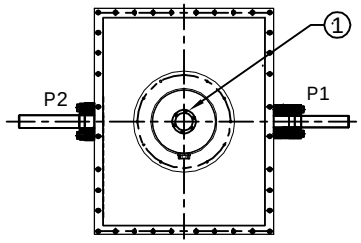
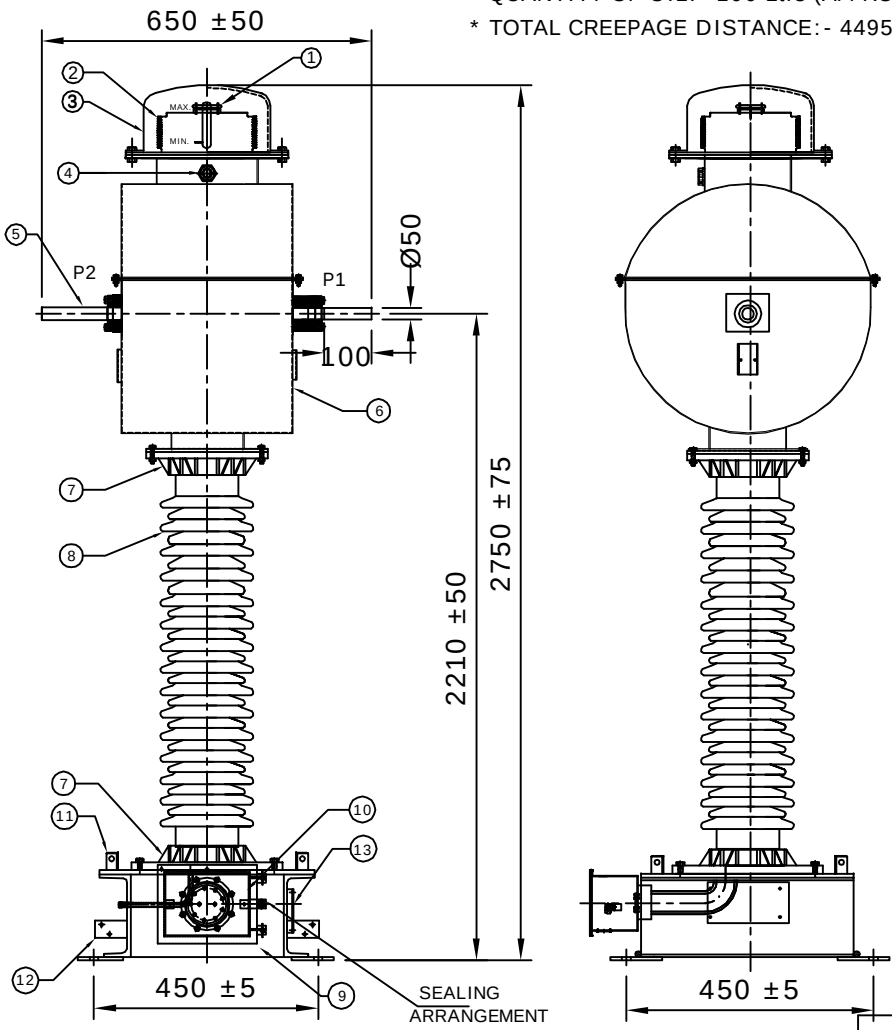


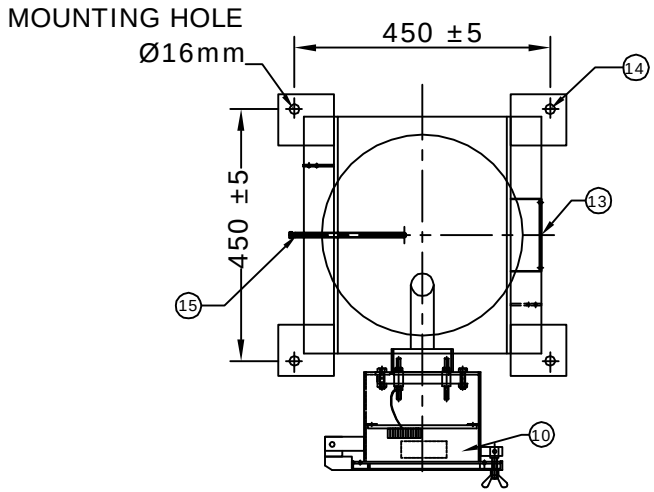
NOTES:-

1. MAKE OF BUSHING: IEC/MODERN/ABIL/BHEL/CJI
2. ALL FERROUS PART EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U PAINT SHADE 631 OF IS:5
3. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
4. PRIMARY WINDING SHALL BE BAR TYPE.
5. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
6. TRANSFORMER OIL AS PER IEC : 60296.
7. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.

