2015-16 & 2014-15)**

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)

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**FORMAT-7: FORMAT OF LIST OF ORDER IN HAND**

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

Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

TO WHOM SO EVER IT MAY CONCEREN

We have examined the information and records of M/s \_\_\_\_\_, having its registered office at \_\_\_\_\_. Based on our examination, we hereby certify that following purchase orders are in under execution which are received to M/s \_\_\_\_\_, for material mentioned below from the Electrical Utilities/ Government departments/ Discoms/SEBs:

Sr. no.	Item Description	Purchase name	Purchase order no.	Purchase date	Order quantity	Supplied quantity	Balance Quantity to be supplied

Date:

Place:

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



Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-8: PRE-BID QUERY FORMAT**

(To be submitted on letter head of the bidder in case of any query after pre-bid meeting)

Tender no. MMD/T-HTM2-04/0824 for supply of 20 Positions 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

Name of the Company:

Name of Key Person:

Key Person Contact details:                      Mobile:                      Email:

Tender Purchased: YES/NO :

**Section & Clause**

Sr. No.	Clause No.	Page No.	Section & Clause	Query

**Note:**

1. It is to be noted that Pre-Bid Queries must be sent within **two days** after Pre-Bid meeting in the *above prescribed format only*. Any query sent afterwards shall not be entertained.
2. Pre-Bid queries should be sent on [cemmcsedcl@mahadiscom.in/](mailto:cemmcsedcl@mahadiscom.in) **cemmcsedcl@gmail.com** only. Other mode of communications shall not be accepted.
3. MSEDCL is not bound to reply all the queries.
4. Replies of Pre-Bid Queries shall be published on MSEDCL e-Tender website.

Authorized Signatory with seal

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-9: FORMAT FOR –READINESS OF MATERIAL FOR INSPECTION  
[THIS IS ONLY A PROFORMA, ACTUAL INSPECTION CALL HAS TO BE GIVEN ON YOUR  
COMPANY LETTER HEAD ONLY]**

**Ref. No.**

**Date:**

To,  
The CE (MMD),  
M.S.E.D.C.L., Prakashgad,  
Bandra (E), Mumbai - 400051.

**Sub:** Readiness of material for inspection against LOA/AT No. ----- dated. -----  
-- for Supply of -----.

Against the LOA/AT cited above, the material as detailed below is hereby offered for inspection

1. Brief description of the material Offered for inspection:
2. Reference of drawing Approval (If applicable):
3. a) Reference of approval of type test(If applicable):  
b) Reference of approval of prototype test(If applicable):  
b) Reference of approval of balance type test (If applicable):
4. Whether it is a joint inspection with EE (Testing)/ SE (TQA) etc.  
(if applicable) (Say Yes or No):
5. a)Whether contract performance deposit has been paid against  
the order:  
b) if paid, please give details:
6. Sr. No. of the items as per LOA/AT:
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 LOA/AT 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:



Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-10: FORMAT FOR –INSPECTION APPROVAL**

[On MSEDCL’s Letter Head]

**Ref. No.**

**Date:**

**Camp:**

To,  
M/s.....  
Works Address:.....

Sub: Final inspection and approval of ..... (Name of material) against  
LOA/AT No. ----- dated. -----for Supply of -----

Ref:1) Readiness of material for Final inspection vide no..... dtd.....

[Date of readiness: dd/mm/yyyy]

2) Authorization letter for Final inspection vide no.....dtd.....

3) Drawing approval no. .... dtd. ....

4) Type Test approval no..... dtd. ....

5) Dispatch Instruction No..... dtd.....

6) MSEDCL’s Material Inspection Portal Call Id No.

Dear Sir,

The routine test certificate submitted by you and the acceptance tests carried out at the time of inspection for the material & quantity mentioned below have been scrutinized with as per MSEDCL Specification and GTP Approval have been generally found in order and hence approved. Therefore the material is cleared for dispatch.

Sr.No.	Details	Item 1	Item 2	.....
1	Description of material offered for inspection:			
	(a) Sr.No./Item as per LOA/AT			
	(b) Item code no.			
	(c) Total order quantity for above item/s. (...UoM)			
2	Quantity offered for inspection (...UoM)			
3	Quantity Inspected (...UoM)			
4	Quantity Accepted (...UoM)			
5	(a) Progressive Total Quantity so far inspected (Including this inspection): (...UoM)			
	(b) No. of inspection carried out against order for this item.			

## Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

6	Material to be dispatched as per dispatch instructions as indicated below:									
	Name of the offices	Name of the consignees (Major Stores/ Store Centre)	Meant for Circle	Qty in .... (UoM)			Qty in .... (UoM)			Material to be reached to destination stores on or before
				Item no...			Item no...			
				Item description			Item description			
				Scheme-1	Scheme-2	Total	Scheme-1	Scheme-2	Total	
	..	...	..	..	...	..	..	..	dd/mm/yyyy	
..	...	..	..	..	..	..	..			
<b>Total</b>										
7	Sealing:			Sealing of .... no. each of ...(name of item).....are carried out on randomly selected & tested for acceptance test bearing sr nos./Seal No. sealed with paper seal sign by the undersigned.			Sealing of .... no. each of ...(name of item).....are carried out on randomly selected & tested for acceptance test bearing sr nos./Seal No. sealed with paper seal sign by the undersigned.			
				Sr.No.... / Seal No...			Sr.No.... / Seal No...			
				Sr.No..../ Seal No...			Sr.No.... / Seal No...			
8	Other Details:									
	(1) Material inspected at & place where the material is inspected. [Name of premises]									
	(2) Date of Inspection									
	(3) Test Report signed in blue ink (Say Yes or No)									
	(4) Matching materials earlier inspected are already dispatched.(Say Yes or No)									
	(5)Whether all the equipments used during inspection have valid calibration.(Say Yes or No)									

The above approval is given without prejudice to the other terms and conditions of the LOA/AT.

**Enclosed:** Test Results.

Yours faithfully

(Sign & Name of MSEDCL's Inspector)  
Executive Engineer (Testing)  
.....Testing Division

Copy s.w.r.t.:

- 1) The Chief Engineer (MMD), MSEDCL, Prakashgad, Mumbai-51.
- 2) The Superintending Engineer (MMD), MSEDCL, Prakashgad, Mumbai-51.
- 3) The Executive Engineer (HTM2), MMD, MSEDCL, Prakashgad, Mumbai-51.

*Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class*

**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,  
1<sup>st</sup> 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 \_\_\_\_\_

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-11: POWER OF ATTORNEY BY BIDDER IN FAVOUR OF AUTHORIZED REPRESENTATIVE DULY EXECUTED BEFORE THE NOTARY.**

*[To be on non-judicial stamp paper of Rupees Two Hundred Only (INR 200/-) or appropriate value should be purchased in the name of bidder as per Stamp Act relevant to place of execution.]*

Know all men by these presents, we .....*[Insert name and address of the registered office of the Bidder]* do hereby constitute, appoint, nominate and authorize Mr./Ms. .... *[Insert name and residential address]*, who is presently employed with us and holding the position of ..... as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid in response to tender no. .... for ..... (Brief Description) issued by Maharashtra State Electricity Distribution Company Ltd. (M.S.E.D.C.L.) including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which M.S.E.D.C.L. may require us to submit. The aforesaid attorney is further authorized for making representations to M.S.E.D.C.L., and providing information / responses to M.S.E.D.C.L., representing us in all matters before M.S.E.D.C.L., and generally dealing with M.S.E.D.C.L. in all matters in connection with our Bid till the completion of the bidding process as well as execution of the order, if applicable, in accordance with the tender.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the tender.

**Signed by the within named ..... *[Insert the name of the executant company]* through the hand of Mr./ Mrs. ....duly authorized by the Board to issue such Power of Attorney dated this ..... day of ..... Accepted**

..... (Signature of Attorney)  
[Insert Name, designation and address of the Attorney]

**Attested**

.....  
(Signature of the executant)  
(Name, designation and address of the executant)

Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

.....  
Signature and stamp of Notary of the place of execution

**Common seal of ..... has been affixed in my/our presence pursuant to Board of Director"s Resolution dated.....**

**1. WITNESS 1. .... (Signature)**  
**Name .....**  
**Designation.....**

**2. WITNESS 2. .... (Signature)**  
**Name .....**  
**Designation.....**

---

**Notes:**

- a. *The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s).*
  - b. *In the event, power of attorney has been executed outside India, the same needs to be duly notarized by a notary public of the jurisdiction where it is executed.*
  - c. *Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).*
-



Procurement of 20 Positions 3 Ph. Fully Automatic Testing Bench with ref. std. of 0.02S accuracy class

**FORMAT-12**

**LAND BORDER DECLARATION CERTIFICATE**

Restrictions on procurement from Bidders from a country or countries, or a class of countries under Rule 144(xi) of the General Financial Rules 2017.

**Tender Document No:** \_\_\_\_\_

**Bidder's Name:** \_\_\_\_\_ **(Bidder Address**

**& contact details) Bidder's Reference No.** \_\_\_\_\_ **Date:** \_\_\_\_\_

Restrictions on procurement from Bidders from a country or countries, or a class of countries under Rule 144(xi) of the General Financial Rules 2017.

"We have read the clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India; and solemnly certify that we are not from such a country or, if from such a country, we are registered with the Competent Authority (copy enclosed). We hereby certify that we fulfill all requirements in this regard and are eligible to be considered."

