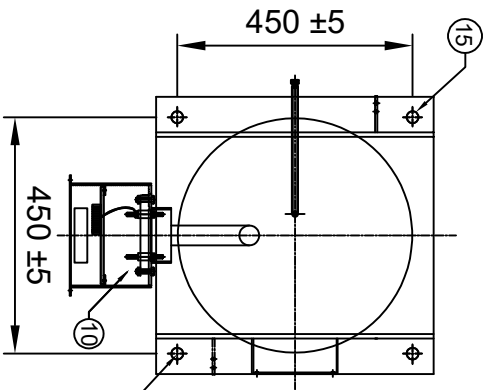
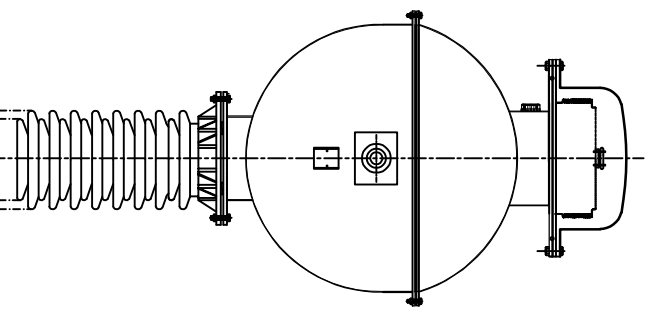


- NOTES :**
1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U PAINT SHADE 631 OF IS: 5.
 2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABL/CJJI
 3. TOTAL CREEPAGE DISTANCE :- 7595 mm (MIN)
 4. QUANTITY OF OIL :- 225 LITRES APPROX.
 5. TOTAL WEIGHT OF CT : 940 KGS APPROX.
 6. PRIMARY WINDING SHALL BE BAR TYPE.
 7. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
 8. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
 9. TRANSFORMER OIL AS PER IEC : 60296.
 10. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.



MOUNTING DETAILS

Chief Engineer
Power Systems, Planning & Design
AP Transco

S.No.	DESCRIPTION	QTY	MATL
1	OIL FILLING PORT	1	MS
2	BELLOW	1	S.S
3	BELLOW DOME 1.5 mm THICK.	1	M.S/ALUMIUM
4	OIL LEVEL INDICATOR	1	AL./BRASS
5	PRIMARY TERMINAL Ø40x80mm	1	ALUMINIUM
6	OIL TANK WITH COVER	1	MS
7	BUSHING	1	PORCELAIN
8	BUSHING FLANGE (CEMENTED)	2	GI/CI
9	BASE	1	MS
10	SECONDARY TERMINAL BOX	1	MS
11	LIFTING HOOK	4	MS
12	EARTHING FLAT 80X50X8THICK	2	MS
13	NAME AND RATING PLATE	1	AL. ANODIZED
14	OIL DRAIN PLUG	1	MS
15	MOUNTING HOLES Ø20	4	MS
16	BUSHING GASKET	2	N.BR

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%

DGN.	DATE	NAME	MATERIAL
06.01.2021	06.01.2021	SPS	AS ABOVE
DRN.	06.01.2021	AKASH	
CHD.	06.01.2021	B.S	

SCALE: N.T.S

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

SHEET No. 1 OF 7

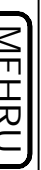
TITLE :
GENERAL ARRANGEMENT DRAWING
FOR 220KV CURRENT TRANSFORMER
RATIO : 300-500/1A,5C
BAR TYPE CT

MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

DRG.NO ME-220CT-GA-04

Drawing approval subject to valid vendor registration

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS.



LIVE TANK CURRENT TRANSFORMER

MADE TO IS: 16227

HIGHEST SYSTEM VOLTAGE	245 KV	INSULATION LEVEL	440/1050 KV
RATED S.T.C	40 KA for 1 Sec	RATED FREQUENCY	50Hz
NOMINAL SYSTEM VOLTAGE	220 KV	CORE 1	CORE 3
RATIO	PRIMARY(Amp) SECONDARY (Amp)	300-500	300-500
SECONDARY TERMINALS	1S1-1S2-1S3	2S1-2S2-2S3	3S1-3S2-3S3
RATED BURDEN	20 VA	PS	PS
ACCURACY CLASS	SP	5VA/0.5 @500A TAP	PS
ALF / ISF	20	40(0ct+10)@ 500/1A	80(0ct+5)@ 500/1A
Min Knee point voltage	----	8 Ohms @500/1A	8 Ohms @500/1A
Max Ret at 75 DEG C	----	50 mA @ 500/1A	50 mA @ 500/1A
Max Ixct at VK	----	2021	SERIAL NO.