* TOTAL WEIGHT OF CT:-390Kgs (APPROX.)
* QUANTITY OF OIL:- 100 Ltrs (APPROX.)
* TOTAL CREEPAGE DISTANCE:- 4495 mm. (MINIMUM)

S.No.	DESCRIPTION	MATERIAL	QTY
1	OIL FILLING PORT	M.S	1
2	BELLOW	S.S	1
3	BELLOW DOME	M.S/AL	1
4	OIL LEVEL INDICATOR	BRASS/AL.	1
5	PRIMARY TERMINAL Ø50x100mm	ALUMINUM	1
6	OIL TANK WITH COVER	M.S	1
7	BUSHING FLANGE (CEMENTED)	GI/CI	2
8	BUSHING	PORCELAIN	1
9	BASE	M.S	1
10	SECONDARY TERMINAL BOX	M.S	1
11	LIFTING HOOK	M.S	4
12	EARTHING FLAT 80x50x8THICK.	M.S	2
13	NAME AND RATING PLATE	ALUMINUM	1
14	MOUNTING HOLE,Ø16mm ±2	M.S	4
15	OIL DRAIN PLUG	M.S	1





MOUNTING DETAILS

PODIUM SURYACHANDRAM

Digitally signed by PODIUM SURYACHANDRAM
Date: 2021.06.15 15:56:56 +05'30'

Drawing approval subject to valid vendor registration

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED ±5%

	DATE	NAME
DGN.	06.01.2021	SPS
DRN.	06.01.2021	AKASH
CHD.	06.01.2021	BLS
SCALE:	N.T.S	

MATERIAL: AS ABOVE

MEHRU
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

TITLE :
GENERAL ARRANGEMENT DRAWING FOR 132kV CURRENT TRANSFORMER
RATIO:- 500-800/1-1-1A
BAR TYPE CT

SHEET No. 1 OF 7

DRG.NO ME-132CT-GA-01

MEHRU

LIVE TANK CURRENT TRANSFORMER

MADE TO IS: 16227

HIGHEST SYSTEM VOLTAGE	145 kV		INSULATION LEVEL	275/650 kV
RATED S.T.C	31.5kA for 1 second		RATED FREQUENCY	50Hz
NOMINAL SYSTEM VOLTAGE	132 kV	CORE 1	CORE 2	CORE 3
RATIO	PRIMARY(Amp)	500-800	500-800	500-800
	SECONDARY(Amp)	1	1	1
SECONDARY TERMINALS		1S1-1S2-1S3	2S1-2S2-2S3	3S1-3S2-3S3
RATED BURDEN IN V.A		20 VA	----	20 VA
ACCURACY CLASS		5P	PS	0.2S
ALF / ISF		20	----	≤5 @ All Ratio
Min Knee point voltage @800/1A		----	40 (Rct+10)V	----
Max Rct @ 75° C' @800/1A		----	4 Ω	----
Max Iext @ Vk @800/1A		----	30 mA	----
YEAR OF MANUFACTURE		2021	SERIAL NO.	

RATED CONTINUOUS THERMAL CURRENT: 120% OF THE RATED PRIMARY CURRENT

* QUANTITY OF OIL:- 100 Ltrs (APPROX.) * TOTAL WEIGHT OF CT:-390Kgs (APPROX.)

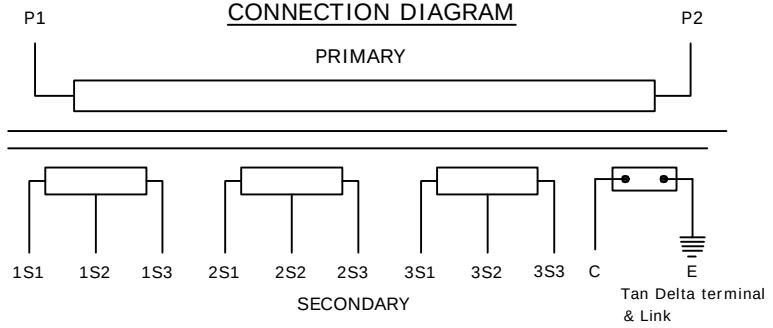
MADE IN INDIA BY * TOTAL CREEPAGE DISTANCE:- 4495 mm. (MINIMUM)

MEHRU ELECTRICAL AND MECHANICAL ENGINEERS (P) LTD.

