



Bid Number/बोली क्रमांक (बिड संख्या):
GEM/2023/B/3422644
Dated/दिनांक : 08-05-2023

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	29-05-2023 11:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	29-05-2023 11:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	180 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Power
Department Name/विभाग का नाम	Na
Organisation Name/संगठन का नाम	Ntpc Limited
Office Name/कार्यालय का नाम	Cg
Total Quantity/कुल मात्रा	24
Item Category/मद केटेगरी	M8725458696 , M8727861206 , M8723443775 , M8723282774 , M8725437543 , M8725946003N
BOQ Title/बीओक्यू शीर्षक	PROCUREMENT OF INSTRUMENT TRANSFORMERS FOR 220KV AND 132KV SWITCHYARD AT NTPC BARAUNI
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Bidder Turnover,Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No
Type of Bid/बिड का प्रकार	Two Packet Bid
Primary product category	M8727861206
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	3 Days
Evaluation Method/मूल्यांकन पद्धति	Item wise evaluation/

EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	ICICI
Schedule 1 EMD Amount/ईएमडी राशि (In INR)	6979
Schedule 2 EMD Amount/ईएमडी राशि (In INR)	24795
Schedule 3 EMD Amount/ईएमडी राशि (In INR)	23893
Schedule 4 EMD Amount/ईएमडी राशि (In INR)	20630
Schedule 5 EMD Amount/ईएमडी राशि (In INR)	15328
Schedule 6 EMD Amount/ईएमडी राशि (In INR)	8375

ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	ICICI
ePBG Percentage(%) /ईपीबीजी प्रतिशत (%)	10.00
Duration of ePBG required (Months)/ईपीबीजी की अपेक्षित अवधि (महीने).	26

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). The EMD Amount will be applicable for each schedule/group selected during Bid creation.

(c). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

GM (C&M)-CPG-1
NTPC Limited, Western Region II Headquarters, Plot No-87, Sector-24, Atal Nagar, Naya Raipur, Raipur
Chhatisgarh-492018
(Uma Shankar Gupta)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

Reserved for Make In India products

Reserved for Make In India products	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. Bid reserved for Make In India products: : Procurement under this bid is reserved for purchase from Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. However, eligible micro and small enterprises will be allowed to participate. The minimum local content to qualify as a class 1 local supplier is denoted in the bid document. All bidders must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which the bid is liable to be rejected. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020 . In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

2. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer)of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY.

3. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

Evaluation Method (Item Wise Evaluation Method)

Contract will be awarded schedulewise and the determination of L1 will be done separately for each schedule. The details of item-consignee combination covered under each schedule are as under:

Evaluation Schedules	Item/Category	Quantity
Schedule 1	M8725458696	3
Schedule 2	M8727861206	3
Schedule 3	M8723443775	3
Schedule 4	M8723282774	6
Schedule 5	M8725437543	6
Schedule 6	M8725946003n	3

M8725458696

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116, Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	3	180

M8727861206

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

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S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116,Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	3	180

M8723443775

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116,Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	3	180

M8723282774

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116,Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	6	180

M8725437543

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116,Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	6	180

M8725946003N

(Minimum 60% Local Content required for qualifying as Class 1 Local Supplier)

Brand Type/ब्रांड का प्रकार	Unbranded
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Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Kumar Devashish	851116, Barauni Thermal Power Plant Project NH31, Barauni Begusarai 851116 Begusarai	3	180

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Scope of Supply

Scope of supply (Bid price to include all cost components) : Only supply of Goods

2. Certificates

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.

3. Inspection

Materials shall be guaranteed for 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.

4. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. Any clause(s) incorporated by the Buyer regarding following shall be treated as null and void and would not be considered as part of bid:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process.
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाही का आधार होगा।

---Thank You/धन्यवाद---

NTPC Limited
(A Government of India Enterprise)

Tender Enquiry No. 9900258152

Bill of Materials

Delivery Address:

Barauni Thermal Power Plant
NH31, Barauni
Begusarai
Bihar
851116
India

Item	Material Code	Description	UoM*	Total Quantity	Delivery Date
00010	M8725458696	PT: 220KV/SQRT3/110V/SQRT3,75VA,C L-0.2	NO	3.000	31.12.2023
00020	M8727861206	XFMR,CURR: 2400-1600/1,220KV,20VA,5	NO	3.000	31.12.2023
00030	M8723443775	220 KV CT 1600/1/1/1A:PS,PS,0.5,PS	NO	3.000	31.12.2023
00040	M8723282774	132KV C.T. 1200-600-300A/1 (5 CORE)	NO	6.000	31.12.2023
00050	M8725437543	PT:132KV/110V/110V/110V:75 VA/CLASS-0.2	NO	6.000	31.12.2023
00060	M8725946003N	132/145KV CVT SINGLE PHASE OUTDOOR	NO	3.000	31.12.2023

(UOM Legends :- NO - Number)

Tender Enquiry No. 9900258152

TECHNICAL DATA SHEET

<p>00010 - M8725458696 Specification 220 KV, Outdoor, Oil filled sealed type suitable for effectively earthed system EMVT</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED.</p>
<p>00020 - M8727861206 Specification 1 Ph Outdoor, Oil Filled, Hermetically sealed, 2400/1A, 220KV CT (Dead Tank Type)</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED</p>
<p>00030 - M8723443775 Specification 1 Ph Outdoor, Oil Filled, Hermetically sealed, 1600/1A, 220KV CT (Dead Tank Type)</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED</p>
<p>00040 - M8723282774 Specification 1 Ph Outdoor, Oil Filled, Hermetically sealed, 1200/1A, 132KV CT (Dead Tank Type)</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED</p>
<p>00050 - M8725437543 Specification 132 KV, 1- PHASE, Outdoor, Oil filled sealed type suitable for effectively earthed system EMVT</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED</p>
<p>00060 - M8725946003N Specification 145 KV, 8800 pF, Line to Ground, 1- PHASE, Outdoor type CVT</p> <p>TECHNICAL SPECIFICATIONS ARE ATTACHED</p>

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 10: 220KV VOLTAGE TRANSFORMERS

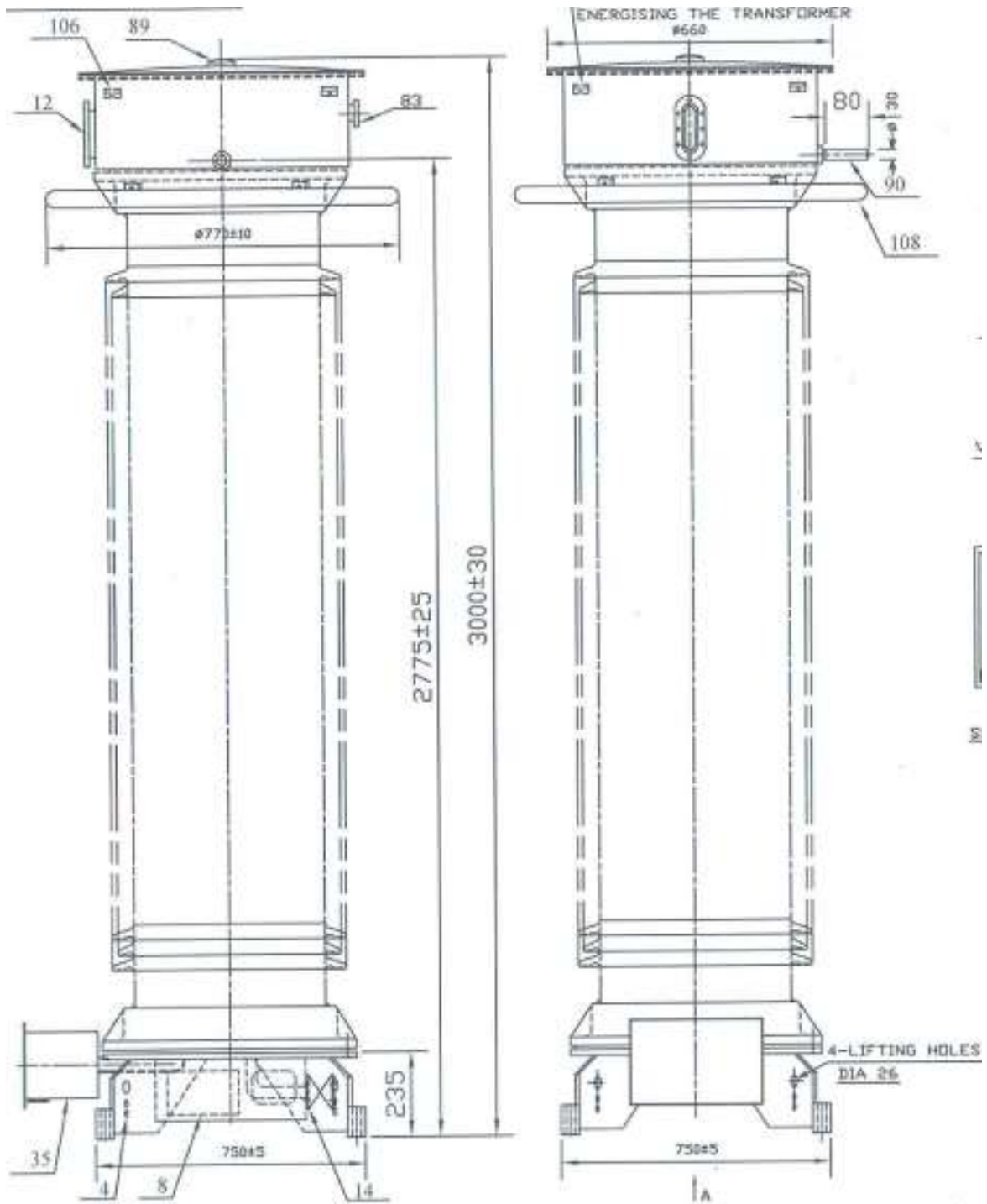
Sl. No.	Description	220kV VT		
1.	Type	220 KV, Outdoor, Oil filled sealed type suitable for effectively earthed system EMVT		
2.	Conforming to Standard	IS-3156		
3.	Type of voltage transformer	220KV EMVT		
4.	Type of insulation	'A'		
5.	Rated primary voltage (kv)	220KV/ $\sqrt{3}$ KV		
6.	No. of secondary windings	03		
		Winding -I	Winding -II	Winding -III
7.	Rated secondary voltage(v)	110// $\sqrt{3}$ V	110// $\sqrt{3}$ V	110// $\sqrt{3}$ V
8.	Rated Transformation ratio	220// $\sqrt{3}$ KV / 110// $\sqrt{3}$ V	220// $\sqrt{3}$ KV / 110// $\sqrt{3}$ V	220// $\sqrt{3}$ KV / 110// $\sqrt{3}$ V
9.	Rated secondary burden (VA)	100 VA	100 VA	100 VA
10.a	Rated thermal burden (VA)	300 VA		
10.	Class of accuracy(for each winding)	3P (Protection)	3P(Protection)	0.2s
11.	Rated Frequency	50Hz.		
12.	Number of phase	Single		
13.	Rated voltage factor and time.	1.5for 30 Sec. 1.25 Cont.		
14.	Temperature rise at 1.25 times rated voltage with rated burden °C	Within limit as per IS-3156		
15.	Primary winding One minute power frequency withstand test voltage on primary (kV rms.)	460KV rms.		
16.	Impulse withstand test voltage 1.2/50 microsecond full wave positive and negative impulse withstand voltage (kV) peak.	1050KVp		
17.	One minute power frequency withstand test voltage on secondary (kV rms.)	3KVrms		
18.	Total creepage distance (in mm)	6125mm		
19.	Treatment of total external surfaces, identifications	All mild steel metallics shall be hot dip galvanised or painted with Grey color RAL 9002.		
20.	Distance between Base and Terminal Stud	2775mm (Mounting Stool of suitable height shall be provided by Vendor in case the offered EMVT length is less than the provided height (2775mm)). Also mounting base shall match to the existing support structure (as per the drawing provided below).		

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

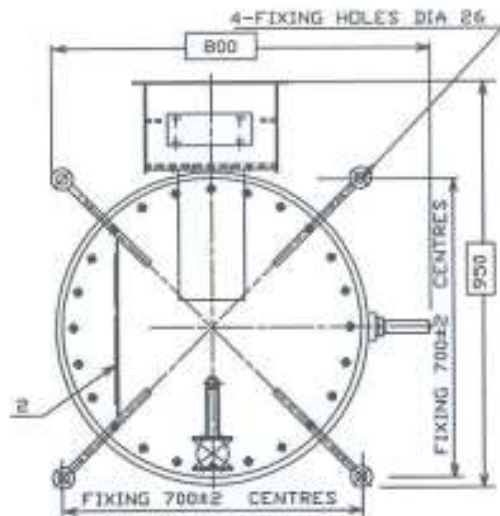
21.	Terminal Clamps	2 No. Aluminium Terminal Clamp/connector of highest quality (Including accessories such as Cu-AL Bimetallic Shim, hardware etc.) suitable of fixing to 4 inch IPS tube shall be supplied along with each EMVT (ie 6 no. for 3 EMVTs). Specification for Aluminum Clamps and Connectors is provided separately in this document.
22.	Marshalling Box	One no. prewired Marshalling Box with required no. of terminal blocks shall be supplied for each set (3 No.) of EMVTs. Specification for MB is provided separately in this document.
23.	Mounting Structure for EMVT	Not Applicable
24.	Erection and Commissioning	Not Applicable

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

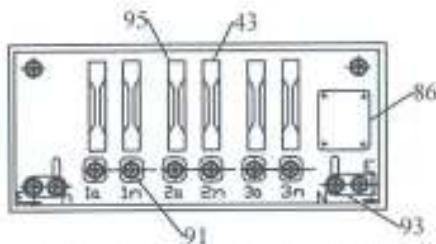
DRAWINGS OF 220KV EMVT



TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs



VIEW LOOKING IN THE DIRECTION OF ARROW 'A'



SECONDARY TERMINALS ARRANGEMENT

APPROXIMATE WEIGHTS (Kg.)

DESCRIPTION	WEIGHTS
CORE & WINDINGS	230
PORCELAIN INSULATOR	460
TANK, TOP CHAMBER AND FITTINGS	158
OIL	242
TOTAL WEIGHT	1090
OIL QUANTITY IN LITRES	265

TABLE OF FITTINGS

2	COMBINED RATING AND DIAGRAM PLATE
4	EARTHING HOLES WITH M12 BOLTS,NUTS & WASHER
8	MONOGRAM PLATE (AL. CASTING)
12	OIL GAUGE(prismatic glass)
14	DRAIN VALVE WITH PLUG(S NB)WITH SEALING ARRGT.
35	SECONDARY TERMINAL BOX AND COVER
43	NEUTRAL LINK
83	PRESSURE RELEASE DEVICE
86	WARNING PLATE
89	NITROGEN FILLING SCHRADER VALVE AND COVER
90	PRIMARY TERMINALS DIA 30 TINNED COPPER
91	SECONDARY TERMINALS M6 TINNED BRASS (INSIDE TERMINAL BOX)
93	EARTH LINK COPPER STRIP-E.T.
95	SECONDARY CARTRIDGE FUSE 16 AMPS.
106	SLING GUIDES
108	STRESS RING

STATUTORY REQUIREMENT:-
TO MEET THE STATUTORY REQUIREMENT OF GROUND CLEARANCE FOR SAFETY AS PER INDIAN ELECTRICITY RULES,THE CUSTOMER IS ADVISED TO MOUNT THE V.T. ON PEDESTAL OF APPROPRIATE HEIGHT.