Penalties for false or misleading declarations:

We hereby confirm that the particulars self-declaration by us would be violation of Code of integrity and would attract penalties as mentioned in this tender document, including debarment.given above are factually correct and nothing is concealed and also undertake to advise any future changes to the above details. We understood that any wrong or misleading

\_\_\_\_\_  
(Signature with date)

\_\_\_\_\_  
(Name and designation)  
Duly authorized to sign Bid  
for and on behalf of

\_\_\_\_\_  
(Name & address of the Bidder and  
Seal of Company)

### 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 Charge s Per Unit (In Rupees )	Integrate d GST for outside State Transaction on (Ex-Works Price+Fr eight Charges + Transit Insuranc e Charges )(In Rupees)	Central GST for within State Transact ion on (Ex-Works Price + Freight Charges + Transit Insuranc e 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	77908100874	20 Positions, 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy	NO	4	90312000								

## 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 3 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: 20 Positions, 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class



Maharashtra State Electricity Distribution Company Limited

---

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

TECHNICAL SPECIFICATION

For

20 Positions, 3 Ph. Fully Automatic Testing Bench  
with reference standard of 0.02S accuracy class

For

DISTRIBUTION SYSTEM

IN

MSEDCL

**MATERIAL SPECIFICATIONS CELL**

TECHNICAL SPECIFICATION

OF

**20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE  
METER OF 0.02% ACCURACY**

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

**INDEX**

<b>Sr. No.</b>	<b>Contents</b>	<b>Page no.</b>
1.	SCOPE	3
2.	QUALIFYING REQUIREMENTS	3
3.	OPERATING CONDITIONS	4
4.	APPLICABLE STANDARDS	4
5.	TESTS TO BE PERFORMED	5
6.	CONSTRUCTION AND COMPONENT OF SYSTEM	6
7.	SPECIFICATION OF VOLTAGE AMPLIFIER	7
8.	SPECIFICATION OF CURRENT AMPLIFIER	8
9.	FREQUENCY GENERATOR	8
10.	PHASE POSITION MODIFIER	9
11.	SPECIFICATION OF ELECTRONIC REFERENCE STANDARD	9
12.	SPECIFICATION OF HARMONIC INJECTION UNIT	11
13.	SPECIFICATION OF METER MOUNTING RACK	11
14.	SPECIFICATION OF SCANNING HEADS AND ERROR INDICATION UNITS	12
15.	ISOLATING CURRENT TRANSFORMER (ICT)	13
16.	COMPUTER SYSTEM	14
17.	DIGITAL PROCESS UNIT	17
18.	TYPE TESTS	17
19.	CALIBRATION CERTIFICATES	18
20.	GUARANTEED TECHNICAL PARTICULARS	18
21.	ACCESSORIES	18
22.	TRAINING	19
23.	GUARANTEE	19
24.	AFTER SALES SERVICE	19
25.	PRE DISPATCH INSTRUCTION	19
26.	QUALITY CONTROL	27
27.	MINIMUM TESTING FACILITIES	20
28.	PACKING	20
29.	SCHEDULES	21
30.	DOCUMENTATION	21
	SCHEDULE-C	22
	ANNEXURE-U-I	24
	SCHEDULE-A	25

## 1.00 SCOPE

This specification covers the general and standard requirement of single phase and three phase fully automatic test bench, technical data design, engineering, manufacturing, assembly, inspection & testing at manufacturer's works, supply & delivery at stores and commissioning at respective laboratories. Specification covers above requirements for fully automatic test bench for 3 Phase 20 position fully automatic test bench with reference standard meter of accuracy class of 0.02.

Test bench must provide facilities for doing routine, acceptance and certification test (error test and dial test) on 1 phase, 3 phase whole current, 3 phase CT/PT operated, RSS, ERS and Energy meters. The following types of Reference Standard and portable Sub Standard Meter of Accuracy Class of 0.05, 0.1, 0.2, 0.5 and electricity meters of class 0.2s, 0.5s, 1s, 1 and 2.0 available with utility can be tested (electronic and electromechanical type).

Scope covers design, engineering, manufacture, delivery, installation and commissioning, spares for 2 years smooth running of fully Automatic Electronic Meter Testing Equipment with reference Meter of Accuracy Class 0.02 for simultaneous testing of 20 position 3 phase & 1 Phase energy meters. In addition to above, bidder shall also be required to provide:

- a) Operations & Maintenance Manuals including drawings.
- b) Training to purchasers employees on all aspects of operation and maintenance.
- c) Continued technical support during guarantee period.
- d) The Major component like Source, Reference Standard Meter, and digital system of Meter Test System should be only from one manufacture to provide better integrity and after sales of offered product.

## 2.00 QUALIFYING REQUIREMENTS.

**2.01** Bidder should be an original equipment manufacturer/ Indian Subsidiary of offered items.

**2.02** The bidder must also have supplied at least 10 nos. such similar or better meter test benches of accuracy class 0.02 with fixed multiple turn wounded primary Isolation Current Transformers for isolation in current circuit to test Link closed meters during last ten financial years.

**2.03** The manufacturer must have ISO 17025 approved calibration and certification facility with measurement uncertainty of not less than 50 ppm. Manufacturer must have ISO 9001 certification.

**2.04** The operating experience of the bidder shall be more than 10 years for supplying and providing after sales support of similar or better equipment to any Govt power utilities or Govt. NABL accredited laboratories in India. Operating experience of the bidder should be for same make as quoted against this tender. The manufacturer shall enclose necessary purchase

order copies along with their bid to prove the same.

- 2.05** Bidder should submit minimum 5 performance certificates of similar or better Meter Test Benches of accuracy class 0.02 supplied during last 5 years showing satisfactory operation of meter testing benches for at least 2 years at Govt. power utilities in India or Govt. NABL accredited laboratories in India. Purchaser has right to directly contact concerned regarding performance of the Meter test benches.
- 2.06** The Bidder should declare that he or his acquired firm is not been ever black listed /defaulter by any utility/ ESCOMs/ Distribution Company/ Laboratories/ Any department of State Government or Centre Government on record of poor performance such as not properly completing the contract, inordinate delays in supply completion, not supplying the items as per commitment of contract etc. The bid should be rejected in case of providing false information on blacklisting. The Bidder or its OEM should not change name or takeover any Blacklisted firm.
- 2.07** The Bidder shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier/Class-II local supplier' as the case may be. The Bidder shall also give details of the location(s) at which the local value addition is made.
- 2.08** The Bidder should submit a "Land Border sharing Declaration" on Bidder's Letter Head in the given format.
- 2.09** Bidder should have fully equipped technical support office/laboratory for facilities of testing, calibration, diagnosis and repair of equipment in India itself. Bidder should have technical support staff permanently posted in India for technical support after sale. List of Plant and Machinery, tools and tackles to carry out service should be submitted along with offer. In support of that copy of running Annual Maintenance Contract (AMC) of minimum 7 Nos. of similar or better Energy Meter test benches from any govt. power utilities should be submitted.
- 2.10** The Testing bench & all allied 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. Further the testing bench should be capable of smart meter testing.
- 2.11** 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. The Bidder shall be responsible for providing all necessary accessories including connecting cables of proper size required for the complete and operational functionality of the Testing bench.
- 2.12** The Bidder or their principals shall have their own service centers and trained engineers dedicated for trouble shooting and technical support permanently posted in India. The bidder shall enclose necessary proof that the firm / the manufacturer / the principal the bidder is participating for, has necessary facility to adjust and calibrate the offered measuring units within the country. The list of Plant and Machinery, tools and tackles to carry out services shall be submitted along with the offer.
- 2.13** The bidder shall arrange demonstration at manufacturer place in India of



exactly the same tendered functionality of test bench within 45 days from the date of closing of tender during technical evaluation at bidder's cost. If the bidder fails to arrange the same their bid shall not be considered for further evaluation.

- 2.14 Average Annual Turnover** — The minimum annual turnover of each last three financial years of the bidder shall be 15 Cr. The bidder has to submit the annual turnover certificate of the company of last three financial years.
- 2.15 Type Test:** The tenderer shall furnish detailed accuracy certificates of the Reference standard meter for all the tests as relevant Indian standards/ International standards and calibration certificate of complete meter testing system (excluding the PC system) as per technical specification. All the accuracy tests of Reference standard meter and calibration certificate of complete meter testing system (excluding the PC system) shall be carried out at laboratories which are accredited by the National Board of Accreditation of laboratories (NABL) of Government of India within five years of opening of the tender to prove that the instruments offered meet the requirements of specification. There shall be no change in the design of type tested instruments and those offered against this tender.
- 2.16** The bidder or their principals / manufacturer shall have the necessary minimum testing facilities for carrying out various acceptance and routine tests. A list of machinery / equipment and testing facility available at their Works shall also be furnished along with the offer.
- 2.17** The offers of Indian subsidiary company, whose parent company is located abroad fulfilling the qualifying requirements as above, shall be considered provided the Indian participant subsidiary company fulfils the minimum experience of 10 years of supply or manufacturing of similar or better equipment to National/ International accredited laboratories or power utilities. However, the conditions of turnover and supply of minimum quantity of similar or better equipment to National/ International accredited laboratories or power utilities as brought out elsewhere in tender documents can be fulfilled by the parent company located abroad on behalf of their Indian subsidiary company. The parent company shall furnish undertaking for accepting responsibility for supplying quality equipment as per MSEDCL'S specifications and execution of the contract on behalf of its India based subsidiary unit who has participated in the tender.
- 2.18 GUARANTEE:** Material offered shall be guaranteed for satisfactory performance for a period of 66 months from the date of receipt of material at concern stores/ consignee in good condition or 60 months from the date of satisfactory commissioning whichever is earlier. In case of failure of material within the above guarantee period, tenderer shall make available other new material free of cost at stores for replacement within 30 days from the date of intimation from stores and lift the rejected material after replacement. If the defective material is not replaced/ repaired within the specified period as above, the Maharashtra State Electricity Distribution Company Ltd. shall recover/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 material. No interest will be paid on the amount so retained / recovered. In case of material / item not replaced 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 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 material is replaced shall not be counted for arriving at the guarantee period. Further, in case of repeated failures of equipments/ material, the Purchaser reserves the right to debar / disqualify the supplier for future tenders / orders irrespective of grounds for debarring in MSEDCL debar policy.

**3.00 OPERATING CONDITIONS**

The meter test equipment shall be suitable for giving an uninterrupted service in following conditions:

- a) Ambient temperature (-) 10°C to (+) 45°C for operation and from (-) 10°C to (+) 60°C for storage.
- b) Relative humidity from 25% to 95%.
- c) Mains voltage shall be 3x240V ± 15% for three phase supply.
- d) Frequency 50Hz ± 5%.
- e) Cabinet for source must be dust proof.