SP2/180,RIICO INDUSTRIAL AREA,KEHRANI, BHIWADI - RAJASTHAN - 301019

SUITABLE FOR HOT LINE WASHING

CONNECTION DIAGRAM



FOR RATIO	PRIMARY CONNECTION	SECONDARY CONNECTION		
		CORE I	CORE II	CORE III
500/1A	P1 - P2	1S1-1S2	2S1-2S2	3S1-3S2
800/1A	P1 - P2	1S1-1S3	2S1-2S3	3S1-3S3

CAUTION

I. Secondary terminals should be short circuited before The burden is disconnected.

II. Tan delta terminal 'C' must be shorted to be earth when operation

III. Do not remove earth link when in operation

105±15

225±25

NOTES:-

1. THICKNESS OF RATING PLATE 1.2 mm
2. MATERIAL OF NAME PLATE SHALL BE AL. ANODIZED.
3. SERIAL NUMBER SHALL BE ENGRAVING BEFORE THE DISPATCH.

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* PRIMARY WINDING AREA : 1964 sq.mm
* CURRENT DENSITY : 0.49 A/sq.mm

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Date: 2021.06.15 15:57:26 +05'30'

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED ±5%

	DATE	NAME
DGN.	06.01.2021	SPS
DRN.	06.01.2021	AKASH
CHD.	06.01.2021	BLS
SCALE:	N.T.S	

MATERIAL: AL. ANODIZED

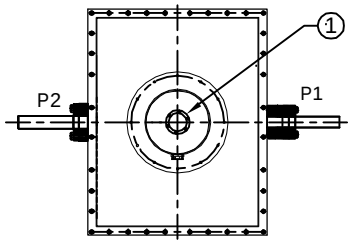
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

TITLE :