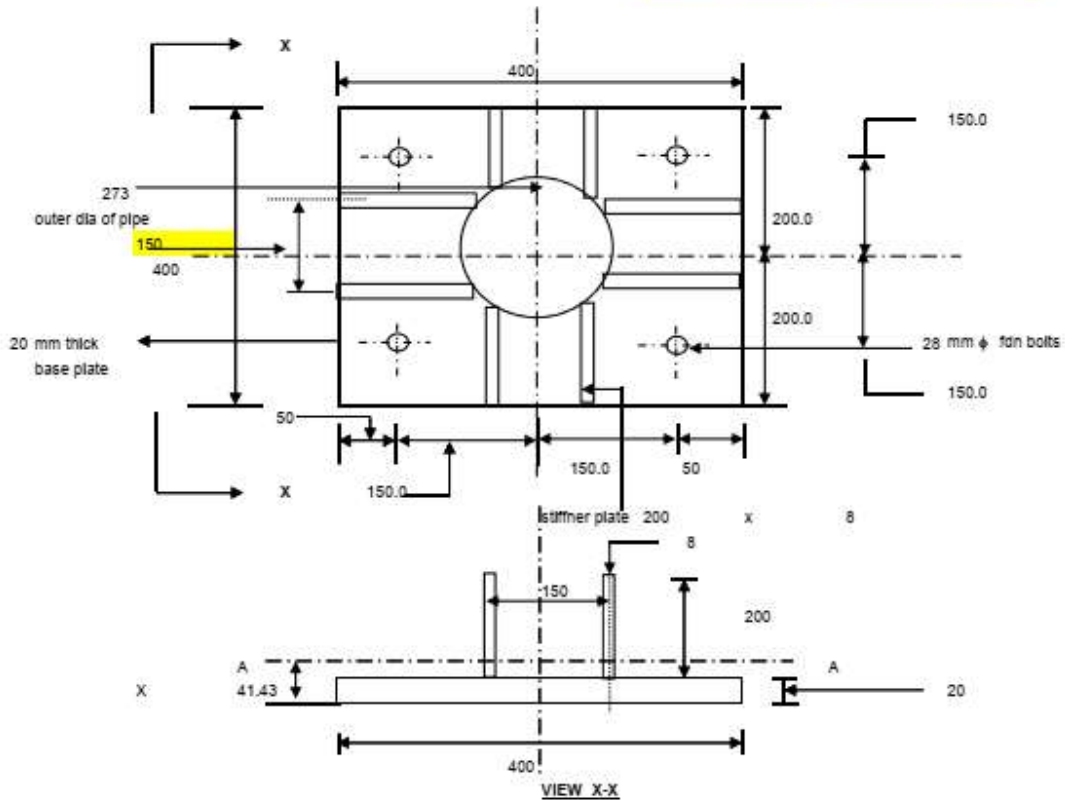
TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

Base Plate Design

Equipment Type 220 KV EMVT

Maximum Design Forces	
$F_x/F_y = F_h =$	7.56 kN
$M_y/M_x = M =$	31.82 kN-m
$F_z = F_v =$	18.76 kN

Permissible Stresses			
Base Pl.	Concrete	Concrete	Weld
Bending**, f_b	Bond**	Bearing**, f_c	Shear**, f_w
(MPa)	(MPa)	(MPa)	(MPa)
101.87	0.9	0	100.5



Trial Sections

Base Plate Thickness	20 mm
Base Plate width	400 mm
Stiffner Plate thickness	8 mm
Stiffner Plate height	200 mm
No of Stiffner Plate in critical section	2
Dist. of outer edge of base pl. from C/L of leg	200.0 mm
Dist. of Inner edge of base pl. from C/L of leg	200.0 mm
Haunch size at Inner edge,	0.00 mm
Reqd. edge distance of Bolt (=1.5* dia of bolt)	42 mm
Providing edge distance	50 mm

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 20: 220KV CURRENT TRANSFORMER (2400A)

Sl. No.	Description	220kV CT	
1.	Type	1 Ph Outdoor, Oil Filled, Hermetically sealed, 220KV CT (Dead Tank Type)	
2.	Type of Installation	Outdoor	
3.	Type of Mounting	Pedestal Type	
4.	Conforming to Standard	IS-2705	
5.	Rated primary Voltage	220KV	
6.	Suitable for System Frequency	50 Hz	
7.	Highest System Voltage	245KV	
8.	Rated Continuous Primary Current	2400A	
9.	Maximum Continuous Primary Current	120% of rated continuous primary current	
10.	Primary Winding	Single Turn Copper, 1520 Sq.mm	
11.	Secondary Winding		
i.	Material Used	Copper	
ii.	Area of cross section	Adequate	
iii.	Material for secondary terminals	Brass	
12.	No. of cores	5	
13.	Current Transformation Ratio	2400-1600/1A	
i	Rated Primary Current(A)	2400A	
ii	Rated Secondary Current(A)	1	
14.	Details of core		
i.	No of core	I,II,IV and V	III
ii.	Core details (Protection/Metering)	Protection	Metering
iii.	Current Ratio A/A	2400-1600/1A	
iv.	Class of accuracy	PS	0.2S
v.	Output Burden (VA)	NA	20
vi.	ALF/ISF	NA	<5 (ISF)
vii.	Min Knee Point Voltage(KPV)	2400-1600 V	NA
viii.	Max Exciting Current at $V_k/2$	30mA at all ratios	NA
ix.	Secondary resistance corrected to 75 Deg	12-8 Ohm	NA
14.	Ration Selection	At Secondary Tap	
15.	Rated Short Time withstand current(KA/Sec)	40KA/1Sec	
16.	Rated dynamic current withstand current KAp	100KA Peak	
17.	One Minute Power Frequency Withstand Voltage (KVrms)		
	On Primary	460	

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

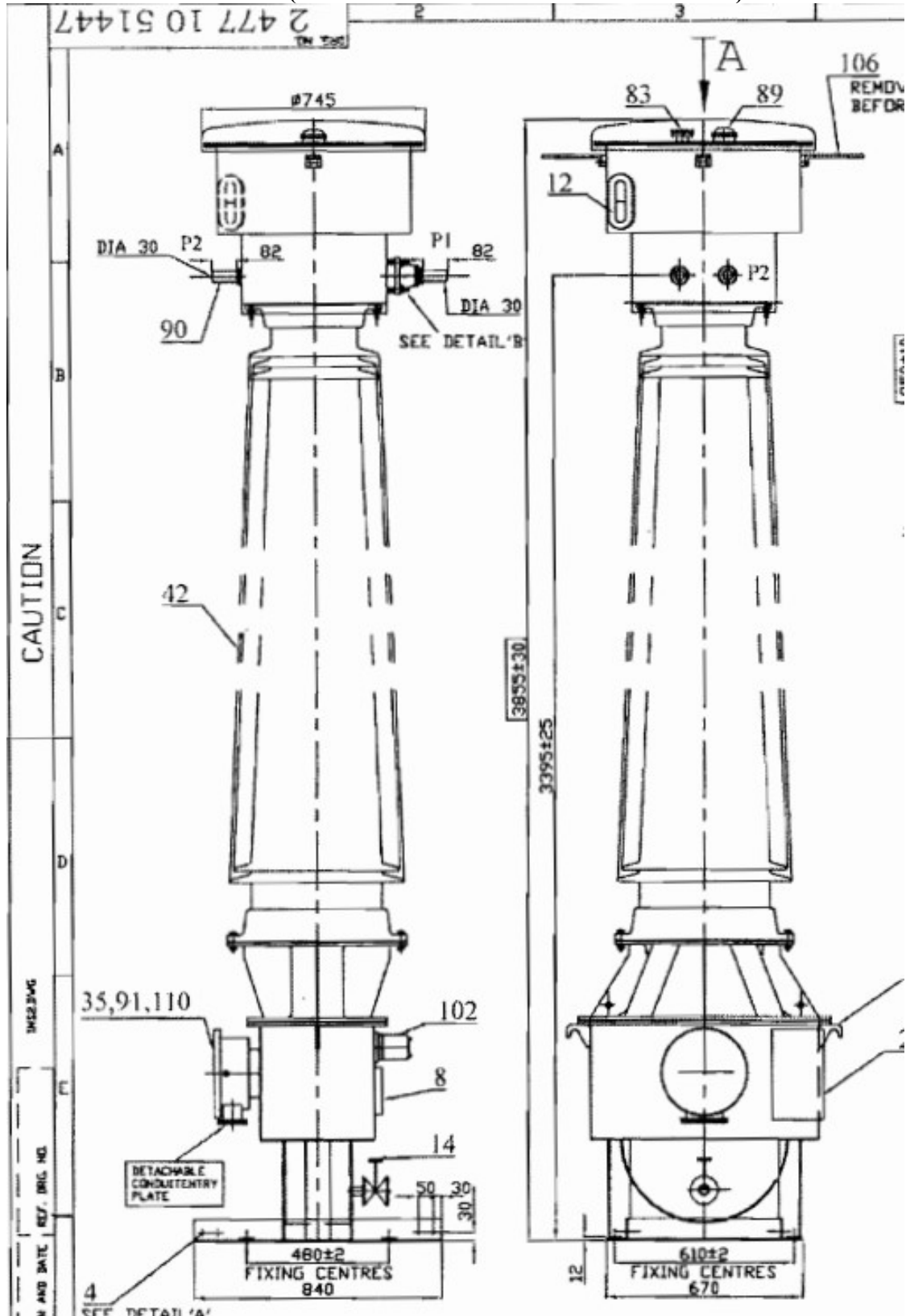
	On Secondary	5
18.	Temperature at 120% of rated current deg. C	As per IS-2705
19.	1.2/50 microsecond lightening impulse withstand voltage (KVp)	1050
20.	Creepage distance of porcelain total(mm)	6125mm
21.	Treatment of total external surfaces	Painted with shade 631 of IS-5
22.	Method of earthing	Solidly Earth
23.	Acceptable partial discharge at 1.1 times of Um/Root(3) (PC)	<10 pC
24.	Type of insulation	Oil immersed Class A
25.	RIV at 1.1x rated voltage	< 1000 micro Volts
26.	Corona extinction Voltage	>156KV
27.	Temperature rise over an ambient at 50 deg. C for Oil	40 Deg C
28.	Maximum winding temperature at 110% of excitation and rated burden	45 Deg C
29.	Other Requirements	<ul style="list-style-type: none"> a. Polarity marks shall indelibly be marked on each instrument transformer and at the lead terminals at the associated terminal block. b. The CT shall be provided with oil sight glass. c. Different ratios shall be achieved by secondary taps only, and primary reconections shall not be accepted. d. The instrument security factor at all ratios shall be less than five (5) for metering core. If any auxiliary CT/reactor is used, then all parameters specified shall be met treating auxiliary CTs/reactors as integral part of CT. The auxiliary CT/reactor shall preferably be in-built construction of the CT. e. The CTs shall have provision for taking oil samples from bottom of CT without exposure to atmosphere to carry out dissolved gas analysis periodically. Vendor shall give his recommendations for such analysis, i.e. frequency of test, norms of acceptance, quantity of oil to be withdrawn etc. f. Vendor shall supply 2nos. oil sampling devices along with accessories for 3 no. of CT g. Common Marshalling Box to be provided one for each set of 3 nos of CTs.

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

		h. The CT to be supplied will be fitted on existing lattice structure. Hence party has to supply suitable base frame to match CT's foundation at lattice structure & height approximately.
30.	Distance between Base and Terminal Stud	3395mm (Mounting Stool of suitable height shall be provided by Vendor in case the offered CT length is less than the provided height (3395mm)). Also mounting base shall match to the existing support structure (as per the drawing provided below).
31.	Terminal Clamps	2 sets of Terminal connectors (Including accessories such as Cu-AL Bimetallic Shim, hardware etc.) for each CT for both primary terminals (P1 and P2) to be supplied along with CT. P1 side Clamp shall be suitable for Twin Moose type conductor and for P2 terminal, Flexible type Clamp shall be suitable for connecting to 4 inch Aluminium IPS tube. Specification for Aluminium Clamps and Connectors is provided separately in this document.
32.	Marshalling Box	One no. prewired Marshalling Box with required no. of terminal blocks shall be supplied for each set (3 No.) of EMVTs. Specification for MB is provided separately in this document.
33.	Mounting Structure for CT	Not Applicable
34.	Erection and Commissioning	Not Applicable

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

DRAWINGS (CURRENT TRANSFORMER 2400-1600/1A)

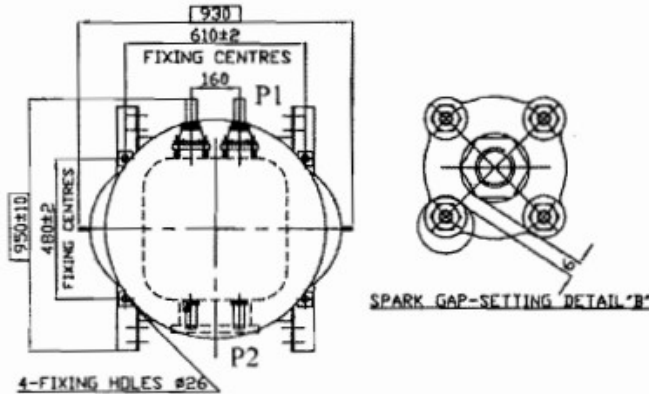


TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

106
REMOVE SLING GUIDES
BEFORE ENERGISING C.T.

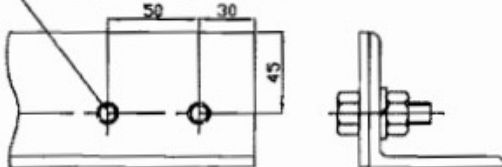
MINIMUM VALUES	
TOTAL CREEPAGE	6125mm
INSULATION LEVEL KV RMS/KVP	460/1050

APPROX WEIGHT	
DESCRIPTION	WEIGHTS (kg)
CORE & WINDING	420
PORCELAIN INSULATOR (BHEL EPD MAKE)	384
TANK, TOP-CHAMBER & FITTINGS	332
OIL (AS PER IS-335)	287
TOTAL WEIGHT	1423
OIL QUANTITY IN LITERS	335



VIEW LOOKING IN DIRECTION OF ARROW 'A'

2-HOLES DRILL & TAP M12
WITH BOLTS, NUTS & WASHER



ARRANGEMENT FOR EARTHING DETAIL 'A' IT.4

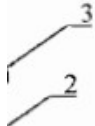
TABLE OF FITTINGS	
ITEM	DESCRIPTION
2	COMBINED RATING AND DIAGRAM PLATE
3	LIFTING LUG
4	EARTHING TERMINAL ARRANGEMENT WITH M12 NUTS & BOLTS
8	NAME PLATES
12	OIL LEVEL GAUGE WITH OIL SIGHT GLASS
14	DRAIN VALVE WITH PLUGE (15NB) WITH SEALING ARRGT.
35	SECONDARY TERMINAL BOX WITH HINGED DOOR
42	PORCELAIN INSULATOR
83	PRESSURE RELEASE DEVICE
89	NITROGEN FILLING SCHRADER VALVE
90	TWIN PRIMARY TERMINAL #30 TINNED COPPER
91	SECONDARY TERMINALS M6 TINNED BRASS (INSIDE TERMINAL BOX)
102	POWER FACTOR TESTING TERMINALS
106	SLING GUIDES
110	SHORTING LINK BRASS E.T.(INSIDE TERMINAL BOX)

STATUTORY REQUIREMENT :-

TO MEET THE STATUTORY REQUIREMENT OF GROUND CLEARANCE FOR SAFETY AS PER INDIAN ELECTRICITY RULES, THE CUSTOMER IS ADVISED TO MOUNT THE C.T. ON PEDESTAL OF APPROPRIATE HEIGHT.