**4.00 APPLICABLE STANDARDS**

The Meter test bench shall conform in all respects including performance and testing thereof to the latest relevant and applicable Indian / International Standards to be read with up to date and latest amendments / revisions thereof but not limited to

Purpose	Applicable
Meter Testing	IEC 62052-11, 62053-11, 21, 22, 23, IEC 60687 IS 14697, IS 13779
Safety	IEC 61010
Meter Testing Equipment	IEC 60736, IS 12346, IS15707, IS/ISO: 10012

The equipment meeting with the requirements of other authoritative standards, which ensures equal or better quality than the standard mentioned above, also shall be considered.

In case the bidder wishes to offer material conforming to the other authoritative standards, salient points of difference between the standards adopted and the specific standards shall be clearly brought out in relevant schedule. Copy of such standards with authentic

English Translations, shall be furnished along with the offer.

In case of conflict related with other parts of the specification, the order of priority shall be – (i) this technical specification, (ii) IS 12346 (iii) IEC 60736 (iv) other authoritative standards.

In case of any difference between provisions of these standards, the provisions of this specification shall prevail.

**5.00 TESTS TO BE PERFORMED**

The offered meter test system shall be capable to perform the following tests on the meters as per IEC 62052-11, 62053-11, 21, 22, 23, IS 13010, IS13779 & IS14697

Test of Meter constant
Test of Starting Condition
Test of No Load
Test of Power Consumption
Voltage Dips and Short interruptions time with programmable interruption Time (Clause 7.1.2) of IEC 62052-11
Test of Self heating
Test of Heating
Test of Immunity to Earth fault

<b>Test of Influence quantities:</b>
Accuracy Test for Active & Re active Energy :
Limits of Error ( Balanced & Unbalanced load in all 4 Quadrants)
Test of repeatability of error
Voltage variation
Frequency variation
Wave form: 10% of 3rd harmonic in the current
Harmonics Components in the Current & Voltage circuits (IEC 62053 -21 - Table 8)
DC & Even harmonics in AC current circuit(IEC 62053 -21 - Table 8)
Odd Harmonics in AC Current circuits(IEC 62053 -21 - Table 8)
Sub Harmonics in AC Current circuits(IEC 62053 -21 - Table 8)
Reverse Phase sequence test
Voltage Unbalance test
Simultaneous calibration/ testing of ERS Meters
Accuracy testing of reference standard used into test system against high precision reference standard
Accuracy testing of reference standard (low accuracy) against the built in reference standard

## **6.0 CONSTRUCTION AND COMPONENT OF SYSTEM**

**6.01.1** The complete system shall consist of at least the following essential components, the specifications of which are defined here in after in this document.

A source, which shall be microprocessor-based, modular type, of 19" (Maximum) rack design and which shall, at least, have in-built Voltage Amplifier and Current Amplifiers, specifications of which are given subsequently in this specification as per clause nos.7 and 8 respectively. Source shall consist of frequency generator, Phase position adjuster & Harmonic Injection unit

**6.01.2** The cabinet shall be 19" (Maximum) rack mounted type in which the source and Reference standard meter (including all their components) shall be placed. This cabinet shall have facility for easy opening and closing as and when required, with doors system. Screwed panels which take time in opening / closing shall not be acceptable. Doors shall be lockable to allow access by authorized personnel only. In the cabinet, a cooling fan of suitable capacity shall be provided to avoid temperature increase inside the cabinet during normal operation.

**6.01.3** The cabinet shall have protective earth terminals which shall be earthed during installation at site. The cabinet shall have one mains-switch to switch-on-off the incoming power supply. The cabinet shall also be protected against overload, under voltage and over voltage through suitable protection devices. With its doors closed, the cabinet housing the source and Reference standard meter shall provide degree of protection equal to IP-41.

**6.01.4** The source shall be easily programmable so as to give:

- a) Reference output frequency independent of mains, with quartz controlled operation range from 40 Hz to 70 Hz in steps of 0.01 Hz. with high efficiency, power-factor compensation according to IEC 61000-3-2.
- b) Stability at inductive, capacitive and non-linear loads for the power factor.
- c) Protection against overload and short circuit and provision for superimposition of harmonics in the range of 2<sup>nd</sup> to 20<sup>th</sup> harmonics.
- d) Star system (phase angle 120°)
- e) Any asymmetrical system.
- f) Computer controlled adjustment of star system (120°) or asymmetrical system in steps of 0.01°.
- g) Any non-balanced system

**6.01.5** Power Factor compensation shall be provided as per IEC 61000-3-2 so that the meter-testing system shall draw purely sinusoidal current from the mains A.C. supply without polluting it.

**6.01.6** Isolation Current Transformer (ICT) for single phase and three phase meters with closed current-voltage links

**6.01.7** Voltage & current cables should be compensated in such a way that voltage & current should not drop at any stage.

**6.01.8** Source capacity shall be capable to test up following combinations simultaneously by expanding Meter test rack

- a) 20 nos single phase energy meters/1Ph reference sub standard meters
- b) 20 nos three phase energy meters/3Ph reference sub standard meters

## **7.0 SPECIFICATION OF VOLTAGE AMPLIFIER**

The voltage amplifier used in the Source shall be a digital resonant switch mode voltage amplifier. It should have closed control conception of the frequency generator for high stability and high precision of test voltage. It should have output VA burden rating not less than 500 VA per phase. The voltage amplifier should have following capabilities and features.

- a) Electronic protection against Overload and Short Circuit
- b) Digital controlled via RS232/ RS 485 connections
- c) LED indication for faults such as overload, short-circuit, power-supply failure
- d) Efficiency better than 85%
- e) Stability 100 ppm /hr with integration time of 60 seconds
- f) Distortion factor 0.5%
- g) Provision for super- imposition of harmonics in the range of 2<sup>nd</sup> to 20<sup>th</sup> harmonics
- h) Test voltage range: 0-320 V (Phase-Neutral) and 0..... 555 V. (Phase to Phase) continuously variable with two setting steps preferably of 160V and 320V.
- i) Accuracy of the test setting amplitude in closed loop with reference meter: 0.05 %
- j) Accuracy of the test setting phase adjustment 0.01°
- k) No load reaction

## **8.0 SPECIFICATION OF CURRENT AMPLIFIERS**

The current amplifiers used in the Source shall be digital resonant switch mode type amplifiers. It should be closed control conception of the frequency generator for high stability and high precision of test current. It should have output VA burden rating not less than 1200 VA per phase. The current amplifiers should have following capabilities and features

- a) Electronic protection against Overload and Open Circuit
- b) LED indications for different faults such as overload, open-circuit,

- and failure of power supply.
- c) Efficiency better than 85%
  - d) Stability 100 ppm /hr with integration time of 60 seconds
  - e) Accuracy of the test setting amplitude in close loop with reference meter: 0.05 %
  - f) Accuracy of the test setting phase adjustment : 0.01°
  - g) Distortion factor : 0.5 %
  - h) Provision for super- imposition of harmonics in the range of 2<sup>nd</sup> to 20<sup>th</sup> harmonics
  - i) Test Current range 10 mA to 120 Amps with the ranges of 120-60-30-12-6-3-1.2-0.6-0.3-0.12-0.06-0.03 Amp and facility to generate starting current in the range of 0.2 mA to 10 mA
  - j) No load reaction

## **9.0 FREQUENCY GENERATOR**

Easily programmable to give reference output frequency independent of mains, with quartz controlled operation range from 40 Hz to 70Hz in steps of 0.01Hz with high efficiency, P.F compensation according to IEC 61000-3-2, stability at inductive, capacitive and non-linear loads for the power factor, protection against O/L and short circuit and provision for superimposition of harmonics for the range of 2<sup>nd</sup> and 20<sup>th</sup> harmonics.

## **10.0 PHASE POSITION MODIFIER**

This will allow adjustment of output power factor from 0.00 to 1.00 in all 4 quadrants in computer controlled steps of 0.01° i.e. 180 - 0 - Minus 180 degree.

Test voltage & test current system should be freely selectable as symmetrical

- Star systems (phase angle 120°)
- Any non-symmetrical system (only manually)
- Any non balanced system (only manually)
- Adjustment computer controlled in step 0.01°

## **11.0 SPECIFICATION OF REFERENCE STANDARD METER**

The class of accuracy of reference standard meter shall be 0.02 or better for active and reactive ranges, over the entire measurement load range & independent of the measuring mode. Current range of reference standard shall be 1 mA... 120 A direct connected and voltage range from 10-500 V (phase - neutral), selectable through PC.

Reference standard meter shall have auto-range selection facility and facility of dial test (power dosing) and RS 232/RS 485 serial communication port for communicating with PC. It must have frequency output proportional to the power to calibrate against better standard.

### Technical Data of Reference Standard Meter

#### a) Measuring modes

- 2 wire active / reactive
- 2 wire apparent
- 3 wire active / reactive mode
- 3 wire apparent
- 4 wire active / reactive mode
- 4 wire apparent

#### b) Frequency Range

Basic frequency 40... 70 Hz and total detectable frequency range 0...3000 Hz

#### c) Voltage Range

10 ...500 V Phase to Neutral

#### d) Current Ranges

- 1 mA to 160 Amps. ( working range )
- 10 mA to 160 Amps. (measurement range)

#### e) Accuracy

Voltage : 100 ppm for the range of 30 V to 500 V ( P-N)  
Current : 100 ppm (50 mA to 160 A)  
: 300 ppm (2 mA to 50 mA)

Power / Energy ( For active and reactive )

: 200 ppm at  $\cos\phi = 1$  or  $\sin\phi = 1$  (50mA to 160A)

: 200 ppm at  $\cos\phi = 0.5$  or  $\sin\phi = 0.5$

: 400 ppm for the range of 2 mA to 50 mA at  $\cos\phi = 1$   
or  $\sin\phi = 1$

The Accuracy shall be same for Active and reactive measurement.

Phase Angle Accuracy  $< 0.01^\circ$

#### f) Measurement drift

Voltage, current and power measurement drift shall be better than 30 ppm/ year. Drift for individual parameter shall be defined clearly in the offer

g) Standard Deviation should be better than 20 ppm

h) Long term stability should be 50 ppm/year

6

A common modular cabinet with door on front and rear shall be used for

housing source and reference standard.

