

FRONT VIEW

SIDE VIEW

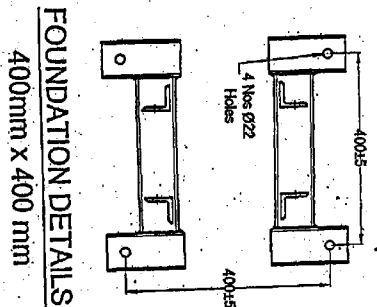
NOTE:-

01. MIN. CREEPAGE DISTANCE : 3625mm (For heavily polluted) / 4495mm (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

Standardised Drawing for 145 kV Voltage Transformers
(M/s Vijai Electricals Limited)
STD/GTP-DWG/Approval No. 279-2 01 sheets Revision No.0
Prepared & Approved during December - 2013
Customer ref : APIRANSCO
Title: GA drawing of 145 VTS (Ratio 1) 132kV/√3/110V/√3, 2) 132kV/√3/110V/√3

RATIOS: 1) $\frac{132kV}{\sqrt{3}} / \frac{110V}{\sqrt{3}}$
2) $\frac{132kV}{\sqrt{3}} / \frac{110V}{\sqrt{3}}$



FOUNDATION DETAILS
400mm x 400 mm

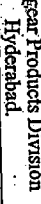
APPROVED FOR TURKEY PROJECTS
Chief Engineer/Construction-I
APIRANSCO, Wajid Souda, Hyd.

QTY	VAR. NO.	FINISH	ITEM	DESCRIPTION	DRAWING No.	ITEM No.	MATERIAL SPEC.
02	-	015	EARTHING BOLTS			MS	
01	-	014	CABLE GLAND PLATE			MS	
01	-	013	RATING PLATE			AL ANODISED	
01	-	012	OIL DRAIN PLUG			MS	
01	-	011	TERMINAL BOX			MS	
01	-	010	BOTTOM TANK			MS	
02	-	009	LIFTING LUGS			MS	
01	-	008	INSULATOR			PORCELAIN	
01	-	007	TOP TANK			MS	
01	-	006	PRIMARY TERMINAL (230x80)			ALUMINIUM	
01	-	005	OIL LEVEL GAUGE			PRESVATICS	
02	-	004	SLING GUIDE			MS	
01	-	003	RAIN SHIELD			ALUMINIUM	
01	-	002	NITROGEN FILLING VALVE			BRASS	
01	-	001	PRESSURE RELEASE DEVICE			BRASS	

DISTRIBUTION OF PRINTS

REV	DATE	ALTERED	QA
		CHECKED:	

Vijai Electricals Ltd.
Synchrogear Products Division
Hyderabad



SCALE: NTS

GA DRAWING OF 145KV VTS.

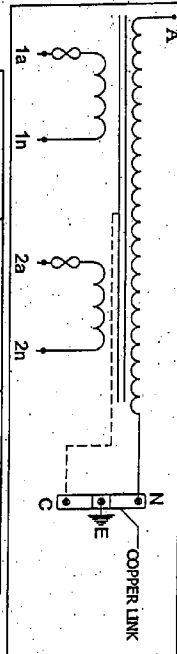
DRAWING No. 3-355-00-199

SHEET No. 01 OF 02

4 Nos OF Ø2 HOLES

VOLTAGE TRANSFORMER

STANDARD	IS:3156:1992	RATIO	$\frac{132kV}{\sqrt{3}} / \frac{110V}{\sqrt{3}}$
TYPE	M45	BURDEN	10 VA / 10 VA
NORMAL SYSTEM VOLTAGE	132 kV	CLASS	0.2 / 0.2
HIGHEST SYSTEM VOLTAGE	145 kV	INSULATION LEVEL	275kV rms / 650 kVp
No. OF PHASES	SINGLE	FREQUENCY	50Hz
VOLTAGE FACTOR	1.2 Continuous & 1.5 for 30 Sec.		
WEIGHT OF EQUIPMENT	500 KG±15% (APPROX.)	QUANTITY OF OIL	115 LITRS±15% (APPROX.)



VOLTAGE RATIO	PRIMARY CONNECTION	SECONDARY CONNECTIONS
$\frac{132kV}{\sqrt{3}} / \frac{110V}{\sqrt{3}}$	A - N	1a-1n, 2a-2n

Vijai Electricals Ltd., Hyderabad, INDIA.

YEAR OF MANUFACTURING

S.L. NO.

