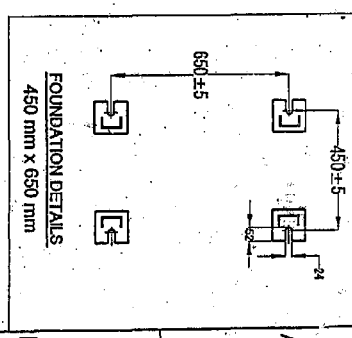


RATIOS : 1) 200/1A, 1C  
2) 400/1A, 1C  
3) 600/1A, 1C

Standardised Drawing for 220 KV Current Transformers  
(M/s Vijai Electricals Limited)  
STD/GTP-DWG/Approval No. 2742-01 sheet Revision No.0  
Prepared & Approved during December - 2013  
Customer ref : APTRANSCO  
Title: GA Drawing of 245 CT (ratio: 1) 200/1A, 1C; 2) 400/1A, 1C;  
3) 600/1A, 1C

APPROVED FOR TURKEY PROJECTS  
Chief Engineer/Construction  
APTRANSCO, Vijai Boudha, Hyd.



ITEM	QTY	ITEM	DESCRIPTION	DRAWING No.	ITEM	QTY	ITEM	DESCRIPTION	DRAWING No.
01	-	016	CABLE GROUND PLATE	-	MS	-	017	ALUMINUM	-
01	-	015	RATING PLATE	-	AL ANODISED	-	018	BRASS	-
01	-	014	OIL DRAIN PLUG	-	MS	-	019	STEEL	-
02	-	013	EARTHING BOLT	-	MS (100)	-	020	STEEL	-
01	-	012	FOUNDATION CHANNEL ASSY	-	MS	-	021	STEEL	-
01	-	011	TERMINAL BOX	-	MS	-	022	STEEL	-
04	-	010	LIFTING LUGS	-	MS	-	023	STEEL	-
01	-	009	BOTTOM TANK	-	MS	-	024	STEEL	-
01	-	008	INSULATOR	-	PORCELAIN	-	025	STEEL	-
01	-	007	TOP TANK	-	MS	-	026	STEEL	-
02	-	006	PRIMARY TERMINAL (1000000V)	-	TINNED COPPER	-	027	STEEL	-
01	-	005	OIL LEVEL GAUGE	-	FRSALC	-	028	STEEL	-
04	-	004	SLING GUIDE	-	MS	-	029	STEEL	-
01	-	003	RAIN SHIELD	-	ALUMINUM	-	030	STEEL	-
01	-	002	NITROGEN FILLING VALVE	-	BRASS	-	031	STEEL	-
01	-	001	PRESSURE RELEASE DEVICE	-	BRASS	-	032	STEEL	-

NOTE:-  
\* 01. MIN. CREEPAGE DISTANCE : 6125mm (For heavily polluted) /  
7595mm (For very heavily polluted).  
02. ALL FERROUS PARTS EXPOSED TO ATMOSPHERE  
ARE ZINC RICH EPOXY PAINTED.

\* Exact Creepage Distance will be provided as per customer requirement mentioned in the relevant Technical specification

DISTRIBUTION OF PARTS		TYPE OF PRODUCT		BILL OF MATERIAL	
REV	DATE	ALtered	DATE	NAME OF CUSTOMER/PROJECT	OR
		CHECKED		TRANSMISSION CORPORATION OF ANDHRA PRADESH	
Vijai Electricals Ltd.		Switchgear Products Division		Hyderabad.	
SCALE: NTS		GRADE OF TOL. DIM		C/D/F P/100 01/100	
TITLE: GA DRAWING OF 245KV CT.		DRAWING No. 3-316-00-386		SHEET No. 01	
DATE		DATE		DATE	
REV		REV		REV	

C. REF :  
ALL DIMENSIONS ARE IN mm & WEIGHTS ARE IN kg UNLESS OTHERWISE SPECIFIED. DIV: SWITCH GEAR UNIT.

# CURRENT TRANSFORMER

STANDARD	IS:2705:1992.		HIGHEST SYSTEM VOLTAGE	245KV	
FREQUENCY	50 Hz		RATED SYSTEM VOLTAGE	220KV	
RATED S.T.C	40 VA rms / 1 Sec.		TYPE DESIGNATION	DT245	
kg	100 kg		INSULATION LEVEL	480/1050 kV/MPP	
QTY. OF OIL	PROTECT (55KVA/APPX)	WT. OF CT	800 KG/15% (APPX)	RATED THERMAL CURRENT	240 A
CORE					
RATIO	PRIMARY (A)		200		
	SECONDARY (A)		1		
RATED BURDEN (VA)	5		0.2S		
ACCURACY CLASS					
U.S.F / A.L.F			< 10 / -		
KNEE POINT VOLTAGE (V)			-		
RESISTANCE AT 75°C. (Ohm)			-		
MAG. CURRENT at V <sub>k</sub> (mA)			-		