NAME PLATE DRAWING FOR
132kV CURRENT TRANSFORMER
RATIO:- 500-800/1-1-1A
BAR TYPE CT

SHEET No. 3 OF 7

DRG.NO ME-132CT-NP-01

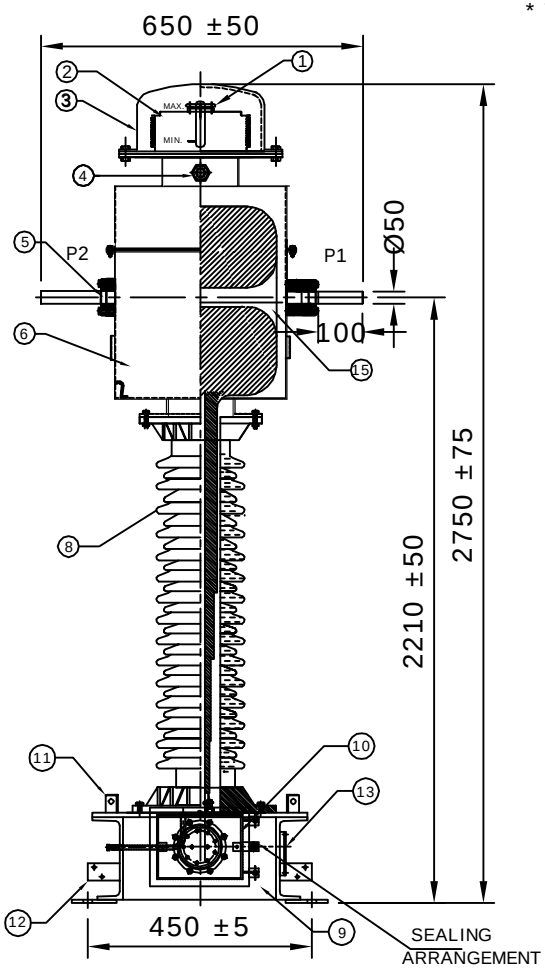


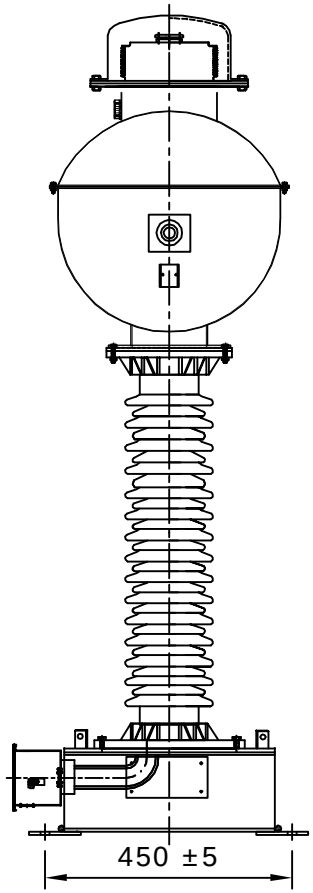
NOTES:-

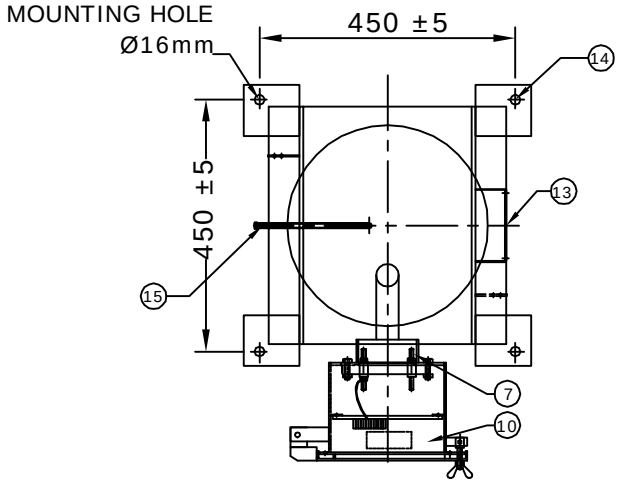
1. MAKE OF BUSHING: IEC/MODERN/ABIL/BHEL/CJI
2. ALL FERROUS PART EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U PAINT SHADE 631 OF IS:5
3. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
4. PRIMARY WINDING SHALL BE BAR TYPE.
5. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
6. TRANSFORMER OIL AS PER IEC : 60296.
7. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.

* TOTAL WEIGHT OF CT:-390Kgs (APPROX.)
* QUANTITY OF OIL:- 100 Ltrs (APPROX.)
* TOTAL CREEPAGE DISTANCE:- 4495 mm. (MINIMUM)

S.No.	DESCRIPTION	MATERIAL	QTY
1	OIL FILLING PORT	M.S	1
2	BELLOW	S.S	1
3	BELLOW DOME	M.S/AL.	1
4	OIL LEVEL INDICATOR	BRASS/AL.	1
5	PRIMARY TERMINAL Ø50x100mm	ALUMINUM	1
6	OIL TANK WITH COVER	M.S	1
7	SECONDARY TERMINAL	BRASS	---
8	BUSHING	PORCELAIN	1
9	BASE	M.S	1
10	SECONDARY TERMINAL BOX	M.S	1
11	LIFTING HOOK	M.S	4
12	EARTHING FLAT 80x50x8THICK.	M.S	2
13	NAME AND RATING PLATE	ALUMINUM	1
14	MOUNTING HOLE, Ø16mm±2	M.S	4
15	OIL DRAIN PLUG	M.S	1







MOUNTING DETAILS

PODIUM SURYACHANDRAM

Digitally signed by PODIUM SURYACHANDRAM
Date: 2021.06.15 15:57:46 +05'30'