* Rated cont. thermal current=120% of the rated primary current . * Total weight of CT : 940 KGS APPROX
 * Total creepage distance : - 7595 mm (MIN) , * Quantity of oil : -225 LITRES APPROX
 MADE IN INDIA BY

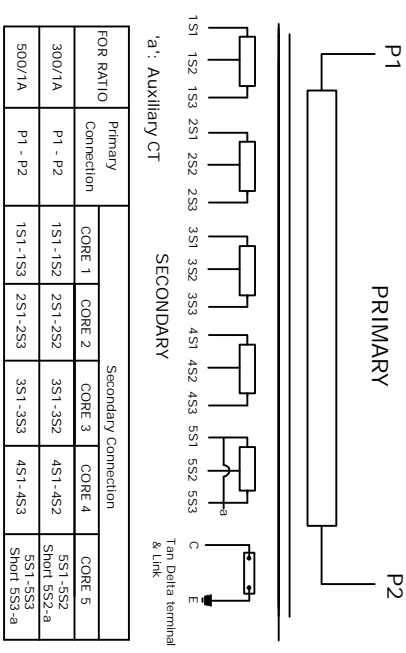
MEHRU ELECTRICAL AND MECHANICAL ENGINEERS (P) LTD.

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

Drawing approval subject to valid vendor registration

250 ± 20

SUITABLE FOR HOT LINE WASHING CONNECTION DIAGRAM



- CAUTION**
- Secondary terminals should be short circuited before the burden is disconnected.
 - Tan delta terminal 'C' must be shorted to be earth when operation
 - Do not remove earth link when in operation

NOTES:-

- MATERIAL OF NAME PLATE : ANODIZED ALUMINIUM
 - THICKNESS OF NAME PLATE : 1.2 mm.
 - SERIAL NO. SHALL BE ENGRAVE BEFORE DISPATCH.
- * PRIMARY WINDING AREA : 1257 sq.mm
 * CURRENT DENSITY : 0.48 A/sq.mm

Drawing approval subject to valid vendor registration

RO	FOR APPROVAL	06.01.2021
REV	REVISION DESCRIPTION	DATED INITIALS

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

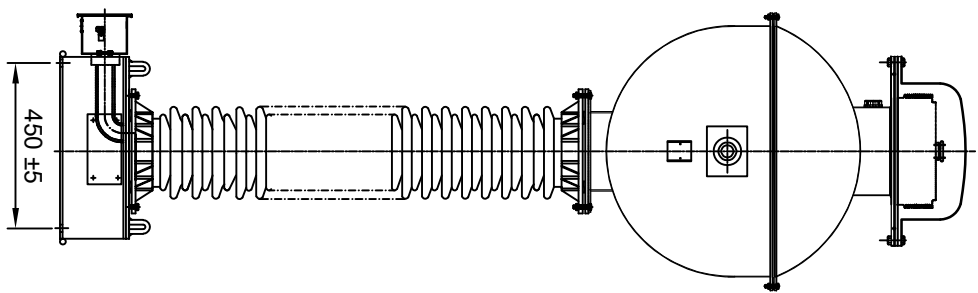
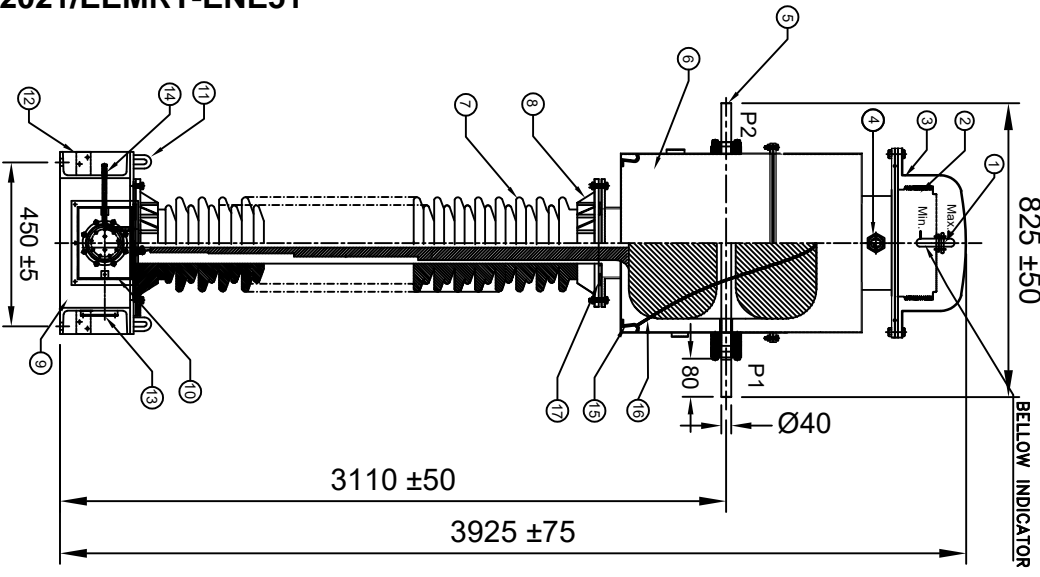
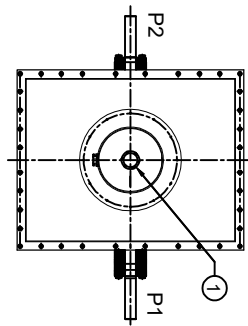
1. ALL DIMENSIONS ARE IN mm.
 2. TOLERANCE WHEREVER NOT INDICATED ±5%