**f) Display :**

The RSM shall have following display following parameters.

- True RMS value of each voltage & current input
- Phase angle between voltage / current and defined reference
- Power factor of each phase
- Active, reactive & apparent power of each phase
- Total active, reactive & apparent power
- Phase Sequence
- Frequency
- Integration time

The selection facility shall be provided to select any 6 parameters out of these parameters. The RSM shall have facility to maintain last setting when it is switched off.

**g) Integration time**

Facility to select integration time between 1 to 99 second shall be provided in the RSM.

**h) Operation**

Membrane key board with membranes push button to operate the RSM shall be provided in the front of the RSM.

**i) Reference Channel**

The RSM shall have facility to select reference for phase angle measurement. Selection of reference shall be provided manually & automatically.

**j) Frequency output :**

The bidder shall provide frequency output proportional to power/energy to calibrate the reference standard against high or lower precision reference standard. The output shall be in commonly used BNC type socket.

**k) Temperature Coefficient:**

Temperature coefficient of the reference meter will be  $<3$  ppm/K. The bidder shall submit necessary documentary evidence to specify the same.

**l) Calibration:**

The reference meter shall be provided along with calibration certificate



from national/international accredited laboratory. The bidder shall also arrange periodical calibration (once in a year) of reference standard meter from national/internationally accredited laboratory for the tenure of 5 years from the date of supply

## **12.0 SPECIFICATION OF HARMONIC INJECTION UNIT**

Over the range 2<sup>nd</sup> to the 20<sup>th</sup> harmonics to the test voltage and test current, the magnitude of each harmonic shall be adjustable from 0-40% of the fundamental wave and the maximum peak value of the wave form shall be 130% of the magnitude of the fundamental wave. Facility of controlling the phase angle of harmonics shall also be provided. Necessary proof for generation of wave form and desired harmonics shall be submitted along with offer.

## **13.0 SPECIFICATION OF METER MOUNTING RACK**

- a) One no. of Meter Mounting Rack shall consist of a lightweight aluminum frame for mounting of sensor heads, display devices and meters-under-test.
- b) Meters-under-test shall get connected to the voltage and current circuits by means of connecting leads.
- c) Design of the frames should be such that it shall safely and easily accommodate 20 numbers of single phase energy meters/reference meters or 20 numbers of three phase energy meters/reference meters of any type, 3 wire or 4 wire, whole-current or CT-VT operated meters. Rack shall have capacity to mount 20 energy meters /reference meters
- d) Necessary BNC type socket to test the Reference standard meter against a precision standard of higher accuracy shall be provided on Meter Mounting Rack.
- e) Necessary BNC type socket or any other suitable arrangement shall be provided on the Meter Mounting Rack to test the inbuilt reference standard meter against a precision standard of higher accuracy without removing the inbuilt reference standard meter from the source cabinet.
- f) The offered software shall have facility to test this reference standard meter in automatic mode by using these BNC type sockets.
- g) Necessary cables shall be provided along with equipment to test reference standard meter having frequency output on BNC type socket.
- h) There should be a warning lamp and two emergency push-buttons fitted on the Meter Mounting Rack.
- i) Each meter test position should have communication facility to communicate with meter under test using DLMS, IEC1107, IEC 62056 communication.
- j) The offered Meter Test System should be capable to carry out following Accuracy/Tamper Test on energy meters.

- Accuracy test for Single Phase Meter for phase & Neutral channel for same magnitude of current one by one.
- Accuracy test for Single Phase Meter in case of reverse power for phase & Neutral channel for same magnitude of current one by one.
- Facility to disconnection neutral for all meters physically by connection.
- CT open, Unbalance and reverse current test for Three Phase Meters
- PT missing, voltage unbalance and reverse phase sequence.

**14.0 SPECIFICATION OF SCANNING HEADS AND ERROR INDICATION UNITS**

- 14.01** 1 photoelectric scanning head for each position suitable for reading the LED/LCD pulse output of the meters-under-test shall be provided
- 14.02** Scanning head shall have mechanical type fixing arrangement so that same can be fixed directly towards the meter body. Each scanning head should be designed in such a way that the scanning head can be fixed easily in a position which would facilitate accurate and proper testing of the meter-under-test.
- 14.03** The scanning head should be insensitive to ambient light. It should give optical indication of pulses by LED
- 14.04** The scanning head must be able to measure LED/LCD pulse output (as per IEC 62052-11, clause 5.11) of frequency up to 1 kHz
- 14.05** An Error Indication Device shall be mounted on each test position. The resolution of error indication shall be 4½ digits with decimal point configurable by software. There shall be provision on the error indication unit to reset the error or to repeat it if something is wrong. The same should have Acknowledgement function while doing testing of starting current and creep tests manually

**15.0 ISOLATING CURRENT TRANSFORMER (ICT) :**

The meter test system shall have isolating current transformer (ICT) to test three phase as well as single phase closed link whole current meters.

**15.01 Technical details.**

Sr. No.	Parameter	Range
1.	Nominal Primary current I-prim	100A
2.	Maximum Primary current	120A
3.	Nominal Secondary current I-sec	100A
4.	Maximum Secondary current	120A

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

5.	VA rating	50VA @ Nominal current (100 Amp) with single turn in operation
6.	Accuracy ratio error	± 0.01% (1 A to 120 A) ± 0.03% (0.15 A to <1 A) ± 0.15% (0.02 A to <0.15 A) ± 0.3% (0.01 A to <0.02 A)
7.	Phase angle error	± 1 min (1 A to 120 A) ± 3 min (0.15 A to <1 A)
		± 10 min (0.02 A to <0.15 A) ± 20 min (0.01 A to <0.02 A)
8.	Operating burden	3 mΩ
9.	Max. Burden	5 mΩ

15.02 There shall be provision to bypass the individual ICT automatically when secondary of ICT is kept open. Sufficient protection shall be provided to protect the ICT in case if secondary of ICT remain open while full load is running in primary.

15.03 Secondary of ICT shall be designed permanently wounded core with multiple turns in such a way that its secondary leads can be connected directly to Meter under Test and fixed with ICT. Ring type or link connected of design with loose primary/secondary type of connection won't be acceptable.

15.04 Primary connection of ICT should be fixed type and all primary connection on each ICT terminal shall be connected permanently. Primary & Secondary leads of ICT should be designed in such a way that it can carry its maximum Current i.e. 120A for 2 hours continuously without any malfunction in ICT.

15.05 LED indication shall be provided on ICT to indicate healthiness of ICT

15.06 Associate Software shall have facility to indicate fault in ICT like open circuit and over load on PC. It should have facility to display message on computer screen about any fault in ICT during testing of meters.

15.07 Detailed catalogue of offered ICT and its working principle of these shall be submitted along with offer (own make)  
One sample certificate of ICT shall be submitted along with offer.

**16.0 COMPUTER SYSTEM (DESKTOP PC, PRINTER, MONITOR, SOFTWARES & ACCESSORIES THEREOF):**

16.01 The operating of the test equipment, the display of the actual values, the processing and display of the test results and the print out of the test results, reports etc. should be effected by the associated Desktop PC (Personal Computer) system complete with licensed Windows based operating system, licensed proprietary software of the meter-testing equipment and a LaserJet printer having minimum specifications as given below to be supplied along with the meter testing system by the

- successful bidder
- 16.02 The Desktop PC (PC) shall be connected to the measuring device and power source and necessary leads and cables for making these connections shall be provided by the vendor at his cost
- 16.03 The licensed proprietary software of the meter-testing equipment shall be supplied and installed on the PC. This software should be Windows based, user friendly and menu driven, operated with the help of a mouse and keyboard in manual or automatic mode. The manual mode of operation of the licensed proprietary software of the meter-testing equipment shall allow, at least, performance of the following tasks:
- Controlling of the source
  - displaying of test parameters (actual values) on PC screen
  - displaying the wave form of output voltage and current and harmonics analysis
  - Performance of the accuracy tests
- 16.04 The automatic mode of operation licensed proprietary software of the meter testing equipment should have different modules to prepare meter test sequence so as to carry out the testing in fully automatic mode. These modules shall be designed in such a way that user can prepare the test sequence very easily
- 16.05 The licensed proprietary software of the meter-testing equipment shall allow, at least, performance of the following tasks:
- User interface to operate the system
  - Easy to prepare test-tables by using “drag & drop” concept
  - Supervision and control of the test procedure
  - Supervision and display of the test current and voltage
  - Indication of the errors of the meters- under- test
  - Evaluation of the test results and generation of test-reports
  - Manual testing and automatic testing facility
  - Facility to define test parameters in terms of percentage and absolute terms
  - Facility to define error limit in two levels
  - Facility to protect the system from over voltage in manual mode and automatic mode
  - Facility to check meters for short circuit and open circuit conditions prior to starting of the testing in fully automatic mode for each sequence
  - Facility to interrupt the testing and restart it again
  - Password facility for administrator and operator with different levels
  - Print out facility of test-reports with desired header
  - Facility to take back-up of data
  - Absolute measurement with higher precision / more accurate standard in fully automatic mode using BNC type socket provided on Meter

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

**Mounting Rack**

- Testing facility of at-least 20 different meters with 20 different constants
- Software shall have facility for display of different output voltages and currents
- Facility to display the curve of test voltage and current in presence of harmonics
- Protection of meters- under- test from high voltage and current
- Software shall have facility to indicate fault in ICT"s like open circuit and over load on PC for easy identification to operator

16.06 The licensed proprietary software of the meter-testing equipment shall have facility to display following parameters:

- Individual phase voltage
- Individual phase current
- Phase angle and power factor of symmetrical or asymmetrical star system
- Total Power Factor
- Individual phase power (Active , Reactive and Apparent)
- Total Power (Active , Reactive and Apparent)
- Frequency
- Phase Sequence
- Measurement mode
- Vectorial display.