Drawing approval subject to valid vendor registration

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED ±5%

	DATE	NAME
DGN.	06.01.2021	SPS
DRN.	06.01.2021	AKASH
CHD.	06.01.2021	BLS
SCALE:	N.T.S	

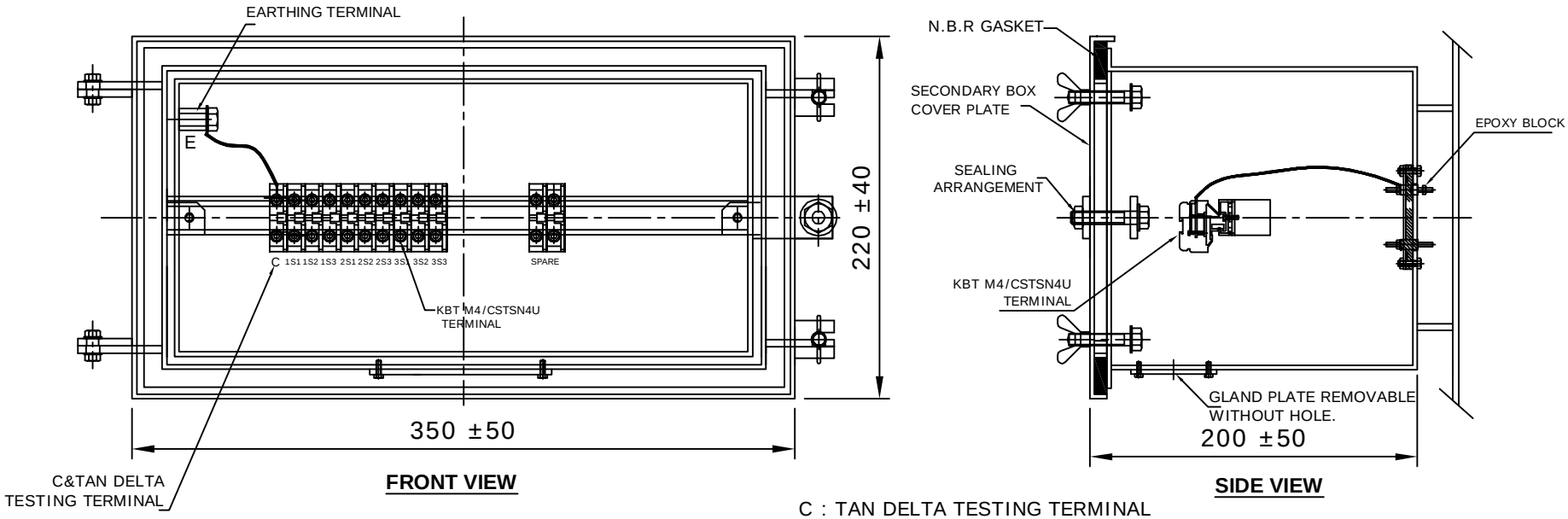
MATERIAL: AS ABOVE

MEHRU
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

TITLE :
SECTIONAL ARRANGEMENT DRAWING FOR 132kV CURRENT TRANSFORMER
RATIO:- 500-800/1-1-1A
BAR TYPE CT

SHEET No. 2 OF 7

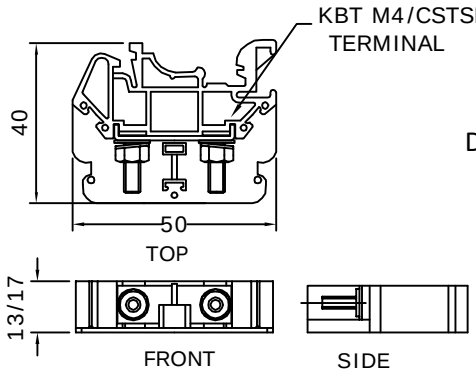
DRG.NO ME-132CT-SE-01



C : TAN DELTA TESTING TERMINAL
E : EARTHING TERMINAL

NOTES:-

1. SECONDARY TERMINAL BOX SHALL BE PROVIDE GLAND PLATE REMOVABLE WITHOUT HOLE.
2. SECONDARY TERMINAL BOX SHALL BE PROVIDED WITH COVER.
3. M.S SHEET THICKNESS FOR TERMINAL BOX 3.0mm & FOR COVER 2.0mm.
4. MATERIAL OF GASKET : NITRILE BUTYL RUBBER GASKET.
5. DEGREE OF PROTECTION : IP 55
6. 20% SPARE TERMINAL SHALL BE PROVIDED.



MATERIAL: POLYAMIDE
MAKE: ELMEX/CONNECTWELL

TERMINAL (DETAIL)

PODIUM SURYACH ANDRAM
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Date: 2021.06.15 15:58:08 +05'30'

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REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED ±5%