Chief Engineer
Power Systems, Planning & Design
APTransco

DGN	06.01.2021	SPS	AL. ANODIZED
DRN	06.01.2021	AKASH	
CHD	06.01.2021	BLS	

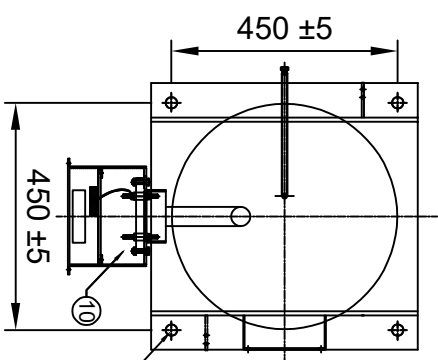
TITLE : NAME PLATE DRAWING FOR 220KV CURRENT TRANSFORMER RATIO : 300-500/1A,5C BAR TYPE CT

DRG.NO ME-220CT-NP-04



- NOTES :**
1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U PAINT SHADE 631 OF IS: 5.
 2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABIL/CIJ
 3. TOTAL CREEPAGE DISTANCE : - 7595 mm (MIN)
 4. QUANTITY OF OIL :-225 LITRES APPROX.
 5. TOTAL WEIGHT OF CT : 940 KGS APPROX.
 6. PRIMARY WINDING SHALL BE BAR TYPE.
 7. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
 8. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
 9. TRANSFORMER OIL AS PER IEC : 60296.
 10. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.
 11. CORE/SECONDARY WINDINGS SHALL BE ENCASED IN ALUMINUM SHELL.

S.No.	DESCRIPTION	QTY	MATL
1	OIL FILLING PORT	1	M.S
2	S.S BELLOW	1	S.S
3	BELLOW DOME	1	M.S/ALUMINIUM
4	OIL LEVEL INDICATOR	1	AL/BRASS
5	PRIMARY TERMINAL Ø40x80mm	1	ALUMINIUM
6	OIL TANK WITH COVER	1	M.S
7	BUSHING	1	PORCELAIN
8	BUSHING FLANGE (CEMENTED)	2	GICI
9	BASE	1	M.S
10	SECONDARY TERMINAL BOX	1	M.S
11	LIFTING HOOK	4	M.S
12	EARTHING FLAT (80x50x8x Thick.)	2	M.S
13	NAME AND RATING PLATE	1	ALUMINIUM ANODIZED
14	OIL DRAIN PLUG	1	M.S
15	HOOK FOR COIL TIGHTENING	4	M.S
16	COIL TIENG STRING	--	NYLON
17	BUSHING GASKET	2	N.B.R