**16.07 TECHNICAL DATA FOR PC**

Sr. No.	Component	Specification
1.	Processor Brand	Intel
2.	Processor Type	i5 Processor 6 <sup>th</sup> generation or later
3.	Processor clock speed	Min. 1.5 GHz
4.	Processor Cache	3 MB or higher
5.	Operating System	Windows 10 Professional edition or latest version (preloaded with license)
6.	OS Architecture	64 bit
7.	Monitor	21.5 inch or higher
8.	Resolution	1920*1080
9.	Memory (RAM)	DDR4 RAM 8 GB or higher
10.	HDD RPM	Min. 5400
11.	HDD Capacity	Min. 1TB SATA HDD
12.	Display Type	LED
13.	Optical Drive	Tray load DVD drive (Read and Write DVD/CD)

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

14.	Ports	
a	USB	Min. 4 USB
b	RJ-45	1
c	HDMI	Integrated
15.	Slots	
a	Micro Card Reader	Integrated
b	DIMM slot	Integrated
16.	Speakers	
17.	Connectivity	
a	Wireless	Wi-fi
b	Bluetooth	Integrated
18.	Keyboard	USB Wired
19.	Mouse	USB Wired
20.	Webcam	Integrated
21.	Printer	Color LaserJet, suitable for paper size upto A4

**17.0 DIGITAL PROCESS UNIT**

For the simultaneous error measurement of 20 meters under test, the basic unit shall be equipped with:

- a) 20 inputs for scanning head pulses.
- b) 1 input for reference output
- c) 1 interface for connection with PC.
- d) Controlled output for Dosage Operation (Dial Test).
- e) Error display per measuring position

**18.0 TYPE TESTS**

**18.01** The tenderer shall furnish detailed accuracy certificates of the Reference standard meter for all the tests as relevant Indian standards / International standards and calibration certificate of complete meter-testing system (excluding the PC system). All the accuracy tests of Reference standard meter and calibration certificate of complete meter-testing system (excluding the PC system) shall be carried out at laboratories which are accredited by the National Board of Accreditation of laboratories (NABL) of Government of India within five years of opening of the tender to prove that the instruments offered meet the requirements of specification. There shall be no change in the design of type tested instruments and those offered against this tender. Accuracy test reports and calibration certificate shall be submitted and got approved from Chief Engineer, MSEDCL, Testing & Quality Control Cell, Prakashgad, Bandra (E), Mumbai - 400051 prior to commencement of supply.

The Purchaser reserves the right to demand repetition of some or all the accuracy tests in presence of purchaser's representative at purchaser's cost. For this purpose, the tenderer shall quote unit rates for carrying

out each tests. However, such unit rates will not be considered for evaluation of the offer. In case the unit fails in test, the complete supply shall be rejected & expenditure incurred shall be recovered from the tenderer from his deposit

### **18.02 ACCEPTANCE & ROUTINE TESTS**

All acceptance tests as per IS: 12346 shall be carried out on the equipment. All acceptance tests certificates, routine test certificates, calibration certificate & operation manual must be provided along with each equipment in the form of CD (Compact Disc) as well as a hard copy.

### **19.0 CALIBRATION CERTIFICATES**

The Reference standard meter shall be supplied along with the calibration certificate as per relevant standards. The calibration certificate shall be issued by NABL labs / International Recognized Laboratories

### **20.0 GUARANTEED TECHNICAL PARTICULARS**

The tenderer shall furnish the particulars giving specific required details of meters in schedule 'A' attached. The offers without the details in Schedule „A" stand rejected.

### **21.0 ACCESSORIES**

Each Meter test bench shall be supplied along with the following accessories:

- One set of connecting cables
- Operating Manual in English.
- One standard calibration report.
- Data download software to read out the module for transfer and presentation of data.
- Spares:
  1. Fuses : One set.
  2. Connecting cables - One set.
  3. Scanner set- 1 No

### **22.0 TRAINING**

The successful bidder shall depute their representative to train MSEDCL"s Engineers at their works of familiarization of design, application, operation & maintenance of the instrument of purchaser as and when they will be called for at no extra cost.

### **23.0 GUARANTEE**

The instrument shall be guaranteed for a period of 5 years from the date of commissioning or five and half years from the date of receipt

whichever is earlier. The instrument found defective within above guarantee period shall be replaced / repaired / rectified by the supplier free of cost, within one month of receipt of intimation. After the replacement / repairs / rectification, the accuracy shall not be affected. Test certificate and calibration certificate shall invariably be submitted after rectification / repairs.

If defective equipment is not replaced / repaired / rectified within the specified period as above, the Company shall recover an equivalent amount plus 15% supervision charges from any of the bills of the supplier.

#### **24.0 AFTER SALES SERVICE**

The bidder has to indicate clearly the after sales service to be provided by the supplier within guarantee period and outside guarantee period and Addresses of Sales Service Centre, details of Engineers, etc. shall be submitted along with the offer.

#### **25.0 PRE-DESPATCH INSPECTIONS**

The successful bidder shall offer test bench at their works for inspection before dispatch. The offered lot shall be tested for acceptance tests and any other test as per relevant IS / IEC as required by inspecting officers. During inspection, if the instrument does not meet the required specification & test results found not satisfactory then it shall be liable for rejection. Calibration Certificates of all associated equipments shall be furnished at the time of factory inspection.

The manufacturer shall offer to the inspector representing the purchaser all the reasonable facilities, free of charge, for inspection and testing, to satisfy him that the material is being supplied in accordance with this specification. The MSEDCL's representative / Engineer attending the above testing shall carry out testing as per relevant IS / IEC & as per this technical specification and issue test certificate approval to the manufacturer and give clearance for dispatch.

The instrument shall be inspected jointly by the Executive Engineer, Testing Division (with respective laboratory engineers) & the Executive Engineer, Inspection Wing.

#### **26.0 QUALITY CONTROL**

The purchaser may send a team of experienced engineers for assessing the capability of the bidder or their principals for manufacturing of instrument as per this specification. The team shall be given all assistance and co-operation for inspection and testing at the bidder's works.

Three tender samples shall be kept ready for assessing and testing. The tenderer has to give all facilities for carrying out the testing of these samples.



## **27.0 MINIMUM TESTING FACILITIES**

The bidder or their principals / manufacturer shall have the necessary minimum testing facilities for carrying out various acceptance and routine tests. A list of machinery / equipment and testing facility available at their Works shall also be furnished along with the offer.

## **28.0 PACKING**

**28.01** The instrument shall be suitably packed to avoid damage or disturbance during transit or handling. Each instrument may be suitably packed in the first instance to prevent ingress of moisture and dust and then placed in a cushioned carton of a suitable material to prevent damage due to shocks during transit. The lid of the cartoon may be suitably sealed. A suitable number of sealed cartons may be packed in a case of adequate strength with extra cushioning if considered necessary. The cases may then be properly sealed against accidental opening in transit. The packing cases may be marked to indicate the fragile nature of the contents.

**28.02** The following information shall be furnished with the consignment :

- Name of consignee
- Details of consignment
- Destination
- Total Weight of consignment.
- Sign showing upper / lower side of the crate
- Sign showing fragility of the material.
- Handling and unpacking instructions.
- Bill of Materials indicating contents of each package and spare materials.

## **29.0 SCHEDULES**

The tenderer shall fill in the following schedules which are part and parcel of the tender specification and offer. If the schedules are not submitted duly filled in with the offer, the offer shall be liable for rejection. The order copies of the order executed mentioned in the list of order shall be invariably enclosed along with the offer. Only those orders mentioned in the list shall be considered whose order copies shall be enclosed with the offer.

Schedule A – Guaranteed and technical particulars.

## **30.0 DOCUMENTATION**

Two set of following documents shall be supplied along with each test system.

- Operating manual of each components of test equipment like reference standard, amplifier, etc
- Wiring diagram
- Service manual
- Calibration certificate of reference standard
- Test certificate of complete test system

**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 Cell,  
1<sup>st</sup> 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 \_\_\_\_\_

**SCHEDULE - "A"**  
**GUARANTEED AND TECHNICAL PARTICULARS**

<b>ITEM NAME</b>	<b>SINGLE PHASE AND THREE PHASE FULLY AUTOMATIC THREE POSITION TEST BENCH WITH REFERENCE STANDARD METER</b>	
<b>SR. NO.</b>	<b>PARTICULARS</b>	<b>GTP VALUES</b>
(1)	MANUFACTURER NAME & ADDRESS	TO BE FILLED BY MANUFACTURER
(2)	COUNTRY OF MANUFACTURE	TO BE FILLED BY MANUFACTURER
(3)	TYPE / MODEL DETAILS OF EQUIPMENT	TO BE FILLED BY MANUFACTURER
(4)	OPERATING EXPERIENCE OF THE BIDDER	TO BE FILLED BY MANUFACTURER
(5)	MANUFACTURER HAS EXPERIENCE OF MINIMUM TEN YEARS FOR SUPPLY OF SIMILAR OR BETTER EQUIPMENTS TO NATIONAL / INTERNATIONAL ACCREDITED LABORATORIES OR POWER UTILITIES IN INDIA.	YES
(6)	NECESSARY PURCHASE ORDER COPIES ENCLOSED IN SUPPORT OF ABOVE (4) &(5)	YES
(7)	PURCHASE ORDER NOS. & DATES IN SUPPORT OF ABOVE (4) & (5)	TO BE FILLED BY MANUFACTURER
(8)	SATISFACTORILY PERFORMANCE REPORT SUBMITTED FROM NABL LABS/ POWER UTILITY ENCLOSED WITH OFFER	YES
(9)	DECLARATION AS PER CL NO 2.05 OF TECH	YES