	DATE	NAME
DGN.	06.01.2021	SPS
DRN.	06.01.2021	AKASH
CHD.	06.01.2021	BLS
SCALE:	N.T.S	

MATERIAL: M.S

MEHRU
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

TITLE :
SECONDARY TERMINAL BOX DRAWING
FOR 132kV CURRENT TRANSFORMER
RATIO:- 500-800/1-1-1A
BAR TYPE CT

SHEET No. 4 OF 7

DRG.NO ME-132CT-STB-01

4620260/2021/EEMRT-ENE51

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Guaranteed Technical Particulars for 132kV Current Transformer			
Sl. No.	Item Description	Unit	GTP as per Bid
E	**CURRENT TRANSFORMER**		
1	Make		Mehru Electrical & Mechanical Engineers (P) Ltd, Bhiwadi, (Raj), Inida
2	Type and Designation		Outdoor, Oil Cooled Live Tank Type, Current Transformer
3	Applicable standards		IS 16227
4	Class		A
5	Rated Voltage	132 kV	132 kV
6	Rated Primary current	Amps	500-800A
7	Rated Secondary current	Amps	1
8	Rated output (Burden)	VA	Core:-1; 20VA, Core 2: NA, Core;3: 20VA,
9	Rated output at 0.8 lag. p.f.	VA	N/A
10	Class of accuracy		Core:1 - 5P, Core: 2 - PS, Core:-3: 0.2S
11	Accuracy limit factor		Core1: 20
12	Knee point voltage for highest tap	Volts	Core:2: 40(Rct+10)V
13	CT Resistance of secondary winding corrected to 75 deg.C for highest tap	Ohms	Core-2-4
14	Magnetising current at knee-voltage point @highest tap		Core-2-30mA
15	secondary limiting voltage	kV	As per IS 16227
16	Instrument security factor for winding meant for metering		Core-3-≤ 5 at all taps
17	One minute Power Frequency withstand test voltage of		
a)	Primary winding	kV (rms)	275
b)	Secondary winding	kV (rms)	3
18	1.2/50Hz Impulse wave withstand voltage of primary winding	kV (peak)	650
19	One minute dry P.F. withstand voltage of primary winding	kV (rms)	275
20	Creepage distance	mm	31mm/kV i.e. 4495mm (Min.)
21	Rated continuous thermal current	Amps	120% of rated primary current
22	Ratios available at highest taps		Yes
23	Rated short time thermal current	kA (rms)	31.5 kA
24	Rated time for above	Sec.	1
25	Rated dynamic current for primary	kA (Peak)	78.75

PODIUM SURYACHANDRAM

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Date: 2021.06.15 15:58:34 +05'30'

4620260/2021/EEMRT-ENE51

26	Class of insulation		A
27	Max. Temperature rise over ambient of 50 deg.C at any part of oil	deg.C	50c max
28			
a)	Radio interference voltage		As per IS 16227 Clause 6.11.2 <2500uV
b)	Partial discharge level		<10 pC at Um & <5 pc at 1.2Um/√3
29	Temp. rise after passsing short time thermal current for one second	deg.C	50c max
30	Current density in primary winding at		
a)	Normal rating		0.49 Amp/sqmm (max)
b)	Short time rating of 1 Sec.		16.04 Amp/sqmm(max.)
c)	Dynamic rating		40.5 Amp/sqmm (max.)
31	Type of primary winding		Aluminium
32	No. of primary turns		1
33	No. of secondary turns		500+300
34	Flux density at knee point		1.4 Tesla
35	Radio interference voltage	(micro volts)	
a)	with terminal connector mountd		<2500uV
b)	under test condition		<2500uV
36	Variation in ratio and phase angle error due to variation in		
a)	Voltage by 1%		N/A
b)	Frequency by 1 Hz.		N/A
37	Mounting details		450±5 x 450±5 mm
38	Source/grade of oil and standard with which it complies		EHV Grade Transformer Oil as per IS 335/IEC 60296 of any reputed make
39	Quantity of insulating oil	Litres	100 Ltr Approx

PODIUM SURYACHANDRAM

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Date: 2021.06.15 15:58:58 +05'30'

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4620260/2021/EEMRT-ENE51

40	Weight of Oil	kg	80 kgs Appprox
41	Total Weight including Oil	kg	390kG Approx
42	Overall dimensions (mm)		2750±75 x 650±50 x 450±5 mm
43	Wheather sealed (if so, type of sealing)		Yes, By SS BELLOW
44	Tan delta		<0.005
45 a)	Weight of Steel		104 kgs (Approx.)
b)	Wight of Aluminum		4.1 kgs (Approx.)
c)	Weight of copper		3.2 kgs (Approx.)

PODIUM SURYACHANDRAM

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Date: 2021.06.15 15:59:22 +05'30'

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