CUSTOMER:

P.O. NO:

CAUTION: 1. TAN DELTA TERMINAL 'C' MUST BE GROUNDED WHILE VT IS IN OPERATION
2. ENSURE SECONDARY (1V) TERMINALS ARE NOT SHORTED IN OPERATION.

NOTE:-

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

APPROVED FOR TURKEY PROJECTS

Chief Engineer/Construction-I
APTRANSCO, Vidut Southa, Hyd.

Standardised Drawing for 145 kV Voltage Transformers
(M/s Vijai Electrical Limited)
STD/GTP-DWG/Approval No. 279-4 01 sheets Revision No.0
Prepared & Approved during December - 2013
Customer ref : APTRANSCO
Title: Rating & connection Diagram for 145 VTs (Ratio 132kV/√3/110V/√3-110/√3)

DISTRIBUTION OF PARTS		VAR. ID		FINISH		ITEM No.		DESCRIPTION		DRAWING No.		V.VAR		MATERIAL CODE		REMARKS	
REV	DATE	ALTERED	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY
01																	

TYPE OF PRODUCT: TRANSFORMER CORPORATION OF ANDHRA PRADESH

OR NAME OF CUSTOMER/PROJECT: Vijai Electricals Ltd. Hyderabad.

GRADE OF TOL DIN: C/M/F 15 mm or 1 mm

SCALE: NTS

TITLE: RATING & CONNECTION DIAGRAM FOR 145kV VT

DRAWING No. 3-355-00-199

SHEET No. 01

Customer : APTRANSCO, Hyderabad		
GUARANTEED TECHNICAL PARTICULARS FOR VOLTAGE TRANSFORMERS		
145kV VTs of Ratio : 132kV/v3 / 110V/v3 -110V/v3 - USED FOR EXCLUSIVE METERING.		
S.No.	DESCRIPTION	REQUIRED
1	Type	Out Door, Single Phase, Oil Cooled & Hermetically sealed
2	Manufacturer's Type Designation	M145
3	Mounting of Tank	Pole / Structure Mounting
4	Conforming to Standard	IS:3156
5	System rated Voltage / Highest Voltage(kV)	132 / 145
6	Rated Primary Voltage (kV)	132 / v3
7	Secondary Winding Details	
	a) No. of Secondary Windings	Winding-I Winding-II
	b) Rated Secondary Voltage (v)	110/ v3 110/v3
	c) Rated Burden	10 10
	d) Class of Accuracy	0.2 0.2
8	Temperature rise at 1.1 times rated voltage with rated burden	Within limits as per IS-3156
9	Rated voltage Factor and Time	1.2 Continuous & 1.5 for 30 sec
10	Temperature rise for item-10 above(deg C)	Within limits as per IS-3156
11	Impulse withstand voltage(kV peak)	650
12	One minute power frequency withstand test voltage on primary (kV rms)	275
13	One minute power frequency withstand test voltage on secondary (kV rms)	3
14	Porcelain bushings	MODERN / IEC / CJI / WSI / ADITYA BIRLA. RAVIKIRAN
15	Total Creepage distance of the bushing	* Min 3625mm (For Heavily Polluted) / 4495 mm (For Very Heavily Polluted).
16	Protected Creepage distance of the bushing	-
17	Quantity of insulating oil	115 Lts ±15% (approx.)
18	Weight of Oil	104 kg ±15% (approx.)
19	Total Weight including oil	500kg ±15% (approx)
20	Mounting Details	Refer Enclosed GA Drawing No :
21	Live parts to ground clearance	3-355-00-199 / R01
22	Whether VT is sealed construction with Nitrogen at top	Yes
23	Overall Dimensions in mm	
	Height	2545±150
	Length	650±100
	Breadth	750±100
24	Grade of Oil	EHV Grade
25	Voltage transformer shall carry 25% above the rated burden continuously without injury in respect of VTs	As per IS 3156
26	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
27	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
28	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 Creepage Distance will be provided as per customer requirement mentioned in the relevant Technical specification.

APPROVED FOR TURNKEY PROJECTS

Chief Engineer/Construction-I
APTRANSCO, Vidyut Boudha, Hyd.

14/11/13

14-11-13

Standardised Drawing for 145 kV Voltage Transformers (M/s Vijai Electrical Limited)
STD/GTP-DWG/Approval No. 279-1 02 sheets Revision No.0
Prepared & Approved during December - 2013
Customer ref : APTRANSCO
Title: GTP for VTs (145kV VTs of ratio 132kV/v3/110V/v3-110/v3) used for exclusive metering