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

	SPECS ENCLOSED.	
(10)	NAME & ADDRESS OF BIDDERS TESTING FACILITIES IN INDIA ENCLOSED WITH OFFER	TO BE FILLED BY MANUFACTURER
(11)	NAME & ADDRESS OF BIDDERS OR THEIR PRINCIPALS OWN SERVICE CENTRE IN INDIA ENCLOSED WITH OFFER	TO BE FILLED BY MANUFACTURER
(12)	LIST OF PLANT AND MACHINERY, TOOLS AND TACKLES TO CARRY OUT SERVICE ENCLOSED ALONG WITH OFFER.	YES
(13)	THE MAJOR COMPONENT LIKE SOURCE, REFERENCE STANDARD METER, AND DIGITAL SYSTEM OF METER TEST SYSTEM SHOULD BE ONLY FROM ONE MANUFACTURE TO PROVIDE BETTER INTEGRITY AND AFTER SALES OF OFFERED PRODUCT. BIDDER SHALL SPECIFY THE MAKE OR NAME OF OEM	YES
(14)	FREQUENCY GENERATOR: i. MAKE ii. FACILITIES SHALL BE SHOULD BE AVAILABLE FOR PROGRAMMING REFERENCE OUTPUT FREQUENCY iii. THE OPERATING RANGE SHALL BE 40 HZ TO 70 HZ IN STEPS OF 0.01 HZ iv. PF COMPENSATION SHOULD CONFORM TO IEC 61000-3-2	TO BE FILLED BY MANUFACTURER
(15)	VOLTAGE AMPLIFIER: i. MAKE ii. VA RATING iii. LED INDICATION FOR FAULTS SUCH AS OVERLOAD, SHORT-CIRCUIT, POWER SUPPLY FAILURE iv. STABILITY IN PPM / H INTEGRATION TIME 60 SEC v. TEST VOLTAGE RANGE (PHASE-NEUTRAL) & (PHASE TO PHASE)	TO BE FILLED BY MANUFACTURER
(16)	CURRENT AMPLIFIER:	TO BE FILLED

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

	<ul style="list-style-type: none"> <li>i. MAKE</li> <li>ii. VA RATING</li> <li>iii. LED INDICATIONS FOR DIFFERENT FAULTS SUCH AS OVERLOAD, OPEN-CIRCUIT FAILURE OF POWER SUPPLY</li> <li>iv. STABILITY PPM / H WITH INTEGRATION TIME OF 60 SEC</li> <li>v. TEST CURRENT RANGE</li> <li>vi. FACILITY TO GENERATE STARTING CURRENT IN THE RANGE OF 1 MA TO 10 MA</li> </ul>	BY MANUFACTURER
(17)	<p><b>FREQUENCY GENERATOR :</b></p> <ul style="list-style-type: none"> <li>i. OPERATION RANGE</li> <li>ii. P.F COMPENSATION ACCORDING TO IEC 61000-3-2, STABILITY AT INDUCTIVE, CAPACITIVE AND NON-LINEAR LOADS FOR THE POWER FACTOR, PROTECTION AGAINST O/L AND SHORT CIRCUIT</li> <li>iii. PROVISION FOR SUPERIMPOSITION OF HARMONICS FOR THE RANGE OF 2<sup>ND</sup> AND 20<sup>TH</sup> HARMONICS</li> </ul>	TO BE FILLED BY MANUFACTURER
(18)	<p><b>PHASE POSITION ADJUSTER</b></p> <p>TEST VOLTAGE &amp; CURRENT SYSTEM CAN BE FREELY SELECTABLE FOR SYMMETRICAL / NON SYMMETRICAL AND BALANCE / UNBALANCE LOAD SYSTEM</p>	YES
(19)	<p><b>HARMONIC INJECTION UNIT :</b></p> <ul style="list-style-type: none"> <li>i. FACILITY OF CONTROLLING THE PHASE ANGLE OF HARMONICS SHALL BE PROVIDED</li> <li>ii. THE SUPERIMPOSITION OF HARMONICS SHALL BE ONLY POSSIBLE IN MANUAL / AUTOMATIC OPERATION</li> <li>iii. OVER THE RANGE 2<sup>ND</sup> TO THE 20<sup>TH</sup> HARMONICS TO THE TEST VOLTAGE AND TEST CURRENT, THE MAGNITUDE OF EACH HARMONIC SHALL BE ADJUSTABLE FROM 0-40% OF THE FUNDAMENTAL WAVE, AND THE MAXIMUM PEAK VALUE OF THE WAVE FORM SHALL BE 130% OF THE MAGNITUDE OF THE FUNDAMENTAL WAVE</li> </ul>	YES

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

(20)	<p><b>REFERENCE STANDARD METER:</b></p> <ul style="list-style-type: none"> <li>i. MAKE</li> <li>ii. CLASS OF ACCURACY OF REFERENCE STANDARD FOR ACTIVE AND REACTIVE RANGES</li> <li>iii. CURRENT RANGE( WORKING RANGE ) &amp; (MEASUREMENT RANGE)</li> <li>iv. VOLTAGE RANGE (PHASE - NEUTRAL)</li> <li>v. ACCURACY</li> <li>vi. FREQUENCY RANGE</li> <li>vii. INTEGRATION TIME</li> <li>viii. TEMPERATURE COEFFICIENT</li> <li>ix. REFERENCE STANDARD HAS AUTO-RANGE SELECTION FACILITY AND FACILITY OF DIAL TEST (POWER DOSING)</li> <li>x. REFERENCE STANDARD METER HAS RS 232 SERIAL COMMUNICATION PORT FOR COMMUNICATING WITH PC</li> </ul>	<p><b>TO BE FILLED BY MANUFACTURER</b></p>
(21)	<p><b>SCANNING HEAD:</b></p> <ul style="list-style-type: none"> <li>i. ONE PHOTOELECTRIC SCANNING HEAD FOR EACH POSITION SUITABLE FOR READING THE LED PULSE OUTPUT OF THE METERS-UNDER-TEST SHALL BE PROVIDED</li> <li>ii. SCANNING HEAD SHALL HAVE MECHANICAL TYPE FIXING ARRANGEMENT SO THAT SAME CAN BE FIXED DIRECTLY ON THE METER BODY</li> <li>iii. THE SCANNING HEAD SHOULD BE INSENSITIVE TO AMBIENT LIGHT. IT SHOULD GIVE OPTICAL INDICATION OF PULSES BY LED</li> <li>iv. THE SCANNING HEAD MUST BE ABLE TO MEASURE LED PULSE OUTPUT (AS PER IEC 62052-11, CLAUSE 5.11) OF FREQUENCY UP TO 1 KHZ</li> </ul>	<p><b>YES</b></p>
(22)	<p><b>METER MOUNTING RACK:</b></p> <ul style="list-style-type: none"> <li>i. ONE RACK SHALL HAVE CAPACITY TO MOUNT 20 METERS OF SINGLE PHASE OR 20 METERS OF THREE PHASE, 3 WIRE OR 4 WIRE, WHOLE-CURRENT OR CT-VT OPERATED ON TWO SIDES ( 10 POSITION ON ONE SIDE AND 10 POSITION ON OTHER SIDE ) SHALL BE SUPPLIED ALONG WITH TEST BENCH.</li> </ul>	<p><b>YES</b></p>

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

	<ul style="list-style-type: none"> <li>ii. NECESSARY BNC TYPE SOCKET TO TEST THE REFERENCE STANDARD METER AGAINST A PRECISION STANDARD OF HIGHER ACCURACY SHALL BE PROVIDED ON METER MOUNTING RACKS.</li> <li>iii. NECESSARY BNC TYPE SOCKET OR ANY OTHER SUITABLE ARRANGEMENT SHALL BE PROVIDED ON THE EITHER OF METER MOUNTING RACKS TO TEST THE INBUILT REFERENCE STANDARD METER AGAINST A PRECISION STANDARD OF HIGHER ACCURACY WITHOUT REMOVING THE INBUILT REFERENCE STANDARD METER FROM THE SOURCE CABINET.</li> <li>iv. THE METER MOUNTING RACKS SHALL BE PROVIDED WITH ONE NUMBER OF BNC TYPE SOCKETS FOR THE TESTING OF ONE REFERENCE STANDARD METER OF LOWER ACCURACY.</li> <li>v. NECESSARY CABLES SHALL BE PROVIDED ALONG WITH EQUIPMENT TO TEST REFERENCE STANDARD METER HAVING FREQUENCY OUTPUT ON BNC TYPE SOCKET</li> <li>vi. THERE SHOULD BE A WARNING LAMP AND TWO EMERGENCY PUSH-BUTTONS FITTED ON THE METER MOUNTING RACKS</li> <li>vii. TAMPER TESTING FACILITY FOR SINGLE PHASE AND THREE PHASE METER AS PER CLAUSE NO. 13 (j)</li> </ul>	
(23)	<p><b>ISOLATION CURRENT TRANSFORMER (ICT):</b></p> <ul style="list-style-type: none"> <li>i. NOMINAL PRIMARY CURRENT</li> <li>ii. MAXIMUM PRIMARY CURRENT</li> <li>iii. NOMINAL SECONDARY CURRENT</li> <li>iv. MAXIMUM SECONDARY CURRENT</li> <li>v. OPERATING BURDEN</li> <li>vi. MAX. BURDEN</li> <li>vii. LED INDICATION SHALL BE PROVIDED ON ICT TO INDICATE HEALTHINESS OF ICT</li> <li>viii. ASSOCIATE SOFTWARE SHALL HAVE FACILITY TO INDICATE FAULT IN ICT LIKE OPEN CIRCUIT AND OVER LOAD ON PC. IT</li> </ul>	<p><b>TO BE FILLED BY MANUFACTURER</b></p>



**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

	SHOULD HAVE FACILITY TO DISPLAY MESSAGE ON COMPUTER SCREEN ABOUT ANY FAULT IN ICT DURING TESTING OF METERS	
(24)	<p><b>SOFTWARE &amp; PC:</b></p> <p>i. MANUAL MODE OF OPERATION OF THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL ALLOW, AT LEAST, PERFORMANCE OF THE TASKS MENTIONED UNDER CLAUSE NO. 16.04</p> <p>ii. THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL ALLOW, AT LEAST, PERFORMANCE OF THE TASKS MENTIONED UNDER CLAUSE NO. 16.06</p> <p>iii. THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL HAVE FACILITY TO DISPLAY PARAMETERS MENTIONED UNDER CLAUSE NO. 16.07</p> <p>iv. TECHNICAL DATA FOR PC AS PER CLAUSE NO. 16.08</p>	YES
(25)	SUPPLIER AGREES TO IMPART NECESSARY TRAINING REGARDING INSTALLATION AND USE OF SOFTWARE.	YES
(26)	WHETHER REFERENCE STANDARD METER IN METER TEST BENCH IS TESTED FOR ACCURACY	YES
(27)	CALIBRATION CERTIFICATE SUBMITTED ALONG WITH OFFER	YES
(28)	CALIBRATION CERTIFICATE NOS. & DATE	TO BE FILLED BY MANUFACTURER
(29)	SUPPLIER AGREES TO SUPPLY REFERENCE STANDARD METER WITH ALL ACCESSORIES AS PER TECHNICAL SPECIFICATION	YES
(30)	SUPPLIER AGREES TO DEPUTE THEIR REPRESENTATIVE TO EDUCATE ENGINEERS OF PURCHASER AS AND WHEN THEY WILL BE	YES