MOUNTING DETAILS

Chief Engineer
Power Systems, Planning & Design
APTranSCO

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%

DGN.	DATE	NAME	MATERIAL
06.01.2021	06.01.2021	SPS	AS ABOVE
DRN.	06.01.2021	AKASH	
CHD.	06.01.2021	BLS	

MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

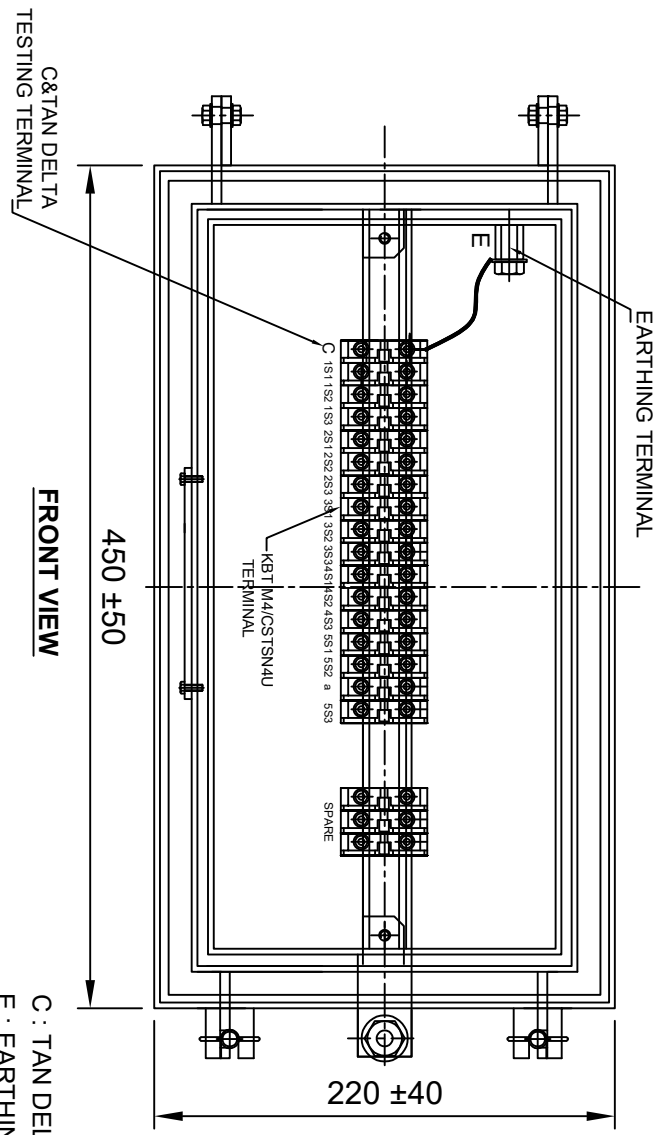
REV.	REVISION DESCRIPTION	DATED	INITIALS
R0	FOR APPROVAL	06.01.2021	

SHEET No. 2 OF 7

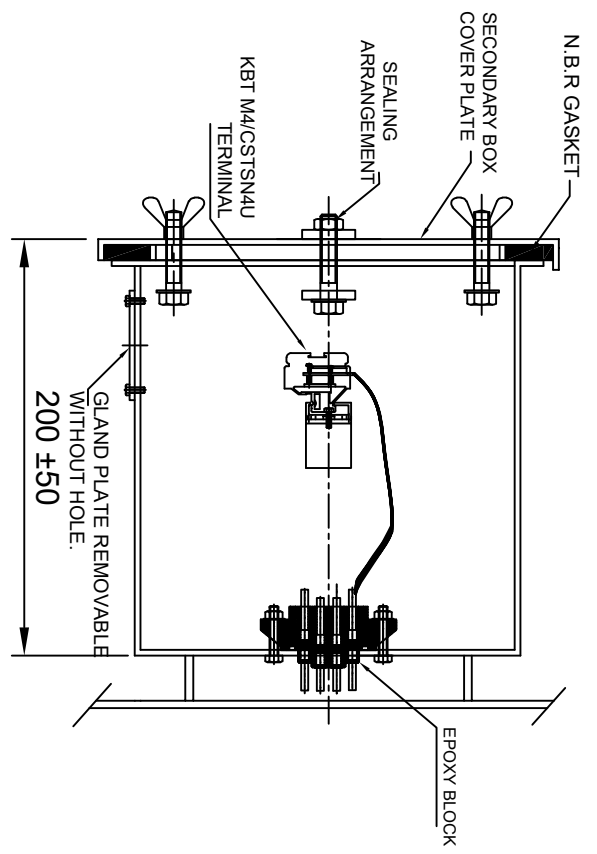
SECTIONAL ARRANGEMENT DRAWING FOR 220kV CURRENT TRANSFORMER RATIO : 300-500/1A,5C BAR TYPE CT

DRG.NO ME-220CT-SE-04

Drawing approval subject to valid vendor registration

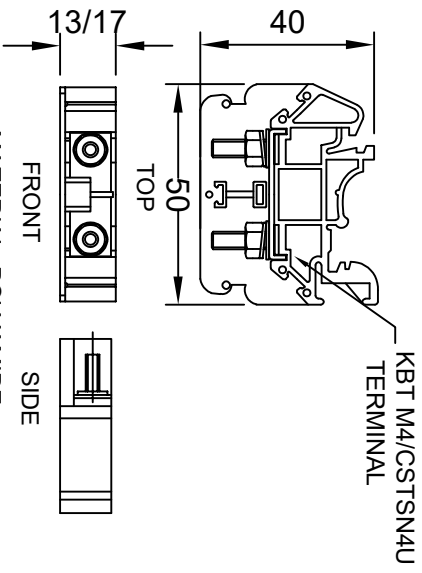


FRONT VIEW



SIDE VIEW

C : TAN DELTA TESTING TERMINAL
 E : EARTHING TERMINAL
 'a' : AUXILIARY CT



MATERIAL: POLYAMIDE
 MAKE: ELMEX/CONNECTWELL
TERMINAL (DETAIL)

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.