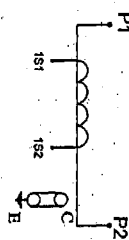
Vijai Electricals Ltd., Hyderabad, INDIA.

CUSTOMER:  
P.O. No.:

YEAR OF MANUFACTURING

SL. No.

RATIO	PRIMARY CONNECTION	SECONDARY CONNECTION
200 / 1	P1-P2	CORE - I 1S1-1S2



CAUTION  
1. SECONDARY TERMINALS MUST BE SHORTED AND EARTHED WHEN NOT IN USE / BEFORE DISCONNECTING THE BURDEN  
2. TAN DELTA TERMINAL 'C' MUST BE GROUND WHILE CT IS IN OPERATION

4 Nos OF Ø2 HOLES

## NOTE :-

1. MATERIAL: ALUMINIUM ANODISED.
2. DETAILS: BY ETCHING PROCESS, WHITE LETTERS - BLACK BACKGROUND.
3. THICKNESS: 0.5 mm (MIN.)
4. WHITE BACKGROUND SHALL BE PROVIDED FOR YEAR OF MANUFACTURING & SL NO BLANK SPACES.

196  
205

APPROVED FOR TENDER PROJECTS

Chief Engineer/Construction-I  
APTRANSCO, Vijaya Soudha, Hyd.

RATIO : 200 / 1A, 1C

	Standardised Drawing for 220 kV Current Transformers (M/s Vijai Electrical Limited)
STD/CTP-DWG/Approval No. 274-3 01 sheet Revision No.0	
Prepared & Approved during December - 2013	
Customer ref : APTRANSCO	
Title: Rating & connecting Diagram for 245kV CT (ratio: 200/1A,1C)	

VAR. NO.	FINISH	ITEM No.	DESCRIPTION	DRAWING No.	VYAS MATERIAL CODE
CTV					ITEM No. MATERIAL SPECN
TYPE OF PRODUCT					
OR					
NAME OF CUSTOMER/PROJECT					
Transmission Corporation of Andhra Pradesh Ltd., Hyderabad.					



Vijai Electricals Ltd.  
Switchgear Products Division  
Hyderabad.

SCALE: NTS

DATE	NAME	SIGNATURE	DATE
01/11/2013	MANISH	[Signature]	01/11/2013
02/11/2013	MANISH	[Signature]	02/11/2013
03/11/2013	MANISH	[Signature]	03/11/2013

GRADE OF TOL. DIM		SCALE		TITLE	
CMF - 3000 mm		NTS		RATING & CONNECTING DIAGRAM FOR 245kV CT	
DRAWING No.		REF TO ASSY DRG.		SHEET No. 02	
3-316-00-386				INCH SHEETS 04	

Customer : APTRANSCO, Hyderabad


**GUARANTEED TECHNICAL PARTICULARS FOR CURRENT TRANSFORMERS  
(220kV CTs of ratio 200/1A, 1C) - USED FOR EXCLUSIVE METERING.**