**TECHNICAL SPECIFICATION OF 20 POSITION THREE PHASE FULLY AUTOMATIC METER TEST BENCH WITH REFERENCE METER OF 0.02% ACCURACY**

---

	<b>CALLED FOR AT NO EXTRA COST</b>	
(31)	<b>GUARANTEE OF METER TEST BENCH AS PER CLAUSE NO. 23.00 OF THIS SPECIFICATION</b>	<b>YES</b>
(32)	<b>DETAILS OF AFTER SALES SERVICE WITHIN GUARANTEE PERIOD ENCLOSED WITH OFFER</b>	<b>YES</b>
(33)	<b>DETAILS OF AFTER SALES SERVICE OUTSIDE GUARANTEE PERIOD ENCLOSED WITH OFFER</b>	<b>YES</b>
(34)	<b>ADDRESSES OF SALES SERVICE CENTRE, DETAILS OF ENGINEERS ENCLOSED WITH OFFER</b>	<b>YES</b>
(35)	<b>DETAILS OF NECESSARY MINIMUM TESTING FACILITIES FOR CARRYING OUT VARIOUS ACCEPTANCE AND ROUTINE TESTS SUBMITTED ALONG WITH OFFER.</b>	<b>YES</b>
(36)	<b>LIST OF MACHINERY / EQUIPMENT AND TESTING FACILITY AVAILABLE AT SUPPLIER'S WORKS IS FURNISHED ALONG WITH OFFER.</b>	<b>YES</b>

20 Positions, 3 Ph. Fully Automatic Testing Bench with reference standard of 0.02S accuracy class

GTP Order Sequence	GTP Parameters	Date Type
1	1)MANUFACTURER NAME & ADDRESS	TEXT
2	2)COUNTRY OF MANUFACTURE	TEXT
3	3)TYPE / MODEL DETAILS OF EQUIPMENT	TEXT
4	4)OPERATING EXPERIENCE OF THE BIDDER	FILE
5	5)MANUFACTURER HAS EXPERIENCE OF MINIMUM TEN YEARS FOR SUPPLY OF SIMILAR OR BETTER EQUIPMENTS TO NATIONAL / INTERNATIONAL ACCREDITED LABORATORIES OR POWER UTILITIES IN	BOOLEAN
6	6)NECESSARY PURCHASE ORDER COPIES ENCLOSED IN SUPPORT OF ABOVE (4) &(5)	FILE
7	7)PURCHASE ORDER NOS. & DATES IN SUPPORT OF ABOVE (4) & (5)	FILE
8	8)SATISFACTORILY PERFORMANCE REPORT SUBMITTED FROM NABL LABS/ POWER UTILITY ENCLOSED WITH OFFER	FILE
9	9)DECLARATION AS PER CL NO 2.05 OF TECH SPECS ENCLOSED	BOOLEAN
10	10)NAME & ADDRESS OF BIDDERS TESTING FACILITIES IN INDIA ENCLOSED WITH OFFER	TEXT
11	11)NAME & ADDRESS OF BIDDERS OR THEIR PRINCIPALS OWN SERVICE CENTRE IN INDIA ENCLOSED WITH OFFER	TEXT
12	12)LIST OF PLANT AND MACHINERY, TOOLS AND TACKLES TO CARRY OUT SERVICE ENCLOSED ALONG WITH OFFER	BOOLEAN
13	13)THE MAJOR COMPONENT LIKE SOURCE, REFERENCE STANDARD METER, AND DIGITAL SYSTEM OF METER TEST SYSTEM SHOULD BE ONLY FROM ONE MANUFACTURE TO PROVIDE BETTER INTEGRITY AND AFTER SALES OF OFFERED PRODUCT. BIDDER SHALL SPECIFY THE	BOOLEAN
14	14-i)FREQUENCY GENERATOR: i. MAKE	TEXT
15	14-ii)FACILITIES SHALL BE SHOULD BE AVAILABLE FOR PROGRAMMING REFERENCE OUTPUT FREQUENCY	TEXT
16	14-iii)THE OPERATING RANGE SHALL BE 40 HZ TO 70 HZ IN STEPS OF 0.01	TEXT
17	14-iv)PF COMPENSATION SHOULD CONFORM TO IEC 61000-3-2	TEXT
18	15-i)VOLTAGE AMPLIFIER: i. MAKE	TEXT
19	15-ii)VA RATING	TEXT
20	15-iii)LED INDICATION FOR FAULTS SUCH AS OVERLOAD, SHORT-CIRCUIT, POWER SUPPLY FAILURE	TEXT
21	15-iv)STABILITY IN PPM / H INTEGRATION TIME 60 SEC	TEXT
22	15-v)TEST VOLTAGE RANGE (PHASE-NEUTRAL) & (PHASE TO PHASE)	TEXT
23	16-i)CURRENT AMPLIFIER:Make	TEXT
24	16-ii)VA RATING	TEXT
25	16-iii)LED INDICATIONS FOR DIFFERENT FAULTS SUCH AS OVERLOAD, OPEN-CIRCUIT FAILURE OF POWER SUPPLY	TEXT

26	16-iv)STABILITY PPM / H WITH INTEGRATION TIME OF 60 SEC	TEXT
27	16-v)TEST CURRENT RANGE	TEXT
28	16-vi)FACILITY TO GENERATE STARTING CURRENT IN THE RANGE OF 1 MA TO 10 MA	TEXT
29	17-i)FREQUENCY GENERATOR : i. OPERATION RANGE	TEXT
30	17-ii)P.F COMPENSATION ACCORDING TO IEC 61000-3-2, STABILITY AT INDUCTIVE, CAPACITIVE AND NON-LINEAR LOADS FOR THE POWER FACTOR, PROTECTION AGAINST O/L AND SHORT CIRCUIT	TEXT
31	17-iii)PROVISION FOR SUPERIMPOSITION OF HARMONICS FOR THE RANGE OF 2ND AND 20TH HARMONICS	TEXT
32	18)PHASE POSITION ADJUSTER TEST VOLTAGE & CURRENT SYSTEM CAN BE FREELY SELECTABLE FOR SYMMETRICAL / NON SYMMETRICAL AND BALANCE / UNBALANCE LOAD SYSTEM	BOOLEAN
33	19-i)HARMONIC INJECTION UNIT : i. FACILITY OF CONTROLLING THE PHASE ANGLE OF HARMONICS SHALL BE PROVIDED	BOOLEAN
34	19-ii)THE SUPERIMPOSITION OF HARMONICS SHALL BE ONLY POSSIBLE IN MANUAL / AUTOMATIC OPERATION	BOOLEAN
35	19-iii)OVER THE RANGE 2ND TO THE 20TH HARMONICS TO THE TEST VOLTAGE AND TEST CURRENT, THE MAGNITUDE OF EACH HARMONIC SHALL BE ADJUSTABLE FROM 0-40% OF THE FUNDAMENTAL WAVE, AND THE MAXIMUM PEAK VALUE OF THE WAVE FORM SHALL BE 130% OF THE MAGNITUDE OF THE FUNDAMENTAL WAVE	BOOLEAN
36	20-i)REFERENCE STANDARD METER: i. MAKE	TEXT
37	20-ii)CLASS OF ACCURACY OF REFERENCE STANDARD FOR ACTIVE AND REACTIVE RANGES	TEXT
38	20-iii)CURRENT RANGE( WORKING RANGE ) & (MEASUREMENT RANGE)	TEXT
39	20-iv)VOLTAGE RANGE (PHASE - NEUTRAL)	TEXT
40	20-v)ACCURACY	TEXT
41	20-vi)FREQUENCY RANGE	TEXT
42	20-vii)INTEGRATION TIME	TEXT
43	20-viii)TEMPERATURE COEFFICIENT	TEXT
44	20-ix)REFERENCE STANDARD HAS AUTO-RANGE SELECTION FACILITY AND FACILITY OF DIAL TEST (POWER DOSING)	TEXT
45	20-x)REFERENCE STANDARD METER HAS RS 232 SERIAL COMMUNICATION PORT FOR COMMUNICATING WITH PC	TEXT
46	21-i)SCANNING HEAD: i. ONE PHOTOELECTRIC SCANNING HEAD FOR EACH POSITION SUITABLE FOR READING THE LED PULSE OUTPUT OF THE METERS-UNDER TEST SHALL BE PROVIDE	BOOLEAN
47	21-ii)SCANNING HEAD SHALL HAVE MECHANICAL TYPE FIXING ARRANGEMENT SO THAT SAME CAN BE FIXED DIRECTLY ON THE METER	BOOLEAN
48	21-iii)THE SCANNING HEAD SHOULD BE INSENSITIVE TO AMBIENT LIGHT. IT SHOULD GIVE OPTICAL INDICATION OF PULSES BY LED	BOOLEAN
49	21-iv)THE SCANNING HEAD MUST BE ABLE TO MEASURE LED PULSE OUTPUT (AS PER IEC 62052-11, CLAUSE 5.11) OF FREQUENCY UP TO 1	BOOLEAN
50	22-i)METER MOUNTING RACK: i. ONE RACK SHALL HAVE CAPACITY TO MOUNT 20 METERS OF SINGLE PHASE OR 20 METERS OF THREE PHASE, 3 WIRE OR 4 WIRE, WHOLE-CURRENT OR CT-VT OPERATED ON TWO SIDES (10 POSITIONS ON ONE SIDE AND 10 POSITIONS ON OTHER SIDE)SHALL BE SUPPLIED ALONG WITH TEST BENCH	BOOLEAN