NOTES:

1. DIMENSIONS SHOWN THIS ARE OVERALL DESPATCHING DIMENSIONS EXCLUSIVE OF PACKING.
2. SLING GUIDES ITJ06 ARE TO BE DESPATCHED LOOSE.
3. ALL EXTERNAL FERROUS PARTS WILL BE PAINTED WITH EPOXY PAINT TO SHADE 631 OF IS-5.



TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 30: 220KV CURRENT TRANSFORMER (1600A)

Sl. No.	Description	220kV CT	
1.	Type	1 Ph Outdoor, Oil Filled, Hermetically sealed, 220KV CT (Dead Tank Type)	
2.	Type of Installation	Outdoor	
3.	Type of Mounting	Pedestal Type	
4.	Conforming to Standard	IS-2705	
5.	Rated primary Voltage	220KV	
6.	Suitable for System Frequency	50 Hz	
7.	Highest System Voltage	245KV	
8.	Rated Continuous Primary Current	1600A	
9.	Maximum Continuous Primary Current	120% of rated continuous primary current	
10.	Primary Winding	Single Turn Copper, 1520 Sq.mm	
11.	Secondary Winding		
iv.	Material Used	Copper	
v.	Area of cross section	Adequate	
vi.	Material for secondary terminals	Brass	
12.	No. of cores	5	
13.	Current Transformation Ratio	1600-800-400/1A	
i	Rated Primary Current(A)	1600A	
ii	Rated Secondary Current(A)	1	
14.	Details of core		
x.	No of core	I,II,IV and V	III
xi.	Core details (Protection/Metering)	Protection	Metering
xii.	Current Ratio A/A	1600-800-400/1A	
xiii.	Class of accuracy	PS	0.2
xiv.	Output Burden (VA)	NA	20
xv.	ALF/ISF	NA	<5 (ISF)
xvi.	Min Knee Point Voltage(KPV)	1600-800-400 V	NA
xvii.	Max Exciting Current at $V_k/2$	30mA at all ratios	NA
xviii.	Secondary resistance corrected to 75 Deg	8-4-5 Ohm	NA
14.	Ration Selection	At Secondary Tap	
15.	Rated Short Time withstand current(KA/Sec)	40KA/1Sec	
16.	Rated dynamic current withstand current KAp	100KA Peak	
17.	One Minute Power Frequency Withstand Voltage (KVrms)		
	On Primary	460	

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

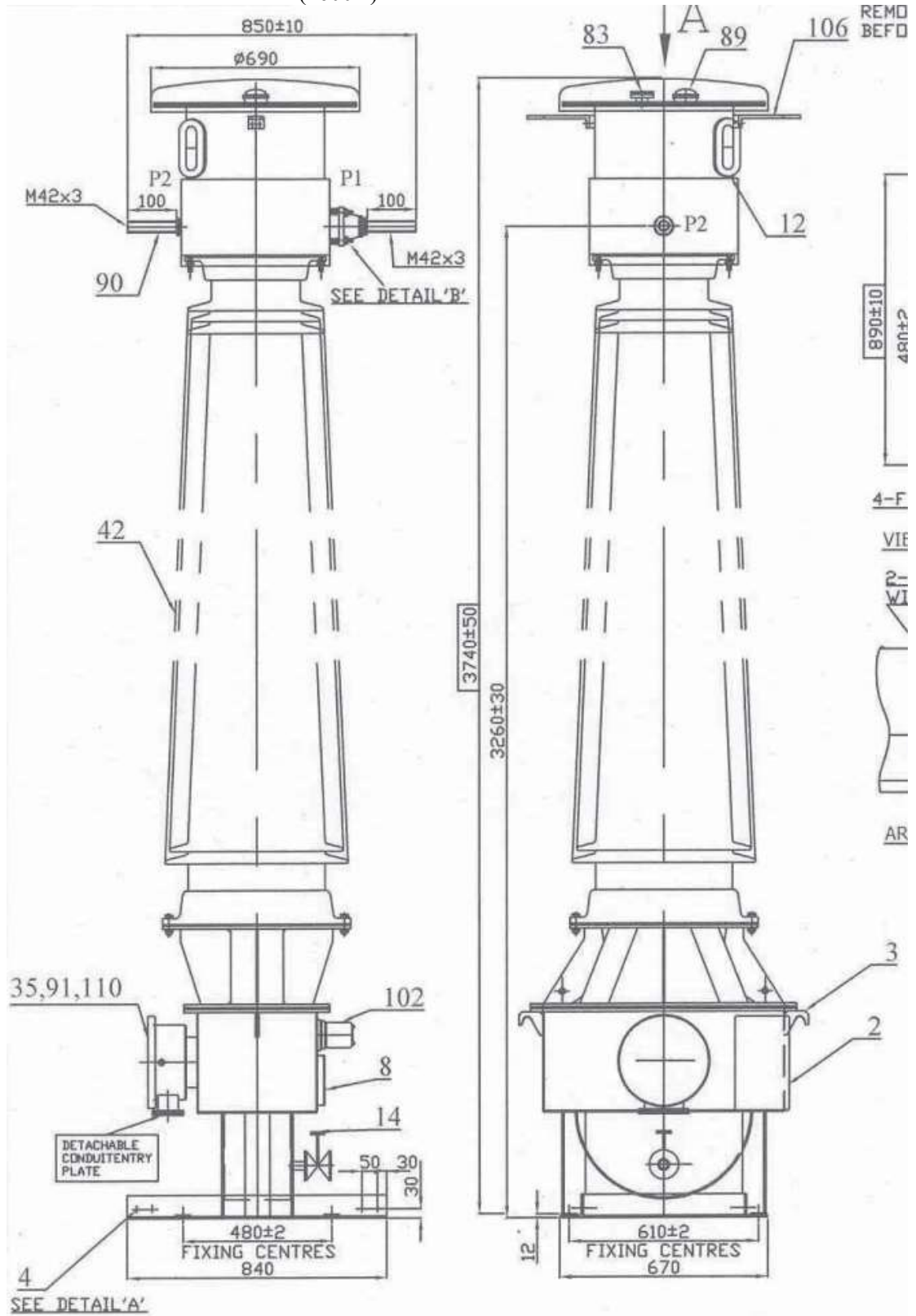
	On Secondary	5
18.	Temperature at 120% of rated current deg. C	As per IS-2705
19.	1.2/50 microsecond lightning impulse withstand voltage (KVp)	1050
20.	Creepage distance of porcelain total(mm)	6125mm
21.	Treatment of total external surfaces	Painted with shade 631 of IS-5
22.	Method of earthing	Solidly Earth
23.	Acceptable partial discharge at 1.1 times of Um/Root(3) (PC)	<10 pC
24.	Type of insulation	Oil immersed Class A
25.	RIV at 1.1x rated voltage	< 1000 micro Volts
26.	Corona extinction Voltage	>156KV
27.	Temperature rise over an ambient at 50 deg. C for Oil	40 Deg C
28.	Maximum winding temperature at 110% of excitation and rated burden	45 Deg C
29.	Other Requirements	<ul style="list-style-type: none"> i. Polarity marks shall indelibly be marked on each instrument transformer and at the lead terminals at the associated terminal block. j. The CT shall be provided with oil sight glass. k. Different ratios shall be achieved by secondary taps only, and primary reconections shall not be accepted. l. The instrument security factor at all ratios shall be less than five (5) for metering core. If any auxiliary CT/reactor is used, then all parameters specified shall be met treating auxiliary CTs/reactors as integral part of CT. The auxiliary CT/reactor shall preferably be in-built construction of the CT. m. The CTs shall have provision for taking oil samples from bottom of CT without exposure to atmosphere to carry out dissolved gas analysis periodically. Vendor shall give his recommendations for such analysis, i.e. frequency of test, norms of acceptance, quantity of oil to be withdrawn etc. n. Vendor shall supply 2nos. oil sampling devices along with accessories for 3 no. of CT o. Common Marshalling Box to be provided one for each set of 3 nos of CTs.

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

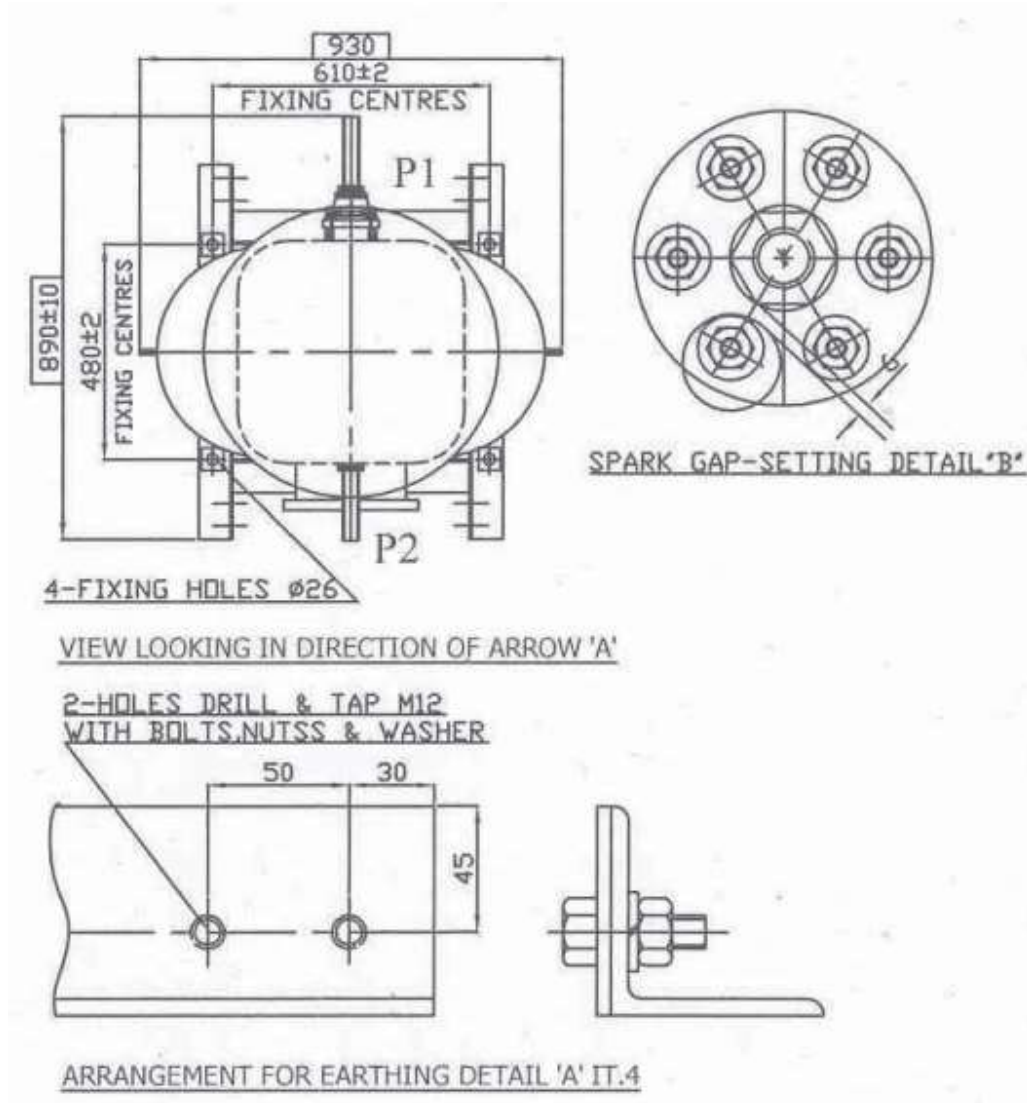
		p. The CT to be supplied will be fitted on existing lattice structure. Hence party has to supply suitable base frame to match CT's foundation at lattice structure & height approximately.
29.	Distance between Base and Terminal Stud	3395mm (Mounting Stool of suitable height shall be provided by Vendor in case the offered CT length is less than the provided height (3395mm)). q. Also mounting base shall match to the existing support structure (as per the drawing provided below).
30.	Terminal Clamps	2 sets of Terminal connectors (Including accessories such as Cu-AL Bimetallic Shim, hardware etc.) for each CT for both primary terminals (P1 and P2) to be supplied along with CT. P1 side Clamp shall be suitable for Twin Moose type conductor and for P2 terminal, Flexible type Clamp shall be suitable for connecting to 4 inch Aluminium IPS tube. Specification for Aluminium Clamps and Connectors is provided separately in this document.
31.	Marshalling Box	One no. prewired Marshalling Box with required no. of terminal blocks shall be supplied for each set (3 No.) of EMVTs. Specification for MB is provided separately in this document.
32.	Mounting Structure for CT	Not Applicable
33.	Erection and Commissioning	Not Applicable

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

CURRENT TRANSFORMER (1600A) DRAWINGS



TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs



TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

APPROX WEIGHT	
DESCRIPTION	WEIGHTS (Kg.)
CORE & WINDING	320
PORCELAIN INSULATOR (BHEL EPD MAKE)	380
TANK, TOP-CHAMBER & FITTINGS	284
DIL	256
TOTAL WEIGHT	1240
DIL QUANTITY IN LITERS	300

TABLE OF FITTINGS	
ITEM	DESCRIPTION
2	COMBINED RATING AND DIAGRAM PLATE
3	LIFTING LUG
4	EARTHING TERMINAL ARRANGEMENT WITH M12 NUTS & BOLTS
8	NAME PLATES
12	DIL LEVEL GAUGE WITH DIL SIGHT GLASS
14	DRAIN VALVE WITH PLUGE (15NB) WITH SEALING ARRGT.
35	SECONDARY TERMINAL BOX
42	PORCELAIN INSULATOR
83	PRESSURE RELEASE DEVICE
89	NITROGEN FILLING SCHRADER VALVE
90	PRIMARY TERMINAL M42X3 TINNED COPPER
91	SECONDARY TERMINALS M6 TINNED BRASS (INSIDE TERMINAL BOX)
102	POWER FACTOR TESTING TERMINALS
106	SLING GUIDES
110	SHORTING LINK BRASS E.T.(INSIDE TERMINAL BOX)

MINIMUM VALUES	
TOTAL CREEPAGE	6125mm
INSULATION LEVEL KV RMS/KVP	460/1050

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 40 - 132KV CURRENT TRANSFORMER (1200A)