1	Type of tank/Installation	Dead Tank / Out door
2	Type of mounting	Pole / Structure Mounting
3	Manufacturer's Name and address and Country of Manufacture	M/s Vijai Electricals Ltd., Rudraram, Patancheru, Medak Dt.
4	Conforming to standard	IS - 2705-1992.
5	a i) Primary and Secondary winding made out of (As per clause 4.12,4.13,4.14)	EC Grade Copper
	ii) Primary windings - Design density for short circuit current - Conductivity of metal used.	180 A/ sq.mm - 97 %
	b i) Area of cross section of primary winding	240 sq.mm
	ii) Area of cross section of secondary winding	19 SWG (0.82 sq.mm)
	c Material used for providing secondary terminals	TIN PLATED BRASS
6	Rated primary voltage (kV rms)	220
7	Rated highest voltage (kV rms)	245
8	Rated frequency (Hz)	50
9	Rated primary current (A)	200
10	Rated secondary current (A)	1
11	Ratio taps (on secondary side only)	On Secondary Side
12	Type of insulation	Oil impregnated Paper
13	Seismic acceleration (g)	0.5
14	RIV at 1.1 x Rated voltage (µV)	< 500
15	Tank material and Tank coating (As per clause 3.1.3 & 3.1.4)	MS of min. 3mm thickness / Zinc rich epoxy Painted
16	Hardware exposed to atmosphere (As per clause 3.1.4)	Hot Dip Galvanized
17	Bolts, Nuts and Washers (As per clause 3.1.4)	Stainless Steel
18	Porcelain housing and it make (Single piece only as per clause 3.1.2)	MODERN / ABI / WSI / CJI / IEC
19	Sealing (Nitrogen gas cushion/Metal bellow as per clause 3.1.7)	Nitrogen Gas cushion
20	Instrument security factor (As per clause 4.10)	< 10
21	Whether test tap provided (As per clause 3.1.14A)	Yes
22	Acceptable limit of temperature	As per IS: 2705 / IEC:60044-1
23	Acceptable partial discharge level at 1.1 times the rated voltage	< 10 pC
24	Rated short time withstand current for 1 sec. duration (kA rms)	40
25	Rated dynamic withstand current (kAp)	100
26	Rated continuous thermal current (pu) where pu = rated current	1.2
27	Impulse withstand voltage (kVp)	1050
28	One minute power frequency withstand voltage (kV rms) of primary winding (Dry)	460


*Signature*  
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Page 01 of 02

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Customer : APTRANSCO, Hyderabad		
GUARANTEED TECHNICAL PARTICULARS FOR CURRENT TRANSFORMERS (220kV CTs of ratio 200/1A, 1C) - USED FOR EXCLUSIVE METERING.		
29	One minute power frequency withstand voltage of secondary winding (kV rms)	3
30	a Minimum total creepage distance of insulator bushing (mm)	* Min 6125mm (For Heavily Polluted) / 7595 mm (For Very Heavily Polluted).
	b Protected creepage of distance of bushing (mm)	NA
31	Details of Cores Core No.	CORE - I
	31.1 Current Ratios A/A	200 / 1
	31.2 Output burden (VA)	5
	31.3 Class of accuracy	0.2S
	31.4 Accuracy limit factor	-
	31.5 Min. knee point voltage (kpv)	-
	31.6 Secondary resistance corrected to 75 deg.C	-
	31.7 Max. exciting current at	-
	20% of knee point voltage	-
	50% of knee point voltage	-
	100% of knee point voltage	-
	31.8 Application	Metering
32	Weight of oil (Kg.)	243 ±15% (Approx.)
33	Total Weight (Kg.)	900 ±15% (Approx.)
34	Mounting details	Refer Enclosed GA Drawing: 3-316-00-386 / R01
35	Overall dimensions	
36	Characteristics (whether graphs enclosed):	APPROVED FOR TURNKEY PROJECTS
	a Ratio and phase angle curves	 Chief Engineer/Construction-1 APTRANSCO, Vijay Soudha, Hyd.
	b Magnetisation curves	
	c Ratio correction factor curves	
37	Core	
	a Area of cross section	As per Design Requirements
	b Flux density at rated primary current and rated burden.	< 1.2 Tesla
38	The type tests should have been conducted not earlier than 5 years in the standard third party laboratory. The manufacturer shall produce the type test reports at the time of acceptance test	Complied
39	Quality of material and applicable standard-BIS. The manufacturer shall produce the valid BIS certification at the time of acceptance.	Will furnish type test reports as per relevant IS / IEC standards
40	The provision for measurement of Capacitance & Dielectric Dissipation factor (Tan Delta) shall be provided. The procedure & measuring of Capacitance & Tan Delta shall be as per IEC: 60044 & IEC:61869	Provided

\* Exact Crepage Distance will be provided as per customer requirement mentioned in the relevant Technical specification.

  
14.11.13

Page 02 of 02.

22.11.13

Standardised Drawing for 220 kV Current Transformers ( M/s Vijai Electrical Limited)
STD/GTP-DWG/Approval No. 274-1 02 sheets Revision No.0
Prepared & Approved during December - 2013
Customer ref : APTRANSCO
Title: GTP for CTs ( 220kV CTs of ratio 200/1A,1C) used for exclusive metering