51	22-ii) NECESSARY BNC TYPE SOCKET TO TEST THE REFERENCE STANDARD METER AGAINST A PRECISION STANDARD OF HIGHER ACCURACY SHALL BE PROVIDED ON METER MOUNTING RACKS.	BOOLEAN
52	22-iii)NECESSARY BNC TYPE SOCKET OR ANY OTHER SUITABLE ARRANGEMENT SHALL BE PROVIDED ON THE EITHER OF METER MOUNTING RACKS TO TEST THE INBUILT REFERENCE STANDARD METER AGAINST A PRECISION STANDARD OF HIGHER ACCURACY WITHOUT REMOVING THE INBUILT REFERENCE STANDARD METER FROM THE	BOOLEAN
53	22-iv)THE METER MOUNTING RACKS SHALL BE PROVIDED WITH ONE NUMBER OF BNC TYPE SOCKETS FOR THE TESTING OF ONE REFERENCE STANDARD METER OF LOWER ACCURACY.	BOOLEAN
54	22-v)NECESSARY CABLES SHALL BE PROVIDED ALONG WITH EQUIPMENT TO TEST REFERENCE STANDARD METER HAVING FREQUENCY OUTPUT ON BNC TYPE SOCKET	BOOLEAN
55	22-vi)THERE SHOULD BE A WARNING LAMP AND TWO EMERGENCY PUSH-BUTTONS FITTED ON THE METER MOUNTING RACKS	BOOLEAN
56	22-vii)TAMPER TESTING FACILITY FOR SINGLE PHASE AND THREE PHASE METER AS PER CLAUSE NO. 13 (j)	BOOLEAN
57	23-i)ISOLATION CURRENT TRANSFORMER (ICT): i. NOMINAL PRIMARY	TEXT
58	23-ii)MAXIMUM PRIMARY CURREN	TEXT
59	23-iii)NOMINAL SECONDARY CURRENT	TEXT
60	23-iv)MAXIMUM SECONDARY CURRENT	TEXT
61	23-v)OPERATING BURDEN	TEXT
62	23-vi)MAX. BURDEN	TEXT
63	23-vii)LED INDICATION SHALL BE PROVIDED ON ICT TO INDICATE HEALTHINESS OF ICT	TEXT
64	23-viii)ASSOCIATE SOFTWARE SHALL HAVE FACILITY TO INDICATE FAULT IN ICT LIKE OPEN CIRCUIT AND OVER LOAD ON PC. ITSHOULD HAVE FACILITY TO DISPLAY MESSAGE ON COMPUTER SCREEN ABOUT ANY FAULT IN ICT DURING TESTING OF METERS	TEXT
65	24-i)SOFTWARE & PC: i. MANUAL MODE OF OPERATION OF THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL ALLOW, AT LEAST, PERFORMANCE OF THE TASKS MENTIONED UNDER CLAUSE NO. 16.04	BOOLEAN
66	.24-ii) THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL ALLOW, AT LEAST, PERFORMANCE OF THE TASKS MENTIONED UNDER CLAUSE NO. 16.06	BOOLEAN
67	24-iii)THE LICENSED PROPRIETARY SOFTWARE OF THE METER-TESTING EQUIPMENT SHALL HAVE FACILITY TO DISPLAY PARAMETERS MENTIONED UNDER CLAUSE NO. 16.07	BOOLEAN
68	24-iv)TECHNICAL DATA FOR PC AS PER CLAUSE NO. 16.08	BOOLEAN
69	25)SUPPLIER AGREES TO IMPART NECESSARY TRAINING REGARDING INSTALLATION AND USE OF SOFTWARE.	BOOLEAN
70	26)WHETHER REFERENCE STANDARD METER IN METER TEST BENCH IS TESTED FOR ACCURACY	BOOLEAN
71	27)CALIBRATION CERTIFICATE SUBMITTED ALONG WITH OFFE	BOOLEAN
72	28)CALIBRATION CERTIFICATE NOS. & DATE	TEXT
73	29)SUPPLIER AGREES TO SUPPLY REFERENCE STANDARD METER WITH ALL ACCESSORIES AS PER TECHNICAL SPECIFICATION	BOOLEAN

74	30)SUPPLIER AGREES TO DEPUTE THEIR REPRESENTATIVE TO EDUCATE ENGINEERS OF PURCHASER AS AND WHEN THEY WILL BECALLED FOR AT NO EXTRA COST	BOOLEAN
75	31)GUARANTEE OF METER TEST BENCH AS PER CLAUSE NO. 23.00 OF THIS SPECIFICATION	BOOLEAN
76	32)DETAILS OF AFTER SALES SERVICE WITHIN GUARANTEE PERIOD ENCLOSED WITH OFFER	BOOLEAN
77	33)DETAILS OF AFTER SALES SERVICE OUTSIDE GUARANTEE PERIOD ENCLOSED WITH OFFER	BOOLEAN
78	34)ADDRESSES OF SALES SERVICE CENTRE, DETAILS OF ENGINEERS ENCLOSED WITH OFFER	BOOLEAN
79	35)DETAILS OF NECESSARY MINIMUM TESTING FACILITIES FOR CARRYING OUT VARIOUS ACCEPTANCE AND ROUTINE TESTS SUBMITTED	BOOLEAN
80	36)LIST OF MACHINERY / EQUIPMENT AND TESTING FACILITY AVAILABLE AT SUPPLIERS WORKS IS FURNISHED ALONG WITH OFFER.	BOOLEAN

### Required Documents (To be uploaded online)

Sr. No.	NAME	SECTION	ITEM	DESCRIPTION
1	Type Test Report	Technical Section	20 Positions, 3 Ph. Fully	Bidder should submit documentary evidence towards Type Test Report as per technical specifications of tender document
2	Annexure-E	Technical Section	20 Positions, 3 Ph. Fully	Please submit as per tender document - Annexure-E as per format of tender document
3	Operating experience	Commercial Section		The manufacturer shall enclose necessary purchase order copies in proof of Operating experience as per clause no.2 of QR of Special Terms & Conditions of Section III of Tender Document
4	Original Equipment Manufacturer/Indian Subsidiary Company	Commercial Section		Bidder should submit documentary evidence towards Original Equipment Manufacturer/Indian Subsidiary Company
5	ISO Certifications	Commercial Section		Bidder should submit documentary evidence towards ISO 17025 & ISO 9001 Certifications.
6	Performance Certificate	Commercial Section		Bidder should submit documentary evidence towards 5 Performance Certificates as per clause no.5 of QR
7	Black listed /defaulter	Commercial Section		Bidder should submit documentary evidence towards Not Black listed /defaulter as per clause no.6 of QR
8	Percentage of local content	Commercial Section		Bidder should submit documentary evidence towards Percentage of local content as per clause no.7 of QR
9	Land Border sharing Declaration	Commercial Section		Bidder should submit documentary evidence towards Land Border sharing Declaration as per format 12
10	Testing Facilities	Commercial Section		Bidder should submit documentary evidence towards Testing Facilities as per clause no.9 of QR
11	Confirmation of One Manufacturer for major components	Commercial Section		Bidder should submit documentary evidence towards Confirmation of One Manufacturer for major components as per clause no.10 of QR
12	Confirmation on providing all necessary accessories	Commercial Section		Bidder should submit documentary evidence towards Confirmation on providing all necessary accessories as per clause no.12 of QR
13	Service Centres Tools Tackles Plants Machineries	Commercial Section		Bidder should submit documentary evidence towards Service Centres Tools Tackles Plants Machineries as per clause no.13 of QR
14	Average Annual Turnover	Commercial Section		Bidder should submit documentary evidence towards Average Annual Turnover as per format 4 of tender document.
15	EMD receipt (Bank guarantee or demand draft)	Commercial Section		Bidder should submit documentary evidence towards EMD receipt (Bank guarantee or demand draft)
16	Minimum Testing Facilities	Commercial Section		Bidder should submit documentary evidence towards Minimum Testing Facilities as per clause no.17 of QR
17	Annexure U-1 for subsidiary company	Commercial Section		Bidder should submit documentary evidence towards Annexure U-1 for subsidiary company as per tender document
18	Format-1: Quantity & Delivery Schedule.	Commercial Section		Please submit as per tender document - Format-1: Quantity & Delivery Schedule.

Sr. No.	NAME	SECTION	ITEM	DESCRIPTION
19	Format-2: Undertaking for not approached any one for undue influence	Commercial Section		Please submit as per tender document - Format-2: Undertaking for not approached any one for undue influence.
20	Format-3: Certificate from CA for controlling stake	Commercial Section		Please submit as per tender document - Format-3: Certificate from chartered accountant for not have controlling stake. in more than one entity applied for the tender/bid as per clause no VIII (B).
21	Format-5: No deviation form.	Commercial Section		Please submit as per tender document - Format-5: No deviation form.
22	Format-7: List of orders in hand certified by Chartered Accountant	Commercial Section		Please submit as per tender document - Format-7: List of orders in hand certified by Chartered Accountant
23	Manufacturing capacity	Commercial Section		Bidder should submit documentary evidence towards Manufacturing capacity as per Commercial Requirement - (f) of Section III
24	Annexure-F:Declaration no pending legal litigation of any type against MSEDCL in any court/Foru	Commercial Section		Please submit as per tender document - Annexure-F:Declaration no pending legal litigation of any type against MSEDCL in any court/Forum
25	Annexure- I:	Commercial Section		Please submit as per tender document - Annexure- I
26	Tender Fees & EMD	Commercial Section		Bidder should submit documentary evidence towards Tender Fees & EMD Payment/ Exemption details
27	Power of Attorney	Commercial Section		Please submit as per tender document - Power of Attorney as per format 11 of tender document
28	Experience	Commercial Section		Documentary evidence towards 10 years of experience in supplying of similar or better equipment as on date of tender opening. i.e. Purchase order copies & order completion certificates.
29	QR - 3 Supply of Test Bench with ICT	Commercial Section		Bidder should submit documentary evidence towards supply of at least 10 nos. such similar or better meter test benches of accuracy class 0.02 with fixed multiple turn wounded primary ICT