Sl. No.	Description	132 KV CT	
1	Type	1 Ph Outdoor, Oil Filled, Hermetically sealed, 220KV CT (Dead Tank Type)	
2	Type of Installation	Outdoor	
3	Type of Mounting	Pedestal Type	
4	Conforming to Standard	IS-2705	
5	Rated primary Voltage	132KV	
6	Suitable for System Frequency	50 Hz	
7	Highest System Voltage	145KV	
8	Rated Continuous Primary Current	1200-600-300A	
9	Maximum Continuous Primary Current	120% of rated continuous primary current	
10	Primary Conductor material and C/S area	735 Sq.mm Copper Conductor	
11	Rated short time Thermal Current (KA/Sec)	31.5KA/1 Sec	
12	Rated dynamic current for primary	80KA peak	
13	Class of Insulation	A	
14	Secondary Winding		
15	Material Used	Copper	
16	Area of cross section	Adequate	
17	Material for secondary terminals	Brass	
18	No. of cores	5	
19	Current Transformation Ratio	1200-600-300/1A	
i	Rated Primary Current(A)	1200-600-300A	
ii	Rated Secondary Current(A)	1	
	Details of core		
20	No of core	I,II,IV and V	III
21	Core details (Protection/Metering)	Protection	Metering
22	Current Ratio A/A	1200-600-300/1A	
23	Class of accuracy	PS	0.2S
24	Output Burden (VA)	NA	20
25	ALF/ISF	NA	<5 (ISF)
26	Min Knee Point Voltage(KPV)	1200-600-300 V	NA
27	Exciting Current at knee point voltage	40-80-160mA	NA
28	Secondary resistance corrected to 75 Deg	10-5-2.5 Ohm	NA
29	Ratio Selection	At Secondary Tap	
30	Rated Short Time withstand current(KA/Sec)	40KA/1Sec	
31	Rated dynamic current withstand current KAp	100KA Peak	

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

32	One Minute Power Frequency Withstand Voltage (KVrms)	
33	On Primary	275 KVrms
34	On Secondary	3 KVrms
35	Maximum temperature rise over ambient Deg C at any part or oil	As per IEC 60044-1
36	1.2/50 microsecond lightening impulse withstand voltage (KVp)	650 KVp
37	Creepage distance of porcelain total(mm)	3625mm
38	Treatment of total external surfaces	Painted with shade 631 of IS-5
39	Method of earthing	Solidly Earth
40	Acceptable partial discharge at 1.1 times of Um/Root(3) (PC)	<10 pC
41	Type of insulation	Oil immersed Class A
42	RIV at 1.1x rated voltage	< 1000 micro Volts
43	Corona extinction Voltage	92 KVrms
44	Maximum winding temperature at 110% of excitation and rated burden	45 Deg C
45	Whether pressure relief device provided	Yes
46	Other Requirements	<ul style="list-style-type: none"> r. Polarity marks shall indelibly be marked on each instrument transformer and at the lead terminals at the associated terminal block. s. The CT shall be provided with oil sight glass. t. Different ratios shall be achieved by secondary taps only, and primary reconnections shall not be accepted. u. The instrument security factor at all ratios shall be less than five (5) for metering core. If any auxiliary CT/reactor is used, then all parameters specified shall be met treating auxiliary CTs/reactors as integral part of CT. The auxiliary CT/reactor shall preferably be in-built construction of the CT. v. The CTs shall have provision for taking oil samples from bottom of CT without exposure to atmosphere to carry out dissolved gas analysis periodically. Vendor shall give his recommendations for such analysis, i.e. frequency of test, norms of acceptance, quantity of oil to be withdrawn etc. w. Vendor shall supply 2nos. oil sampling devices along with accessories for 3 no. of CT

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

		<p>x. Common Marshalling Box to be provided one for each set of 3 nos of CTs.</p> <p>y. The CT to be supplied will be fitted on existing lattice structure. Hence party has to supply suitable base frame to match CT's foundation at lattice structure & height approximately.</p>
46	Distance between Base and Terminal Stud	<p>3395mm (Mounting Stool of suitable height shall be provided by Vendor in case the offered CT length is less than the provided height (3395mm)).</p> <p>z. Also mounting base shall match to the existing support structure (as per the drawing provided below).</p>
47	Terminal Clamps	<p>2 sets of Terminal connectors (Including accessories such as Cu-AL Bimetallic Shim, hardware etc.) for each CT for both primary terminals (P1 and P2) to be supplied along with CT. P1 side Clamp shall be suitable for Twin Moose type conductor and for P2 terminal, Flexible type Clamp shall be suitable for connecting to 4 inch Aluminium IPS tube. Specification for Aluminium Clamps and Connectors is provided separately in this document.</p>
48	Marshalling Box	<p>One no. prewired Marshalling Box with required no. of terminal blocks shall be supplied for each set (3 No.) of EMVTs. Specification for MB is provided separately in this document.</p>
49	Mounting Structure for CT	Not Applicable
50	Erection and Commissioning	Not Applicable

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 50 - 132KV VOLTAGE TRANSFORMER

Sl. No.	Description	132 KV VT		
		Winding -I	Winding -II	Winding - III
1.	Type	132 KV, 1- PHASE, Outdoor, Oil filled sealed type suitable for effectively earthed system EMVT		
2.	Conforming to Standard	IS-3156		
3.	Type of voltage transformer	132KV EMVT		
4.	Type of insulation	'A'		
5.	Rated primary voltage (kv)	132KV/ $\sqrt{3}$ KV		
6.	No. of secondary windings	03		
7.	Rated secondary voltage(v)	110// $\sqrt{3}$ V	110// $\sqrt{3}$ V	110// $\sqrt{3}$ V
8.	Rated Transformation ratio	132/ $\sqrt{3}$ KV / 110// $\sqrt{3}$ V	132/ $\sqrt{3}$ KV / 110// $\sqrt{3}$ V	132/ $\sqrt{3}$ KV / 110// $\sqrt{3}$ V
9.	Rated secondary burden (VA)	75 VA	75 VA	75 VA
10.	Class of accuracy(for each winding)	3P	3P	0.2
11.	Rated Frequency	50Hz.		
12.	Number of phase	Single		
13.	Rated voltage factor and time.	1.5for 30 Sec. 1.25 Cont.		
14.	Temperature rise at 1.25 times rated voltage with rated burden °C	Within limit as per IS-3156		
15.	Primary winding One minute power frequency withstand test voltage on primary (kV rms.)	275KV rms.		
16.	Impulse withstand test voltage 1.2/50 microsecond full wave positive and negative impulse withstand voltage (kV) peak.	650KVp		
17.	One minute power frequency withstand test voltage on secondary (kV rms.)	3KVrms		
18.	Treatment of total external surfaces	Painted with paint shade 631 IS-5		

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

ITEM NO. 60 - 132KV CAPACITIVE VOLTAGE TRANSFORMER

Sl. No.	Description	132 KV CVT		
1.	Type	145 KV, 880P pF, Line to Ground, 1- PHASE, Outdoor type CVT		
2.	Conforming to Standard	IS-3156/IEC 186/ IEC 358		
3.	Type of voltage transformer	132KV EMVT		
4.	Type of insulation	'A'		
5.	Rated primary voltage (kv)	132/ $\sqrt{3}$ KV		
6.	Type of installation	Line to Ground, Outdoor		
7.	No. of secondary windings	03		
		Winding -I	Winding -II	Winding - III
8.	Rated secondary voltage(v)	110/ $\sqrt{3}$ V	110/ $\sqrt{3}$ V	110/ $\sqrt{3}$ V
9.	Rated Transformation ratio	132/ $\sqrt{3}$ KV / 110/ $\sqrt{3}$ V	132/ $\sqrt{3}$ KV / 110/ $\sqrt{3}$ V	132/ $\sqrt{3}$ KV / 110/ $\sqrt{3}$ V
10.	Rated secondary burden (VA)	50 VA	50 VA	50 VA
11.	Class of accuracy(for each winding)	3P	3P	0.2
12.	Rated Frequency	50Hz.		
13.	Number of phase	Single		
14.	Rated voltage factor and time.	1.5 for 30 Sec. 1.25 Continuous.		
15.	Capacitance	Of High Voltage Capacitance – 10756 pF Of Intermediate Voltage Capacitance – 48400 pF Of Carrier Frequency Coupling – 8800 pF		
16.	Temperature rise at 1.25 times rated voltage with rated burden °C	Within limit as per IS-3156		
17.	Primary winding One minute power frequency withstand test voltage on primary kV rms.	275KV rms.		
18.	Impulse withstand test voltage 1.2/50 microsecond full wave positive and negative impulse withstand voltage (kV) peak.	650KVp		
19.	One minute power frequency withstand test voltage on secondary (kV rms.)	3KVrms		
20.	Treatment of total external surfaces	Painted with paint shade 631 IS-5		

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

TECHNICAL SPECIFICATION FOR MARSHALLING BOX

- a. The wiring diagram for the interconnection of three phase instrument transformer shall be pasted inside the box in such a manner so that it is visible and it does not deteriorate with time. Terminal blocks in the marshaling box shall have facility for star/delta formation, short circuiting and grounding of secondary terminals. The box shall have enough terminals to wire all control circuits plus 20 spare terminals.
- b. All types of control cabinets, junction boxes, marshaling boxes etc. shall generally conform to IS: 5039, IS: 8623 and IEC: 61439 as applicable.
- c. They shall be of painted sheet steel or aluminium. The thickness of sheet steel shall be 2mm cold rolled or 2.5mm hot rolled. The thickness of aluminium shall be 3mm and shall provide rigidity. Top of the boxes shall be sloped towards rear of the box. The paint shall be of grey RAL 9002 on the outside and glossy white inside. However, the junction and switch boxes shall be of hot dip galvanised sheet steel of 1.6mm thickness.
- d. The Marshalling Box shall be free standing or wall mounting or pedestal mounting type. They shall have hinged doors with padlocking arrangement. All doors, removable covers and plates shall be gasketed all around with neoprene gaskets.
- e. The degree of protection of all the outdoor boxes shall not be less than IP 55 as per IS 2147.
- f. The cable entry shall be from bottom, for which removable gasketed cable gland plates shall be provided.
- g. Suitable 240V, single phase, 50Hz ac heaters with thermostats controlled by switch and fuse shall be provided to maintain inside temperature 10deg. above the ambient. The size of enclosure and the layout of equipment inside shall provide generous clearances. Each cabinet/box shall be provided with a 15A, 240V AC, 2 pole, 3 pin industrial grade receptacle with switch. For incoming supply, MCB of suitable rating shall be provided. Illumination of each compartment shall be with door operated LED lamp. All control switches shall be of rotary switch type.
- h. Each Marshalling Box shall be provided with two earthing pads to receive 75mmx12mm GS flat. The connection shall be bolted type with two bolts per pad. The hinged door shall be connected to body using flexible wire. The cabinets/boxes/kiosks/panels shall also be provided with danger plate, and internal wiring diagram pasted on inside of the door. The front label shall be on a 3mm thick plastic plate with white letters engraved on black background.

TECHNICAL SPECIFICATIONS FOR 220KV AND 132 KV EMVT AND CTs

TECHNICAL SPECIFICATIONS FOR CLAMPS AND CONNECTORS

- a) The material of clamps and connectors shall be Aluminium alloy casting conforming to designation A6 of IS: 617 for connecting to equipment terminals and conductors of aluminium. In case the terminals are of copper, the same clamps/connectors shall be used with 2mm thick bimetallic liner.
- b) The material of clamps and connectors shall be Galvanized mild steel for connecting to shield wire.
- c) Bolts, nuts and plain washers shall be hot dip galvanized mild steel for sizes M12 and above. For sizes below M12, they shall be electro-galvanized mild steel. The spring washers shall be electro-galvanized mild steel.
- d) All castings shall be free from blow holes, surface blisters, cracks and cavities. All sharp edges and corners shall be rounded off to meet specified corona and radio interference requirements.
- e) They shall have same current rating as that of the connected equipment. All current carrying parts shall be at least 10 mm thick. The connectors shall be manufactured to have minimum contact resistance.
- f) Flexible connectors, braids or laminated strips shall be made up of copper/aluminium.
- g) Current rating and size of terminal/conductor for which connector is suitable shall be put on a suitable sticker on each component which should last at least till erection time.



USSC-CPG1

PPG-QA



Standardised Quality Plan	
Item	Oil Filled Current Transformer upto 400KV
SQP No.	CPG-QA-SQP- E-069
Rev	00

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Date: 2022.11.04
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MANUFACTURING QUALITY PLAN

CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		
					M	C/N				D*		
1	2	3	4	5	6		7	8	9		11	
I RAW MATERIAL & BOUGHT OUT ITEMS												
1.0	Transformer Oil [Insulating Oil]	1.Appearance 2.Density 3.Kinematic Viscosity a) at 37.8 Deg C b) at -30 deg C 4. Interfacial Tension 5. Flash Point (6. Pour Point 7. Neutralisation Number 8. Corrossive Sulphur 9. Inhibitor Content % wt 10. Specific resistance (Resistivity),at 90 deg.C 11. .Electrical strength (BDV) New Untreated Oil 12.Dielectric Dissipation factor - Tan Delta 13..Oxidation Stability. a) Total Acidity b) Sludge Content	Major	Visual Test	1 Sample / Tanker	-	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS			V V V V V V V V V V V V V	- - - - - - - - - - - - -	Raw material / BOI TC's will be maintained for NTPC verification at any time during inspection
2.0	Enamelled Cu Wire	1.Insulation Defects 2. Dimensions 3. Resistance 4. Elongation. 5. Flexibility & Adherence 6. Restance to abrasion 7. Heat Shock test 8. Cut Through test 9. Breakdown voltage 10. Springness (Spring back) 11. Solvent test.	Major	Visual Meas. Test	5 Nos / lot	-				V V V V V V V V V V V	- - - - - - - - - - -	

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.

** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,
CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of inspection

MANUFACTURING QUALITY PLAN

CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		
					M	C/N				M	C	N
1	2	3	4	5	6		7	8	9	D*	10	11
I RAW MATERIAL & BOUGHT OUT ITEMS												
3.0	Gasket (O Rings)	1.. Specific Gravity. 2. Hardness 3. Elongation 4. Ageing Test in Tr. Oil 5.Compression set	Major	Test	1Sample / lot	-	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS			V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
4.0	Cable paper (Kraft Paper)	1. Visual (Appearance) 2.Elec. Breakdown Strength 3.Density (apparent bulk density) 4. Tensile Index (factor) 5. Elongation. 6.Conductivity. Of Aqueous Extract 7. Ash Content (Annealing residue) 8. Capillary water rise 9. Air Permeance (Pearmeability)	Major	Phy. Test.	100% 1Sample / lot	-				P	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
			"	"	"	-				V	-	
5.0	Porcelain Insulator	1. Major Dimensions 2. Visual (Surface defects) 3. Electrical Routine test. 4. Porosity test 5. Temp. Cycle test 6. Creepage distance 7. Following test in case of Jointed Porcelain a) Beam test for Joint , b) Radial dielectric test c) temp. Cycle test.	Major	Meas.	IS 5621-1980	-			V	-		
			"	Phy.	100%	-			V	-		
			"	Test.	100%	10%			V	V		
			"	"	IS 5621-1980	-			V	-		
			"	"	IS 5621-1980	IS 5621-1980			V	V		
			"	Meas.	1sample / lot	1sample / lot			V	V		
			"	Test.	IS 5621-1980	IS 5621-1980			V	-		
6.0	Semiconducting Paper.	1. Thickness 2. Density 3. Tensile Strength 4.Elongation 5. Resistivity 6. Porosity (Bendsten) 7. Conductivity	Major	Meas.	1 sample / lot	-			V	-		
			"	Test.	"	-			V	-		
			"	"	"	-			V	-		
			"	"	"	-			V	-		
			"	"	"	-			V	-		
			"	"	"	-			V	-		
			"	"	"	-			V	-		

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/)-SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.

** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,
CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of inspection

MANUFACTURING QUALITY PLAN

CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			
					M	C/N				M	C	N	
1	2	3	4	5	6		7	8	9	D*	10	11	
I RAW MATERIAL & BOUGHT OUT ITEMS													
7.0	Primary Bar (Al / Cu) (As applicable)	1. Dimension 2. Visual	Major	Meas. Phy	1Sample / lot "	- -	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS			V	--	--	
8.0	Torroidal Core (CRGO strip wound core)	1. Strip Thickness 2. Silicon content 3. Watt loss (power loss) 4. Specific gravity 5. Stacking factor.	Major	Visual Meas. Test. " "	100% 1Sample / lot " "	- - - -				V V V V V	-- -- -- -- --	-- -- -- -- --	
9.0	Core for Metering	1. Strip thickness 2. Stacking factor.	Major	Meas. "	1Sample / lot "	- -				V V	-- --	-- --	Cores required for 0.2 Accuracy
10.0	Aluminium foil	1. Thickness 2. Purity 3. Visual	Major	Meas. Test. Phy.	1Sample / lot " "	- - -				V V V	-- -- --	-- -- --	
11.0	P.E.T.P FILM	1. Breakdown Voltage 2. Volume Resistivity 3. Surface Resistance 4. Tensile Strength 5. Elongation 6. Density 7. Dielectric Constant	Major	Test. " " " " " "	1Sample / lot " " " " " " "	- - - - - - -				V V V V V V V	-- -- -- -- -- -- --	-- -- -- -- -- -- --	

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA
 ** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N: NTPC P: PERFORM W: WITNESS AND V: VENDOR
 CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

NOTE : # NTPC Inspection Engineer to check , approval
 date / revision no. reference documents at the time of inspection

MANUFACTURING QUALITY PLAN

CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY									
					M	C/N				M	C								
1	2	3	4	5	6		7	8	9	D*	**	10	11						
I RAW MATERIAL & BOUGHT OUT ITEMS																			
12.0	Base Pedestal	1. Major Dimensions	"	Meas.	1Sample / lot	-	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS				V	--	--						
		2. Visual	"	"	100%	-					V	--	--						
13.0	Check on Hot Dip Galvanised item (if applicable)	1. wt. of Zn coating.	Major	Test.	1Sample / lot	-										V	--	--	Applicable for Base Pedestal & Terminal Box
		2. Adhesion test	"	"	"	-										V	--	--	
		3. Zinc thickness test	"	"	"	-										V	--	--	
		4. Visual defects	"	Phy.	100%	-										V	--	--	
14.0	Terminal Connector (If Applicable)	1. Major Dimensions	Major	Meas.	IS -5561-1970	-										V	--	--	
		2. Visual	"	Phy.	"	-	V	--	--										
		3. Tensile Test	"	Test.	"	-	V	--	--										
		4. Resistance test	"	Test.	"	-	V	--	--										
15.0	Cable Crepe Paper	1. Area Weight (Grammage)	Major	Test.	1Sample / lot	-					V	--	--						
		2. Tensile Index	"	"	"	-					V	--	--						
		3. Elongation	"	"	"	-					V	--	--						
		4. Conductivity of Aqueous Extract	"	"	"	-					V	--	--						
		5. Ash Content	"	"	"	-					V	--	--						
16.0	Terminal Block	1. Make, Type, Rating	Minor	Visual	1Sample / lot	-					V	--	--						
		2. Visual	"	"	"	-					V	--	--						
LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE., CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"										NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of inspection									

MANUFACTURING QUALITY PLAN

CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		
					M	C/N				M	C	N
1	2	3	4	5	6		7	8	9	D*	10	
I RAW MATERIAL & BOUGHT OUT ITEMS												
17.0	Fastners	1. Make 2. Visual / Dimensions	Major	Phy.	1Sample / lot	-	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS			V	-	
18.0	Head Housing	1. Dimension 2. Visual 3. Leak Test	Major	Meas. " Phy.	1Sample / lot 100% 100%	- - -				V V V	- - V	
19.0	Bellow	1. Dimension 2. Visual	Major	Meas. "	1Sample / lot 100%	- -				V V	- -	
20.0	D.C.C. Cu / Al Stranded Conductor (as applicable)	a) Diameter b) Electrical High Voltage Test	Major Major	Meas. Test.	1Sample / lot "	- "				V V	- -	
21.0	Base Plate Aluminium	1. Thickness 2. Chemical Composition	Major Major	Meas. Test.	1Sample / lot "	- -				V V	- -	
22.0	Marshalling Box (Accessory)	1. Dimension 2. HV test - 2kV for 1 min. 3. IR test - 20 M Ohm (min) 4. Component Physical check 5. Functional check 6. Painting Thickness & Paint shade 7. Adhesion Test 8. Degree of protection (IP - 55) Type Test	Major " " " " " "	Meas. Test. Test. Visual Test. " "	1 Sample / lot 100% " " " 1 Sample / lot " " Sample	1 Sample / lot " " " " " "				Tender / PO Tech. Specifications/ NTPC Approved Drg./DS/ASTM D 3359/IS-13947 P1		

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.

** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,
CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of Ins

verification of sealing arrangement with respect to drawing attached to type test

Report

MANUFACTURING QUALITY PLAN CURRENT TRANSFORMERS -upto 400 kV (TOP CORE)

NO.	OPERATIONS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY				
							M	C	N		
1	2	3	4	5	6	7	8	9	10	11	
INPROCESS INSPECTION											
1.0	Secondary Winding & Taping	Visual Check	Major	Visual	100%	-	Tender / PO Tech. Specifications/ NTPC Approved Drg./DS				
2.0	Assembly	Base To Pedestal Assembly	Major	Visual	100%	-					
		Tank to Porcelain Assembly	Major	Visual	"	-					
		Main Assembly	Major	Visual	"	-					
2.0	Treated oil	BDV	Critical	Test							
		Loss Angle	"	"	1 Sample / flooding lot	-					
		Water Content	"	"							
3.0	Impregnation, visual leak check	Temperature & Vacuum	Critical	Meas.	Continuous	-					

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.
** M : MANUFACTURER / SUB - SUPPLIER C: MAI

FORMAT -QS-01-QAI-P-10/F1-R1

NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of Inspection



USSC-CPG1

PPG-QA



Standardised Quality Plan	
Item	Capacitor Voltage Transformer CVT upto 400 kV
SQP No.	CPG-QA-SQP- E-041
Rev	01

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DILEEP KUMAR DIXIT
Date: 2022.11.04
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		Manufacturing QUALITY PLAN					NTPC	TO BE FILLED BY NTPC							
		ITEM / EQUIPMENT :			QP NO. :		SIGN. OF MFR'S			REVIEWED BY		APPROVED BY			
		CAPACITOR VOLTAGE			REV. :										
		TRANSFORMER UPTO 400 KV			DATE :			PAGE NO. 1 OF 7							
		SUB - SYSTEM :			PAGE NO. 1 OF 7										
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS		
					M	C/N				M	C	N			
1	2	3	4	5	6	7	8	9	D*	**	10		11		
I <u>RAW MATERIAL & BOUGHT OUT ITEMS</u> (makes of critical raw material and bought out items like oil,polymer insulator, capacitor paper,Alu. Foil,PPE film,copper conductor,bushing,metal bellow shall be furnished with bid QP for reference; an indicative list of makes is furnished for reference)															
1.0	Transformer Oil (Insulating Oil)	1.Appearance 2.Density (max) 3.Kinematic Viscosity (Max) a) at 37.8 Deg C b) at -30 deg C 4. Interfacial Tension 5. Flash Point (min) 6. Pour Point (max) 7. Neutralisation Number (max) 8. Corrossive Sulphur 9. Inhibitor Content % wt 10..Specific resistance (Resistivity). at 90 deg.C (min) 11.Electrical strength (BDV) New Untreated Oil 12.Dielectric Dissipation factor Tan Delta (max) 13.Oxidation Stability. a) Total Acidity (max) b) Sludge Content (max) 14. Water Content	Major	Visual	1 Sample / Tanker	-	Manufacturer's Standards / relevant standards	Manufacturer's Standards / relevant standards	Supplier's TC		V	-	-	Raw Material/ BOI TC's will be maintained for NTPC verification at any time during inspection	
			"	Test	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
			"	"	"	-	"	"	"		V	-	-		
2.0	Enamelled Cu Wire (Grade 2 , CI 200 / manufacturer's standard as per IEC)	1.Insulation Defects 2. Dimensions 3. Resistance 4. Elongation. 5. Flexibility & Adherence 6. Restance to abrasion 7. Heat Shock test 8. Cut Through test 9. Breakdown voltage 10. Springness (Spring back) 11. Solvent test.	Major	Visual	5 Nos / lot	-	IS-13730 P- 13 / IEC 317 - 13 -1990	IS-13730 P- 13 / IEC 317 - 13 -1990	Supplier TC		V	-	--		
			"	Meas.	"	-	"	"	"		V	-	--		
			"	Test	"	-	"	"	"		V	-	--		
			"	"	"	-	"	"	"		V	-	--		
			"	"	"	-	"	"	"		V	-	--		
			"	"	"	-	"	"	"		V	-	--		
			"	"	"	5 Nos / lot	"	"	"		V	-	V		
			"	"	"	"	"	"	"		V	-	V		
			"	"	"	"	"	"	"		V	-	V		
			"	"	"	"	"	"	"		V	-	--		
			"	"	"	"	"	"	"		V	-	--		

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.

** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,

CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W". LOT REFERS TO BATCH QUANTITY OFFERED FOR INSPECTION BY SUPPLIER


NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of inspection

		Manufacturing QUALITY PLAN							TO BE FILLED BY NTPC					
		ITEM / EQUIPMENT : CAPACITOR VOLTAGE TRANSFORMER UPTO 400 KV SUB - SYSTEM :				PAGE NO. 2 OF 7		SIGN. OF MFGR'S	PAGE NO. 2 OF 7		REVIEWED BY		APPROVED BY	
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS	
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	
I RAW MATERIAL & BOUGHT OUT ITEMS														
3.0	Press Board	1. Thickness 2. Density 3. Electrical strength 4. Ash Content. 5. Moisture Content (%) 7. pH of aqueous extract 8. Conductivity of aqueous extract 9. Oil absorption (%)	Major	MEAS.	1 sample / lot	-	Manufacturer's Standards / relevant standards	Manufacturer's Standards / relevant standards	SUPPLIER TC		V	-	-	
			"	Test	"	-	"	"	"		V	-	-	
			"	"	"	-	"	"	"		V	-	-	
			"	"	"	-	"	"	"		V	-	-	
			"	"	"	-	"	"	"		V	-	-	
			"	"	"	-	"	"	"		V	-	-	
			"	"	"	-	"	"	"		V	-	-	
4.0	Polymer Insulator	1. Raw material (TS,EB,shore hardness, tracking resistance,sp. gravity,dielectric strength, volume resistivity, silicon content by weight, density, T90 value,UV resistance) 2. Visual (Surface defects),Major Dimensions,jointless,DPT 3. Electrical Routine test. 4. Cantilever strength test 5. Temp. Cycle test 6. Creepage distance 7. Type test certificate including Water diffusion test, water immersion test	Major	Meas.	IEC 61462	-	Manufacturer's standards /IEC 61462 /ASTM	Manufacturer's standards /IEC 61462 /ASTM	Manufacturer's Report / Supplier TC		V		V	
			"	Phy.	100%	-	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	"		V		V	
			"	Test.	100%	10%	IEC 61462	IEC 61462	Supplier TC		V		V	
			"	"	IEC 61462	IEC 61462	IEC 61462	IEC 61462	"		V		V	
			"	"	IEC 61462	IEC 61462	IEC 61462	IEC 61462	"		V		V	
			"	Meas.	1sample / lot	1sample / lo	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's / Supplier TC		V		V	
			"	Test.	IEC 61462	IEC 61462	IEC 61462	IEC 61462	Supplier TC		V		V	
5.0	Capacitor Paper	1. Visual Check 2.Thickness 3. Density 4. Moisture 5. Tensile Strength 6. Dielectric Strength 7. Ash Content 8. Conductivity of Aqueous Extract	Major	Phy.	100%	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's REPORT		P	--	--	
			"	Test.	1 sample / lot	--	"	"	Supplier TC		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
6.0	Aluminium Foil	1. Visual,thickness 2. TS , Wettability	Major	Phy.	100%	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's REPORT		V	--	--	
			Major	Meas.	1Sample / lot	--	"	"	Manufacturer's / SUP. TC		V	--	--	

LEGEND : * RECORDS IDENTIFIED WITH "TICK" (/) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.


** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,
 CHP : NTPC SHALL IDENTIFY IN COLUMN "N" AS "W". LOT REFERS TO BATCH QUANTITY OFFERED FOR INSPECTION BY SUPPLIER

NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of inspection

		Manufacturing QUALITY PLAN								TO BE FILLED BY NTPC				
		ITEM / EQUIPMENT :		QP NO. : 140		SIGN. OF MFGR'S				REVIEWED BY		APPROVED BY		
		CAPACITOR VOLTAGE		REV. : 02										
		TRANSFORMER UPTO 400 KV		DATE : 03.11.2014										
		SUB - SYSTEM :		PAGE NO. 3 OF 7										
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	6		7	8	9	D*	**	10	11	
I RAW MATERIAL & BOUGHT OUT ITEMS														
7.0	Poly propelyne Film	1.Thickness (Space factor) 2.Visual check 3.Dielectric strength,dissipation factor	Major	Phy.	1Sample / lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Supplier TC		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
8.0	Gasket	1. Dimension * 2. Visual	Major	Meas.	1Sample/lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's / SUPPLIER. TC		V	--	--	* With matching component
			"	Test	1Sample/lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	"		V	--	--	
9.0	Intermediate Voltage Bushing	1. Visual 2. Dimension	Major	Phy.	100%	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's / SUPPLIER. TC		V	--	--	
			"	Test	1Sample / lot	--	"	"	"		V	--	--	
10.0	Stainless Steel Bellow	1. Dimensions 2. Helium leak test 3. Chemical composition	Major	Phy.	1 sample / lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's / SUPPLIER. TC		V	--	--	
			"	Test.	100%	--	"	"	"		V	--	--	
			"	"	1 sample / lot	--	"	"	"		V	--	--	
11.0	Lamination	1. Core Loss 2. Minimum Induction 3. Stacking Factor	Major	Test.	1Sample / lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Supplier TC		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
12.0	Rectangular Enamelled Copper Conductor	1. Dimension 2. Electrical resistance 3. Springiness 4. Break down voltage 5. Heat shock 6. Flexibility & adherence	Major	Meas.	1Sample / lot	--	Manufacturer's standards / NTPC appd. DRG.	Manufacturer's standards / NTPC appd. DRG.	Supplier TC		V	--	--	
			"	Test.	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	
			"	"	"	--	"	"	"		V	--	--	


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 ** M : MANUFACTURER / SUB - SUPPLIER C: MAIN SUPPLIER N : NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE.,
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NOTE : # NTPC Inspection Engineer to check , approval date / revision no. reference documents at the time of Inspection