Chief Engineer

Power Systems, Planning & Design
 APTransco

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REV.	REVISION DESCRIPTION	DATED INITIALS
RO	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED	SHEET No.	4 OF 7
PROJECT NAME : AS APPLICABLE	UNLESS OTHERWISE SPECIFIED	
1. ALL DIMENSIONS ARE IN mm.		
2. TOLERANCE WHEREVER NOT INDICATED ±9%		

DATE	NAME	MATERIAL
06.01.2021	SPS	M.S
06.01.2021	AKASH	
06.01.2021	BLS	

TITLE : SECONDARY TERMINAL BOX DRAWING FOR 220KV CURRENT TRANSFORMER RATIO : 300-500/1A,5C BAR TYPE CT

MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

DRG NO ME-220CT-STB-04

Guaranteed Technical Particulars for 220kV 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	220 kV	220 kV
6	Rated Primary current	Amps	300-500A
7	Rated Secondary current	Amps	1
8	Rated output (Burden)	VA	Core:1 & 5 : - 20VA
9	Class of accuracy		Core: 3 & 4 - PS, Core:-1: 5P, Core:-5:0.2S,Core-2 : PS 5VA/0.5@500A tap
10	Accuracy limit factor		Core:-1:20
11	Knee point voltage	Volts	For Core-2: 40(Rct+10)@500/1A Core:-3 & 4: 80(Rct+5)@500/1A
12	CT Resistance of secondary winding corrected to 75 deg.C	Ohms	Core- 2,3 & 4:- 8 Ohms @500/1A
13	Magnetising current at knee-voltage point		Core- 2,3 & 4:- 50 mA@500/1A
14	secondary limiting voltage	kV	As per IS 16227
15	Instrument security factor for winding meant for metering		<5 at all ratio for Core-5
16	One minute Power Frequency withstand test voltage of		
a)	Primary winding	kV (rms)	460
b)	Secondary winding	kV (rms)	3
17	Impulse withstand voltage of primary winding	kV (peak)	1050
18	One minute dry P.F. withstand voltage of primary winding	kV (rms)	460
19	Creepage distance	mm	31mm/kV i.e. 7595mm (Min.)
20	Rated continuous thermal current	Amps	120% of rated primary current
21	Ratios available at highest taps		Yes
22	Rated short time thermal current	kA (rms)	40 kA
23	Rated time for above	Sec.	1

Drawing approval subject to valid vendor registration

4609510/2021/EEMRT-ENE51

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS.

24	Rated dynamic current for primary	kA (Peak)	100
25	Class of insulation		A
26	Max. Temperature rise over ambient of 50 deg.C at any part of oil	deg.C	50c max
27			
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/ $\sqrt{3}$
28	Temp. rise after passing short time thermal current for one second	deg.C	50c max
29	Current density in primary winding at		
a)	Normal rating		0.48 Amp/sqmm
b)	Short time rating of 1 Sec.		31.84 Amp/sqmm
c)	Dynamic rating		79.6 Amp/sqmm
30	Type of primary winding		Aluminum
31	No. of primary turns		1
32	No. of secondary turns		300+200
33	Flux density at knee point		1.4 Tesla
34	Mounting details		450±5 x 450±5 mm
35	Source/grade of oil and standard with which it complies		EHV Grade Transformer Oil as per IS 335/IEC 60296 of any reputed make
36	Quantity of insulating oil	Litres	225 Ltr Approx
37	Weight of Oil	kg	180 Kgs Approx
38	Total Weight including Oil	kg	940kG Approx
39	Overall dimensions (mm)		3925±75 x 825±50 x 450±5 mm
40	Wheather sealed (if so, type of sealing)		Yes, By SS BELLOW
41	Tan delta		<0.005
42 a)	Weight of Steel		160 kgs (Approx.)
b)	Wight of Aluminum		22 kgs (Approx.)
c)	Weight of copper		20 kgs (Approx.)

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/IVT/CVT requirement and compatibility.

FOR EPC CONTRACTS ONLY

Chief Engineer
Power Systems, Planning & Design
APTransco