		Manufacturing QUALITY PLAN								TO BE FILLED BY NTPC				
		ITEM / EQUIPMENT :			QP NO. : 140		SIGN. OF MFR'S				REVIEWED BY		APPROVED BY	
		CAPACITOR VOLTAGE			REV. : 02									
		TRANSFORMER UPTO 400 KV			DATE : 03.11.2014				PAGE NO. 4 OF 7					
		SUB - SYSTEM :			PAGE NO. 4 OF 7									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	6		7	8	9	D*	**	10	11	
I RAW MATERIAL & BOUGHT OUT ITEMS														
14.0	Hot Dip Galvanised Item (if applicable)	1.wt. of Zn coating. 2. Adhesion test 3. Zn thickness test 4. Visual defects, DPT,Leak test,dimensions	Major	Phy.	1Sample / lot	--	IS-2633 / IS-2629	IS-2633-1986 IS-2629-1985	Manufacturer's / SUP. TC		V		--	
			"	"	"	Sample / lot	"	"	"		V		V	
			"	"	"	"	"	"	"		V		V	
			"	"	"	--	"	"	"		V		--	
15.0	Terminal block	1. Make, Type, Rating 2. Visual	Minor	Visual	1Sample / lot	--	Manufacturer Catalogue	Manufacturer Catalogue	Manufacturer's REPORT		V		--	
			"	"	"	--	"	"	"		V		--	
16.0	Marshalling Box (Accessory)	1. Dimension 2. HV test - 2kV for 1 min. 3. IR test - 20 M Ohm (min) 4. Component Physical check 5. Functional check 6. Painting Thickness , Paint shade 7. Adhesion Test 8. Degree of protection (IP - 55)	Major	Meas.	1Sample / lot	1Sample / lot	NTPC appd. Drg.	NTPC appd. Drg.	Manufacturer's / SUP. TC		P		V	
			"	Test.	100%	"	"	"	"		P		V	
			"	Test.	"	"	"	"	"		P		V	
			"	Visual	"	"	"	"	"		P		V	
			"	Test.	"	"	"	"	"		P		V	
			"	"	1 Sample / lot	"	80 Micron (min)	80 Micron (min)	"		P		V	
			"	"	"	"	ASTM D 3359	ASTM D 3359	"		P		V	
			"	"	Sample	Sample	IS - 13947 P 1	IS - 13947 P 1	"		P		V	
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		MANUFACTURER'S NAME AND ADDRESS:		Manufacturing QUALITY PLAN				NTPC	TO BE FILLED BY NTPC					
				ITEM / EQUIPMENT :		SIGN. OF MFGR'S				REVIEWED BY		APPROVED BY		
				CAPACITOR VOLTAGE TRANSFORMER UPTO 400 KV		PAGE NO. 5 OF 7								
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	D*	AGENCY M	AGENCY C	AGENCY N	REMARKS
1	2	3	4	5	M	C/N	7	8	9		**	10		11
17.0	Epoxy moulded PT / Choke -if applicable	visual,dimensional,ratio,PD,terminal marking & polarity,induced over voltage on primary,HV on secondary etc for PT,visual,inductance, resistance & 10 kV on choke	Major	Meas.	1Sample / lot	1Sample / lot	Manufacturer's Standards / relevant standards	Manufacturer's Standards / relevant standards	Manufacturer's / SUP. TC		P		V	
18.0	FRP Rod	dimensions,DPT,water absorption, water diffusion,glass content,brittle fracture resistance test,specific gravity,electric grade corrosion resistance,acid resistance as per ASTM / IEC -as applicable	Major	Meas.	1Sample / lot	1Sample / lot	Manufacturer's Standards / relevant standards	Manufacturer's Standards / relevant standards	Manufacturer's / SUP. TC		P		V	
INPROCESS INSPECTION														
1.0	Capacitor Assembly	Visual	Major	Visual	100%	-	Manufacturer's winding sheet	Manufacturer's winding sheet	Manufacturer's LOG BOOK		P	-	-	
		Capacitance Measurement	Major	"	"	-	"	"	"		P	-	-	
2.0	Treated Transformer Oil	1. BDV 2. Loss Angle 3. Water Content	Critical	Test	1 Sample / flooding lot	-	Manufacturer's WI	Manufacturer's WI	Manufacturer's LOG BOOK		P	-	-	
			"	"	"	-	"	"	"		P	-	-	
			"	"	"	-	"	"	"		P	-	-	
3.0	Impregnation & Flooding of Capacitor Stack	Temperature / Vacuum	"	"	"	-	Manufacturer's WI	Manufacturer's WI			P	-	-	
4.0	Sealing Test On Divider With Bellow	Leakages	Major	Test	100%	-	Manufacturer's WI	Manufacturer's WI	Manufacturer's REPORT		P	-	-	
			"	"	"	-	"	"	"		P	-	-	
5.0	Synthetic oil for Capacitor Divider after treatment.	BDV Tan delta (Loss Angle) Tan Delta at 90° C	Major	Test	1 Sample / flooding lot	-	Manufacturer's WI	Manufacturer's WI	Manufacturer's REPORT		P	-	-	
			"	"	"	-	"	"	"		P		V	
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		ITEM / EQUIPMENT :			SIGN. OF MFGR'S				REVIEWED BY		APPROVED BY			
		CAPACITOR VOLTAGE TRANSFORMER UPTO 400 KV			PAGE NO. 6 OF 7		PAGE NO. 6 OF 7							
		SUB - SYSTEM :			PAGE NO. 6 OF 7									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERSTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY AGENCY AGENCY AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	6	C/N	7	8	9	D*	**	10	11	
FINAL TESTS														
Verification of type test approval from NTPC Site-if envisaged in PO.														
ROUTINE TESTS														
1.0	Routine Tests On Capacitor Assembly	a.Capacitance & Loss Angle Measurement before high voltage test at 10 % of rated voltage	Critical.	Test	100%	10 % of Lot	IEC - 60358 / 61869 - 5	IEC	IEC - 60358 / IEC 61869 - 5	TC	√	P		W
		b. Power Frequency voltage Withstand test for one minute on Capacitor Voltage Dividers	"	"	"	10 % of Lot	IEC - 60358 / 61869 - 5	IEC	IEC - 60358 / IEC 61869 - 5	"	√	P		W
		c. Capacitance & Loss Angle Measurement at Rated Voltage after High Voltage Test	"	"	"	10 % of Lot	IEC - 60358 / IEC 61869 - 5		IEC - 60358 / IEC 61869 - 5	"	√	P		W
		2. Partial Discharge Test On Capacitor Voltage Divider	"	"	"	10 % of Lot	IEC - 61869 - 5	IEC - 61869 - 5		"	√	P		W
		3. Power Frequency withstand test between Low Voltage Terminal & Earth	"	"	"	10 % of Lot	IEC - 60358 / IEC 61869 - 5		IEC - 60358 / IEC 61869 - 5	"	√	P		W
		4.Visual,dimension & Tightness of Capacitor Voltage divider	"	"	"	10 % of Lot	Manufacturer's WI IEC 60358 / 61869 - 5	Manufacturer's WI	IEC 60358 / 61869 - 6	"	√	P		V
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		ITEM / EQUIPMENT :			SIGN. OF MFGR'S		PAGE NO. 7 OF 7			REVIEWED BY		APPROVED BY		
		CAPACITOR VOLTAGE TRANSFORMER UPTO 400 KV			PAGE NO. 7 OF 7									
		SUB - SYSTEM :												
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY AGENCY AGENCY AGENCY			REMARKS
					M	C/N			M	D*	M	C	N	
1	2	3	4	5	6		7	8	9		**	10		11
ROUTINE TESTS														
2.0	Routine Tests On EMU	1.Verification of terminal marking & polarity 2. P.F. Test on Primary windings of EM 3. P.F. Test on secondary windings of EMU between LV, LV-E 4. Induced Overvoltage	Critical.	Test	100%	10 % of Lot	IEC 61869 - 5	IEC 61869 - 5	TC	√	P		W	Note : In the event of Routine test of 10% of offered Lot of CVT/s witnessed by customer , even if 1 No. CVT does not conforming to reference Document / Stadarads, then 100 % of the offered lot has to be offered for NTPC Witnessal of all Routine Tests
			"	"	"	"	"	"	"	"	P		W	
			"	"	"	10 % of Lot	"	"	"	√	P		W	
			"	"	"	"	"	"	"	"	P		W	
3.0	Routine Tests On Complete CVT	1. Ferro-Resonance check . 2. Measurement of ratio & phase angle errors 3. Verification of Terminal marking & polarity	Critical.	Test	100% of the CVTs	10 % of Lot	IEC 61869 - 5	IEC 61869 - 5	TC	√	P		W	
			Critical.	TEST	100%	10 % of Lot	IEC 61869 - 5	IEC 61869 - 5	"	√	P		W	
			Critical.	TEST	100%	10 % of Lot	IEC 61869 - 5	IEC 61869 - 5			P		W	
4.0	Pre - despatch Packing	Check for finish, Completeness of Equipment Check for packing sturdiness	Major	Phy.	100%	NA	Manufacturer's Packing	Manufacturer's Packing			P	-	-	
			Major	Phy.	100%	NA	work instruction	work instruction			P	-	-	

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- Note:
- Reference and Acceptance norms shall be derived from following in the same sequence-
 a) NTPC Approved drawing / data sheet, b) NTPC tech specs, c) Purchase Order , d) Relevant national standard e) Relevant International standard, f) Manufacturer's standard, g) Good Engineering practices.
 - Main Contractor Column may please be ignored.
 - Type test clearance from NTPC site shall be reviewed during final inspection as envisaged by tender/PO specification.
 - Witness by NTPC/authorized representative (wherever applicable) shall be on randomly chosen sample/s. NTPC shall review MFRs test report for balance Qty.

INVITATION FOR BIDS (IFB)

NTPC LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE)

Central Procurement Group-I, Raipur

**INVITATION FOR BIDS (IFB)
(DOMESTIC COMPETITIVE BIDDING)**

NTPC invites online bids for “PROCUREMENT OF INSTRUMENT TRANSFORMERS FOR 220 KV AND 132KV SWITCHYARD AT NTPC BARAUNI.”

Brief Details:

NIT No.	NTPC/USSC-CPG1/ 9900258152
Tender Fees	Not Applicable
EMD	INR 1,00,000.00 (One Lakh Only)
Delivery/ Completion period	Within 180 days from PO

General Terms & Conditions:

1. NTPC reserve the right to assess bidder's capability and capacity of the bidder for carrying out the supplies and the decision of NTPC in this regard shall be final.
2. NTPC reserves the right to accept or reject any or all the tenders in part or full including rejection of any request for issue of tender documents, alter the quantities or split the order without assigning any reason thereof.
3. Above details are only indicative. Other detailed terms and conditions shall be as per tender documents.

Address for Communication:
GM (C&M)-CPG-1/ AGM(C&M)-CPG-1

NTPC Limited, Western Region II Headquarters,
Plot No-87, Sector-24, Atal Nagar,
Naya Raipur, Raipur
Chhatisgarh-492018
Email:- usgupta01@ntpc.co.in/dppradhan@ntpc.co.in/amitksingh@ntpc.co.in

Contact Nos.: Amit Kumar Singh: 9415335083/ Durga Prasad Pradhan: 7008084608

BUYER ADDED ADDITIONAL TERMS & CONTIONS (ATC)

1. TERMS & CONDITIONS:

1. **Delivery/ Completion Period:** Within 180 days from PO
2. **Payment Term:** 100% payment within 10 days of Consignee's Receipt & Acceptance Certificate (CRAC) Generation in GeM.
3. **Inspection:** Pre dispatch inspection (PDI) shall be carried out by NTPC RIO at the works of vendor as per technical specification, drawing, standard quality plan, etc. Material to be dispatched only after issue of MDCC from NTPC.

Vendor shall submit following documents along with Supply (Applicable for All Items) -

- a. MDCC issued by NTPC Inspection Office
 - b. WARRANTY /GUARANTEE CERTIFICATE
 - c. TEST CERTIFICATE and TEST REPORTS (Routine tests)
 - d. HARD COPY OF ALL TYPES OF DRAWINGS (GA, GTP, CIRCUIT DWG ETC.)
 - e. INTERCHANGEABILITY CERTIFICATE (Equipment and support structures being supplied shall be one to one replacement of the existing breakers with respect to dimensions at NTPC Barauni)
4. **TYPE Tests and Routine Tests:** Type Tests reports carried out in the past 10 years from the date of opening of bid are acceptable. In case, the same are not available, then the agency shall carry out the tests without any financial implication to NTPC and submit the reports for review by NTPC.

Type test reports shall be submitted to NTPC within 10 days after placement of purchase order (along with drawings and MQP) for approval.

5. **Drawings and Manufacturing Quality Plan (MQP):** Drawings and MQP shall be submitted by the agency within 10 days after placement of purchase order for approval of NTPC. Manufacturing shall be carried out only after approval of drawings and MQP by NTPC.

The following documents are to be submitted for NTPC Approval

- i) Outline general arrangement of Instrument Transformer indicating part list.
- ii) Name plate diagram.
- iii) Sectional view of Instrument Transformer.
- iv) Details of secondary terminals box for Instrument Transformer.
- v) Guaranteed technical particulars (GTP)—Data Sheets
- vi) Characteristic curves for CT/EMVT.

- vii) Terminal connector GA & Test reports as required.
 - viii) Type test reports as per relevant IS/IEC and shall not be older than ten years from the date of bid opening.
6. **Matching base frame details:** The offered CTs shall fit to the existing support structure base. The adapter base plate (shall be hot dip galvanized/SS316 material) shall be supplied along with supply of each CT/EMVT and in scope of this contract. The existing details (Base mounting dimensions, Mounting Holes details and Height up to terminals from mounting plane) are provided in Technical Specifications for reference.
7. **WARRANTY / GUARANTEE:** 18 Months from the date of receipt of materials at site or 12 months from the date of installation and commissioning whichever is earlier.
8. **PBG (Performance bank Guarantee):** Contract Performance Guarantee (CPG) for an amount equal to 10% (ten percent) of total order value of GeM Contract to be submitted within 30 days of placement of award. CPG should be valid for a period of 26 months (6 months completion period + 18 months warranty + 2 months claim period).

2. ELIGIBILITY FOR PARTICIATION IN TENDER:

'Class-I local suppliers' only are eligible to participate in this tender, as defined in the bidding documents/ Public Procurement (Preference to Make in India), Order 2017 and its subsequent amendments/ revisions issued by DPIIT. The bidders may apprise themselves of the relevant provisions of bidding documents in this regard before submission of their bids."

The minimum local content shall be 60%.

The 'Class-I local supplier' shall be required to provide, in the Bid Form/relevant attachment of Techno- Commercial bid, self-certification/declaration that the Item offered meets the local content requirement for 'Class-I local supplier' and shall give details of the location(s) at which the local value addition is made. Format is attached as **Annexure A**.

Bids for item(s) which do not meet the Minimum Local Content as mentioned above, shall be considered non-responsive and shall not be evaluated in respect of such item(s) i.e. shall be rejected for such item(s).

Annexure A

Bidding Document No:.....

Declaration of Local content

Dear Sir,

- 1.1 We have read the provisions of “Preference to Make in India and Eligibility for granting of Purchase Preference to Class-I local suppliers” enclosed with the Bid Data Sheets.

In terms of the requirement of the aforesaid provisions, we hereby declare that we have submitted our bids for only those item(s) for which we are eligible for participation as per provisions of the Bidding documents and we are Class-I local supplier for all such items.

The details of the location(s) at which the local value addition is made are as under:

Sl. No. of BOQ	Description of Goods	Details of the location(s) at which the local value addition is made
10	PT: 220KV/SQRT3/110V/SQRT3,75VA, CL-0.2	
20	XFMR, CURR: 2400-1600/1,220KV,20VA,5	
30	220 KV CT 1600/1/1/1A:PS, PS,0.5, PS	
40	132KV C.T. 1200-600-300A/1 (5 CORE)	
50	PT:132KV/110V/110V/110V:75 VA/CLASS-0.2	
60	132/145KV CVT SINGLE PHASE OUTDOOR	

- 1.2 We undertake that a certificate from the statutory auditor or cost auditor (in the case the bidder is a company) or from a practicing cost accountant or practicing chartered accountant (in respect of bidders other than companies) certifying the percentage of local content shall be submitted by us prior to submission of our last bill for payment.##

This para is applicable in packages with estimated value (excluding taxes & duties) exceeding INR 10 Crores.

- 2.0 Further, we hereby confirm that we are presently not debarred / banned by any other procuring entity for violation of ‘Public Procurement (Preference to Make In India), Order 2017’ (PPP-MII Order) dated 15.06.2017 and its subsequent revisions / amendments issued by Department of Industrial Policy and Promotion (DIPP).
- 3.0 We agree to furnish any information as a proof of the above to your satisfaction as and when required.

Note : 1) Continuation sheets of like size and format, may be used as per Bidder's requirement and shall be annexed to this Attachment.

- 2) In case a Bidder has been banned/debarred by any other procuring entity for violation of ‘Public Procurement (Preference to Make In India), Order 2017’ (PPP- MII Order) dated 15.06.2017 and its subsequent revisions / amendments issued by Department of Industrial Policy and Promotion (DIPP), the same may be declared by Bidder by striking off para 2.0 above and declaring the details of banning using additional sheets which shall be annexed to this Attachment.

3. QUALIFYING REQUIREMENT

The bidder who wishes to participate in the bidding shall meet the Qualifying Requirements stipulated hereunder:

1.1 Technical Criteria:

1.1.1 The bidder should be a manufacturer of Instrument Transformers of 220kV class or above.

1.1.2 The Bidder should have executed order(s) for supply of Instrument transformers of 220 KV voltage class or above within preceding 07 (seven) years as on the date of Techno commercial bid opening in any of the following manner:

A. One (1) order having executed value not less than **Rs. 53 Lakh**

OR

B. Two (2) orders having executed value not less than **Rs.33 Lakh each**

OR

C. Three (3) orders having executed quantity not less than **Rs.27 Lakh each**

Notes for Technical Criteria:

1. The word "Executed" mentioned above means that the bidder should have achieved the criteria specified above, even if the total contract is started earlier and/or is not completed/closed.
2. In case of orders under execution, the value of work executed prior to the date of Techno-Commercial bid opening duly certified by bidder's client shall be considered acceptable.
3. Reference work executed by the bidder as a sub-contractor may also be considered provided the certificate issued by main contractor is duly certified by owner specifying the scope of work executed by the sub-contractor in support of qualifying requirements.
4. For arriving at the executed value of work specified above, basic amount only shall be considered. In case contract is inclusive of taxes, bidder should provide the break –up of basic value and taxes.
5. The definition of Instrument transformer means current transformer/voltage transformer/Capacitive voltage transformer

1.2 Financial Criteria:

1.2.1 The Average Annual Turnover of the Bidder, should not be less than **Rs.66 Lakh (Rupees Sixty-Six Lakh Only)** during the preceding three (3) completed financial years as on the date of Techno-Commercial bid opening.

1.2.2 In case the bidder does not satisfy the financial criteria, stipulated at Cl. 1.2.1 above on its own, its Holding Company would be required to meet the stipulated turnover requirements at Cl. 1.2.1 above, provided that the net worth of such Holding Company as on the last day of the preceding financial year is at least equal to or more than the paid-up share capital of the Holding Company. In such an event, the bidder would be required to furnish along with its Techno-Commercial bid, a Letter of Undertaking from the Holding Company, supported by Board Resolution, as per the format enclosed in the bid documents, pledging unconditional and irrevocable financial support for the execution of the Contract by the bidder in case of award.

1.2.3 In case the bidder is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the bidder can be considered

acceptable provided the bidder further furnishes the following documents for substantiation of its qualification.

- a) Copies of the unaudited unconsolidated financial statements of the bidder along with copies of the Audited consolidated financial statements of its Holding Company.
- b) A Certificate from the CEO/CFO of the Holding Company, as per the format enclosed in the bidding documents, stating that the unaudited unconsolidated financial statements form part of the Consolidated Annual Report of the company.

1.2.4 In cases where audited results for the last preceding financial year as on the date of Techno-Commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case, Bidder is not able to submit the Certificate from practicing Chartered Accountant certifying its financial parameters, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further, a Certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the Company are under audit as on the date of Techno-Commercial bid opening and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.

Notes for 1.2:

1. Other income shall not be considered for arriving at annual turnover.
2. "Holding Company" and "Subsidiary Company" shall have the meaning ascribed to them as per Companies Act of India, in vogue.
3. Net worth means the sum total of the paid-up share capital and free reserves. Free reserve means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further, any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus.

4. DOCUMENTS IN SUPPORT OF MEETING THE QUALIFYING REQUIREMENTS:

The Bidder shall submit documents towards in support of meeting the QR stipulated in the Detailed NIT along with their bid (**ANNEXURE I**) which shall include:

- a) Company Registration certificate / certificate of incorporation/ Partnership agreement etc.
- b) Memorandum and Article of Association including changes in the constitution of the firm/company, name and address/(es) of Sole proprietor / partners / board of directors, partnership deed (up to date), if any, in case of partnership firm and affidavit for proprietorship concern.
- c) Copy of GST Registration document.
- d) Copies of the Letter of Award/Purchase orders/Contracts along with Certificate(s) from the Client(s) for successful execution of the assignment with value and period of executions in support of meeting the QR as stipulated in NIT.
- e) Copies of financial statement in support of meeting the QR as stipulated in NIT
- f) Any Other Document in support of meeting the QR as stipulated in the Detailed NIT

The bidder shall be required to submit duly certified and verified documents from their Statutory Auditors or specified Third Party Inspection Agency (TPIA) in support of meeting Technical QR along with a certificate regarding verification of authenticity of documents as per the format

placed at **Annexure-II** (Undertaking from Statutory Auditor) and/ or **Annexure III** (Undertaking from TPIA). All the documents submitted by the bidder in support of meeting Technical QR shall be digitally signed by the Statutory Auditor and/ or specified TPIA”

Further, wherever information can be drawn from books of accounts, records and other relevant documents, Bidders can also submit a certificate issued by their Independent Statutory Auditor certifying the data required for meeting the Technical Qualification Requirements.

Details of submitted copy of Purchase Orders/ Work Orders / Contract Agreements, Client Certificates etc.), duly certified and verified by statutory auditors or specified TPIA should be entered in Annexure I.

In case documents are certified & verified for authenticity through TPIA, the verification and certification of authenticity of documents is acceptable from any of the following TPIAs:

- 1) Société Générale de Surveillance / SGS India Pvt. Ltd.(SGS)
- 2) Gulf Lloyds Industrial Services (India) Pvt. Ltd (GLISPL)
- 3) International Certification Services (ICS)
- 4) TUV Rheinland (India) Pvt. Ltd.
- 5) TÜV SÜD South Asia Pvt. Ltd.
- 6) TUV India Pvt. Ltd. (TÜV Nord Group)
- 7) Intertek India Pvt. Ltd.
- 8) Moody International (India) Pvt. Ltd.
- 9) RINA India Pvt. Ltd.
- 10) Competent Inspectorate and Consultants LLP

The following website may be referred for contact details of above ten (10) TPIAs:

http://nabcb.qci.org.in/accreditation/reg_bod_inspection_bodies.php

Any document pertaining to reference works/ plants in support of Technical QR, which is not certified by specified TPIA or Statutory Auditor of the bidder, as per the format enclosed with the bidding documents, shall not be considered verified/ certified for the purpose of evaluation, and the bid shall be liable for rejection.

The Bidder shall be responsible to get their documents/ credentials in support of Qualifying Requirements verified & certified by their Statutory Auditor(s) and/ or specified TPIAs. All the costs pertaining to third party verification and certification (including those by statutory auditors) shall be borne by the Bidder. Employer shall have no liability (financial or otherwise) towards the same and shall not be liable for any claim/ dispute between the bidder and TPIA and/ or Statutory Auditor.

Bidders are required to fill Annexure I/ IA properly. These references shall only be considered to ascertain the bidder's compliance to Qualifying Requirement (QR).

Tender Reference/ NIT No:

ANNEXURE I

Summary of Details & Documents in support of QR

Bidders Name and Address:

To,

GM(C&M)

**NTPC Limited, Central Procurement Group-I,
NTPC WR-II office, Sector-24, Tuta,
Naya Raipur, Chattisgarh - 492101 (India)**

QR No.	QR Stipulation as in NIT	Meet (Yes/No)	Brief Description along with supporting documents
1.1	Technical Criteria		
	<p>1.1.1 The bidder should be a manufacturer of Instrument Transformers of 220kV class or above.</p> <p>1.1.2 The Bidder should have executed order(s) for supply of Instrument transformers of 220 KV voltage class or above within preceding 07 (seven) years as on the date of Techno commercial bid opening in any of the following manner:</p> <p>A. One (1) order having executed value not less than Rs. 53 Lakh</p> <p style="text-align: center;">OR</p> <p>B. Two (2) orders having executed value not less than Rs.33 Lakh each</p> <p style="text-align: center;">OR</p> <p>C. Three (3) orders having executed quantity not less than Rs.27 Lakh each</p>		

	<p>Notes for Technical Criteria:</p> <ol style="list-style-type: none"> 1. The word "Executed" mentioned above means that the bidder should have achieved the criteria specified above, even if the total contract is started earlier and/or is not completed/closed. 2. In case of orders under execution, the value of work executed prior to the date of Techno-Commercial bid opening duly certified by bidder's client shall be considered acceptable. 3. Reference work executed by the bidder as a sub-contractor may also be considered provided the certificate issued by main contractor is duly certified by owner specifying the scope of work executed by the sub-contractor in support of qualifying requirements. 4. For arriving at the executed value of work specified above, basic amount only shall be considered. In case contract is inclusive of taxes, bidder should provide the break –up of basic value and taxes. 5. The definition of Instrument transformer means current transformer/voltage transformer/ Capacitive voltage transformer 		
1.2	<p align="center"><u>Financial Criteria</u></p>	<p align="center">Meet (Yes/No)</p>	<p align="center">Brief Description along with supporting documents</p>
	<p>1.2.1 The Average Annual Turnover of the Bidder, should not be less than Rs. 67Lakh (Rupees Sixty-seven lakh only) during the preceding three (3) completed financial years as on the date of Techno-Commercial bid opening.</p> <p>1.2.2 In case the bidder does not satisfy the financial criteria, stipulated at Cl. 1.2.1 above on its own, its Holding Company would be required to meet the stipulated turnover requirements at Cl. 1.2.1 above, provided that the net worth of such Holding Company as on the last day of the preceding financial year is at</p>		

	<p>least equal to or more than the paid-up share capital of the Holding Company. In such an event, the bidder would be required to furnish along with its Techno-Commercial bid, a Letter of Undertaking from the Holding Company, supported by Board Resolution, as per the format enclosed in the bid documents, pledging unconditional and irrevocable financial support for the execution of the Contract by the bidder in case of award.</p> <p>1.2.3 In case the bidder is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the bidder can be considered acceptable provided the bidder further furnishes the following documents for substantiation of its qualification.</p> <p>a) Copies of the unaudited unconsolidated financial statements of the bidder along with copies of the Audited consolidated financial statements of its Holding Company.</p> <p>b) A Certificate from the CEO/CFO of the Holding Company, as per the format enclosed in the bidding documents, stating that the unaudited unconsolidated financial statements form part of the Consolidated Annual Report of the company.</p>													
<p>1.2.4 In cases where audited results for the last preceding financial year as on the date of Techno-Commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case, Bidder is not able to submit the Certificate from practicing Chartered Accountant certifying its financial parameters, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further, a Certificate would be required from the CEO/CFO as per the format enclosed in the</p>	<table border="1"> <thead> <tr> <th data-bbox="820 1375 1104 1438">Financial year</th> <th data-bbox="1112 1375 1469 1438">Turnover (Rs.)</th> </tr> </thead> <tbody> <tr> <td data-bbox="820 1438 1104 1501">2019-20</td> <td data-bbox="1112 1438 1469 1501"></td> </tr> <tr> <td data-bbox="820 1501 1104 1564">2020-21</td> <td data-bbox="1112 1501 1469 1564"></td> </tr> <tr> <td data-bbox="820 1564 1104 1627">2021-22</td> <td data-bbox="1112 1564 1469 1627"></td> </tr> <tr> <td data-bbox="820 1627 1104 1690">2022-23</td> <td data-bbox="1112 1627 1469 1690"></td> </tr> <tr> <td data-bbox="820 1690 1104 1963">Average Annual Turnover for the preceding three (03) completed financial years.</td> <td data-bbox="1112 1690 1469 1963"></td> </tr> </tbody> </table>	Financial year	Turnover (Rs.)	2019-20		2020-21		2021-22		2022-23		Average Annual Turnover for the preceding three (03) completed financial years.		
Financial year	Turnover (Rs.)													
2019-20														
2020-21														
2021-22														
2022-23														
Average Annual Turnover for the preceding three (03) completed financial years.														

bidding documents stating that the Financial results of the Company are under audit as on the date of Techno-Commercial bid opening and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.		
--	--	--

Notes for 1.2:

- 1 Other income shall not be considered for arriving at annual turnover.
- 2 "Holding Company" and "Subsidiary Company" shall have the meaning ascribed to them as per Companies Act of India, in vogue.
- 3 Net worth means the sum total of the paid-up share capital and free reserves. Free reserve means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further, any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus.

The Reference Plants/ Orders/ Works declared, shall only be considered for evaluation/ establishing compliance to Qualifying Requirements. No change or substitution in respect of reference Plants/ Orders for meeting the specified Qualifying requirements shall be offered by the Bidder.

The order-1 details are given below:

Sl No	Item Description	Details
(i)	Name of the Station and its location	
(ii)	Client Name and Address e-mail, Mobile and Tel. No	
(iii)	Name and designation of the responsible person in Client's organization	
(iv)	LOA No. & Date	
(iv)	Purchase Order / Contract No. & Date	
(v)	Value of PO (Basic value & taxes break up required)	
(vi)	Executed value of PO (Basic value & taxes break up required)	
	<i>In support of the above, we have attached Copies of relevant purchase orders along with proof of execution such as client certificate, corresponding invoice/ delivery challans, LR , E-way Bill installation/ performance report etc</i>	At Appendix no.to Annexure -IA.

The order-2 details are given below:

SI No	Item Description	Details
(i)	Name of the Station and its location	
(ii)	Client Name and Address e-mail, Mobile and Tel. No	
(iii)	Name and designation of the responsible person in Client's organization	
(iv)	LOA No. & Date	
(iv)	Purchase Order / Contract No. & Date	
(v)	Value of PO (Basic value & taxes break up required)	
(vi)	Executed value of PO (Basic value & taxes break up required)	
	<i>In support of the above, we have attached Copies of relevant purchase orders along with proof of execution such as client certificate, corresponding invoice/ delivery challans, LR , E-way Bill installation/ performance report etc</i>	At Appendix no.to Annexure -IA.

The order-3 details are given below:

Sl. No.	Item Description	Details
(i)	Name of the Station and its location	
(ii)	Client Name and Address e-mail, Mobile and Tel. No	
(iii)	Name and designation of the responsible person in Client's organization	
(iv)	LOA No. & Date	
(iv)	Purchase Order / Contract No. & Date	
(v)	Value of PO (Basic value & taxes break up required)	
(vi)	Executed value of PO (Basic value & taxes break up required)	
	<i>In support of the above, we have attached Copies of relevant purchase orders along with proof of execution such as client certificate, corresponding invoice/ delivery challans, LR , E-way Bill installation/ performance report etc</i>	At Appendix no.to Annexure -IA.

ANNEXURE IA

Bidders are required to fill Annexure I properly. These references shall only be considered to ascertain the bidder's compliance to Qualifying Requirement (QR).

Bidder's Qualifications

(To be uploaded in Pre-Qual/Technical Cover/Envelope)

Bidder to enclose supporting documents in support of meeting Qualifying Requirements in line with (NIT)

NAME OF BIDDER:

PAN NUMBER:

GST REGISTRATION NUMBER:

Details of Completed / Executed work:

S.No.	WO No / Date	Executed Amount	Date of Execution/ Completion	Document Submitted		
				Name of Customer / Company, Phone, Fax, Email id & Name of contact person	Work order Copy with BOQ Yes /No	Document in support of executed work Completion Certificate / Copy of Measurement book (R/A bills) / Proof of receipt of payment etc.
1.						
2.						
3.						

Notes:

The Reference Plants/ Orders/ Works declared, shall only be considered for evaluation/ establishing compliance to Qualifying Requirements. No change or substitution in respect of reference Plants/ Orders for meeting the specified Qualifying requirements shall be offered by the Bidder.

(LIST OF FINANCIAL DOCUMENTS)

Bidder's Name & Address:

To,

NTPC Limited,

The following Documents are annexed to this attachment.

1. Annual reports for preceding three years as on the date of Techno-commercial Bid opening.

ANNUAL TURNOVER FOR 03 FINANCIAL YEARS :

2022-2023:	LAKHS (UDIN No.:)
2021-2022:	LAKHS (UDIN No.:)
2020-2021:	LAKHS (UDIN No.:)
2019-2020:	LAKHS (UDIN No.:)

@ In case Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters for the last financial year, the audited results of the three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further, a Certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the Financial results of the Company are under audit as on the date of Techno-commercial bid opening and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.

Date : Signature.....

Place : Name of Authorised person having Power of attorney.....

Designation.....

CommonSeal.....

Proforma of Certificate from the CEO/CFO of the company in accordance with Financial requirement criteria in cases where audited results for the last financial year as on the date of Techno-commercial bid opening are not available

(To be submitted by Bidder along with the Techno-commercial Bid with QR Documents)

Ref:

Date:

To

Dear Sir,

1.0 I, Mr./Ms. (*CEO of the Company/*CFO of the Company), confirm and undertake that the Financial results of the Company are under audit as on the date of Techno- commercial bid opening and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.

2.0 Accordingly, the company is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters for the last financial year and the audited results of the three consecutive financial years preceding the last financial year have been considered for meeting the financial parameters in the bid submitted by M/s
(Name of the Bidder) for the (Name of the package) under NIT reference No. Dated

Yours faithfully, Signature

Name & Designation.....

Name of the Company.....

(Seal of Company).....

Note : *Strike off whichever is not applicable.

ANNEXURE II

Undertaking from Independent Statutory Auditor

(On letter head digitally signed by a person duly authorized to Sign on behalf of the Statutory Auditor)

Bid Ref. No:

DATE:

To,

NTPC Ltd.

.....

Subject: Authentication of veracity of documents submitted by M/s in support of meeting the Qualifying Requirements

Ref : IFB/Tender no.

Name of the Package/ Tender:

Dear Sir,

M/s. (hereinafter called Bidder) having
.....Registered

office at intend to participate in above referred tender of NTPC Ltd.

We, M/s has been appointed as Statutory Auditor for the Bidder i.e. M/s (Relevant documents on our appointment attached)

The tender condition stipulates that the bidder shall submit supporting Documents pertaining to Technical Qualifying Requirement duly verified and certified by Statutory Auditor.

In this regard, it is hereby confirmed that we have examined the following documents, which are also attached with this letter. The same has been verified from the Original Documents and/ or Client for authenticity.

We hereby confirm that the following documents are found to be genuine and authentic.

1. Doc ref./PO No. no. dated (name of Documents)
2. Doc ref. no./PO No. dated (name of Documents)
3.

The Executed Value/ Quantity of the PO(s) as above has been verified using invoice copy(s)/ LR Bill and completion certificate/ inspection report/ material despatch clearance certificate submitted as execution proof and are found to be genuine and authentic:

1. Invoice no. dated / LR Bill dated and completion certificate dated..... (name of Documents)
2. Invoice no. dated / LR Bill dated and completion certificate dated..... (name of Documents)
3.

All the aforesaid documents have been duly signed and stamped and/ or digitally signed by us as a certificate of authenticity.

*Further, we have examined the books of accounts, records, and other relevant documents, along with other necessary information and explanations furnished by M/s. _____ (bidder) and hereby certify following:

.....

This certificate is issued at the request of M/s (Bidder) for the purpose of participating in tender/s.

Thanking you,

.....

Annexure III

Undertaking from Third Party Inspection Agency

(on letter head digitally signed by a person duly authorized to Sign on behalf of the
TPIA)

Ref.: _____ Date:

To,

NTPC Ltd.

.....

Dear Sir,

**Subject: Authentication of veracity of documents submitted by M/s in
support of meeting the Qualifying Requirements**

Ref: IFB/Tender no.

Name of the Package/ Tender:

M/s. (hereinafter called Bidder) having Registered office at

..... intend to participate in above referred tender of NTPC Ltd.

The tender condition stipulates that the bidder shall submit supporting Documents pertaining to Qualifying Requirement duly verified and certified by a specified independent Third Party Inspection Agency as per the list mentioned in the bidding documents.

In this regard, it is hereby confirmed that we have examined the following documents, which are also attached with this letter. The same has been verified from the Original Documents and / or Client for authenticity.

We hereby confirm that the following documents are found to be genuine and authentic.

1. Doc ref. no./PO No. dated (name of Documents)
2. Doc ref. no./P O No dated (name of Documents)
3.

The Executed Value/ Quantity of the PO(s) as above has been verified using invoice copy(s)/ LR Bill and completion certificate/ inspection report/ material despatch clearance certificate submitted as execution proof and are found to be genuine and authentic:

3. Invoice no. dated / LR Bill dated and completion certificate dated..... (name of Documents)
4. Invoice no. dated / LR Bill dated and completion certificate dated..... (name of Documents)
3.

All the aforesaid documents has been digitally signed by us as a certificate of authenticity.

We further confirm that we neither have any vested interest in aforesaid tender nor have any conflict of interest in respect of above tender.

This certificate is issued at the request of M/s (Bidder) for the purpose of participating in the subject tender/s.

Thanking you,

.....

** Strike off, whichever is not applicable.*

VI. EARNEST MONEY DEPOSIT (EMD) / BID SECURITY

The Earnest Money Deposit (EMD) shall in the form of Bank Guarantee from banks specified in the published GeM bid.

MSE Bidders who are manufacturer of the tendered Item(s) and have a valid Udyam Registration Certificate shall be exempted from submission of EMD.

The format of Bid Guarantee (BG) towards EMD shall be as per GeM formats. The BG towards EMD shall remain valid for a period of forty-five (45) days beyond the original Bid validity period or beyond any extension in the period of Bid validity subsequently requested.

Bidders shall be required to upload the scanned copy of the BG on GeM portal.

Bidder shall also be required to submit the Original BG in physical form to reach NTPC at the address mentioned in Bidding Documents, not later than 5 days from the date of submission of Techno-Commercial bids or before the Price Bid opening, whichever is earlier, failing which its bid shall be rejected and not considered for further evaluation.

Sealed envelope containing EMD and any offline documents sought in tender, must be marked and details like NIT/ Tender No, Scope of Work, Bid Opening Due Date etc mentioned on the envelope

CONFIRMATION OF BGS

While issuing the physical BGs, the Bidder's Bank shall also send electronic message through secure SFMS (in case of BGs issued from within India) or SWIFT (in case of BGs issued from outside India) to Employer's Beneficiary Bank whose details are provided above

i	Bank Name	ICICI BANK LTD.
ii	Branch	CONNAUGHT PLACE BRANCH
iii	Bank address	9A, PHELPS BUILDING, INNER CIRCLE, NEW DELHI-110001
iv	IFSC Code	ICIC0000007

BG issuing/amending bank must send the BG advice in the form of message format via SFMS (Structured Financial Messaging System) as provided by RBI. The format of the message for confirmation of the BG shall be as below:

BG advising message: IFN 760COV/ IFN 767COV via SFMS

Field Number: Particulars (to be mentioned in Row 1)

7037: NTPCBG (unique identifier)

EMD Exemption for MSE Bidders

MSE Bidders who are manufacturer of the tendered Item(s) and have a valid Udyam Registration Certificate shall be exempted from submission of EMD.

In case of an upward change in terms of investment in plant and machinery or equipment or turnover or both, and consequent re-classification, an enterprise shall continue to avail of all non-tax benefits of the category (micro or small or medium) it was in before the re-classification, for a period of three years from the date of such upward change.

For availing MSE benefits, bidder must confirm that some or all the items quoted by the bidder are manufactured by them. The bidders must specify the names of items in the technical bid. Further, the benefit of purchase preference will be available only for such item(s) quoted by bidder for which Bidder is a manufacturer and for rest of the items, its bid shall be evaluated/treated as Non-MSE bid.

In support of above claim regarding manufacturing of each of the specified Item(s), Bidder will furnish necessary details of Stores/ Category of items etc. as mentioned in the MSE registration certificate along with the Undertaking as given at Annexure 14. In case, such details are not available in the Registration Certificate furnished by the Bidder for any of the quoted item(s), other relevant details/documentary evidence will be furnished along with the Undertaking in support of the claim that such item(s) are manufactured by the Bidder.

However, in case the MSE Bidder is manufacturing any / some of the quoted item(s) then Purchase Preference benefits for MSEs shall be extended for such item(s) being manufactured by them. For balance items, its bid shall be evaluated as "Non MSE" bidder.

Bidders are required to submit the declaration/ undertaking as given at Annexure 14/14 A.

The benefit as above to MSEs shall be available only for Goods/ Services produced & provided by MSEs. As per answer to FAQ no. 18 circulated vide Office Memorandum F. No. 22(1)/2012-MA dated 24.10.2016 "Policy is meant for procurement of goods produced and services rendered by MSEs. However, traders are excluded from the purview of benefits and exemption of MSEs."

ANNEXURE-14

Undertaking to be given by the MSE Bidder for availing benefits/ exemptions as per PPP 2012 for cases where **Item wise evaluation** is applicable

M/s NTPC Limited

Ref: Our Bid Reference Number: _____ Dated _____
against Tender Invitation
Number _____ Dated _____ for _____ Name of
Package _____

With reference to our bid (as referred above) against subject Tender Invitation, we have attached relevant documents for availing benefits/ exemptions available to MSEs as per PPP 2012 and its subsequent amendments, if any. We are aware that benefits to MSEs under PPP 2012 are available to manufacturer of goods and not to traders/dealers and accordingly, we hereby undertake that:

* *We are **manufacturer of all the quoted item(s)** and understand that the benefits as applicable to MSEs under PPP 2012 including Purchase Preference shall be applicable as per provisions of Bidding Document for all the quoted items of our bid.*

Or

* *We are **manufacturer of some the quoted item(s)** and understand that the benefits pertaining to EMD and Tender fee exemption shall be applicable for our bid as per provisions of Bidding Document. We also understand that Purchase Preference benefits as applicable to MSEs under PPP 2012 shall be applicable only for those quoted items of our bid for which we are a manufacturer and the remaining quoted items, for which we are not a manufacturer, shall not be eligible for the aforesaid Purchase Preference benefits as per provisions of Bidding documents.*

We also understand that in case documents submitted by us for availing benefits/exemptions applicable to MSEs under PPP 2012 are not found to be in order by NTPC Limited/ Employer at any stage of Bid Evaluation and EMD and/or cost of Bid Documents (wherever applicable) have also not been submitted by us then our bid shall not be considered further for evaluation and be rejected.

Thanking you,

(Authorized Signatory)

Name & address of the bidder _____

Date:

*** Strike out which is not applicable**

ANNEXURE 14 A

(To be submitted in case of bidder being a manufacturer of some the quoted item(s))

The list of items quoted for which we are the manufacturer are as under and supporting documents are enclosed:

LIST OF ITEMS:

SI No.	BOQ Item No. for which we are the manufacturer	Item Description

Thanking you,

(Authorised Signatory)

Name & address of the bidder

.....

Date:

Note: May kindly enclose supporting documents

VII. COMPLIANT BID:

No deviation, whatsoever, is permitted by EMPLOYER to any provision of Bidding Documents. The Bidders are advised that while making their Bids and quoting prices, all conditions are appropriately taken into consideration.

Bidders shall certify their compliance to the complete Bidding Documents as per Certificate at **Annexure D** of the Tender:

In case the Products and/or Services offered do not meet the Technical requirements, the bid shall be rejected as Technically non-responsive.

Bidders may note that in case the Bidder refuses to withdraw additional conditions/ deviations/ variations/ exception, implicit or explicit, found anywhere in the techno-commercial bid, the bid shall be rejected as Technically non-responsive.

Bidders may also note that any deviation/variation in any form in the Price Bid shall result in forfeiture of EMD.

**CERTIFICATE FOR COMPLIANCE
TO
ALL PROVISIONS OF BIDDING DOCUMENTS
(Certificate of "NIL" Deviation)
Towards COMPLIANT BID**

To,
.....
..... Power Station
NTPC Limited,
.....
.....

Dear Sir,

1. With reference to our Bid submitted against the tender, we hereby confirm that we comply with all terms, conditions and specifications of the Bidding Documents read in conjunction with Amendment(s) / Clarification(s) / Addenda/Errata (if any) issued by the Employer prior to opening of Techno-Commercial Bids and the same has been taken into consideration while making our Techno-Commercial Bid & Price Bid and we declare that we have not taken any deviation in this regard.

2. We understand that in case the Products and/or Services offered do not meet the Technical requirements, then our bid shall be rejected as Technically nonresponsive.

We also confirm that in case we refuse to withdraw additional conditions/deviations/exceptions/implicit or explicit, found anywhere in the techno-commercial bid, our bid shall be rejected as Technically non-responsive.

We further confirm that if any deviation/variation in any form is found in our Price Bid, the EMD shall be forfeited.

(Authorised Signatory)

Name & address of the bidder

.....

Date:

VIII. Documents to be submitted along with the bid:

1. Declaration of Local content (**Annexure A**)
2. DOCUMENTS IN SUPPORT OF MEETING THE QUALIFYING REQUIREMENTS along with **Annexure I and IA.**
3. Undertaking from Independent Statutory Auditor/ Undertaking from Third Party Inspection Agency (**Annexure II/ III**)
4. Undertaking to be given by the MSE Bidder (**Annexure 14/ 14A**) (**applicable for MSE Bidders only**)
5. CERTIFICATE FOR COMPLIANCE TO ALL PROVISIONS OF BIDDING DOCUMENTS (**Annexure D**)