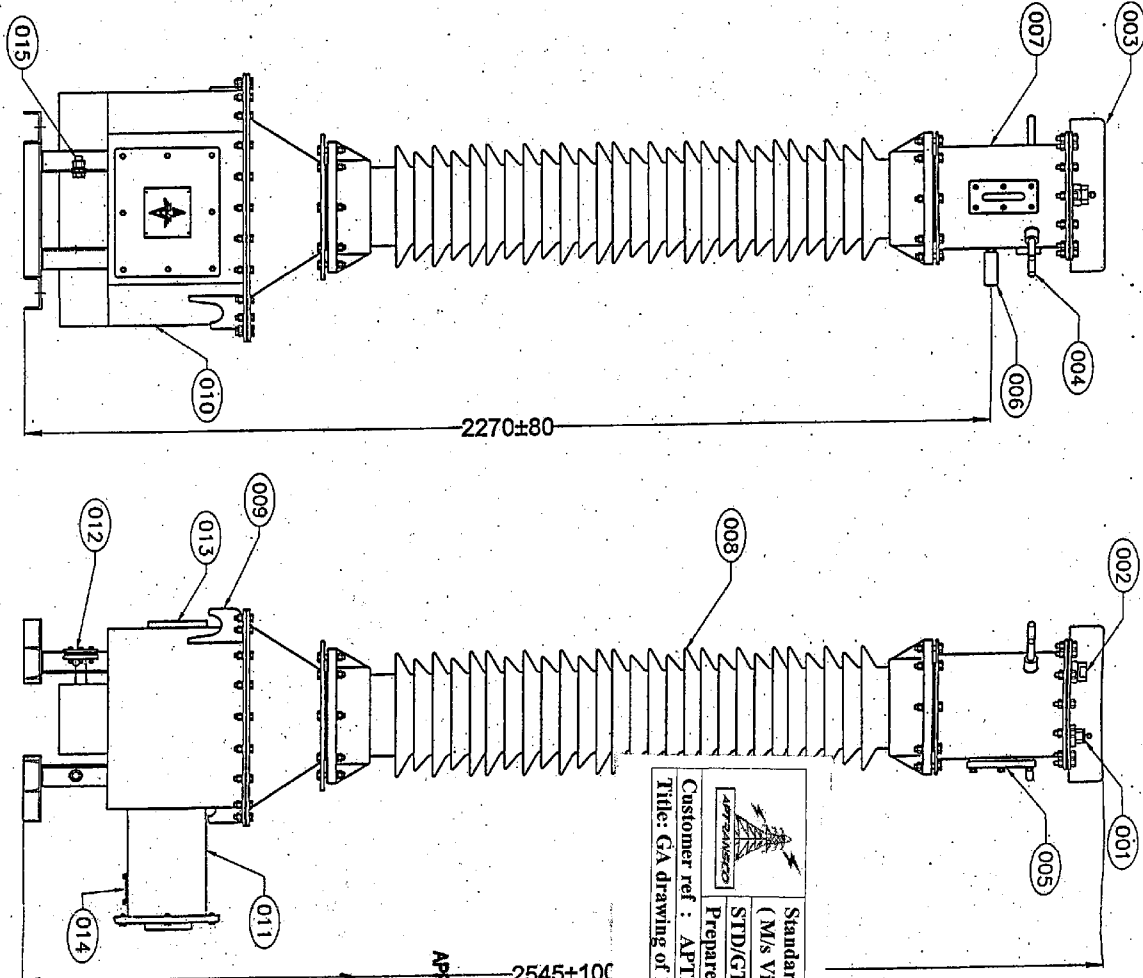


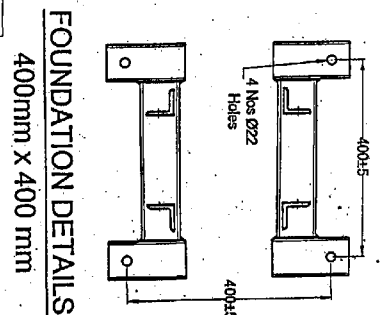
ALL DIMENSIONS ARE IN mm & WEIGHTS ARE IN kg
UNLESS OTHERWISE SPECIFIED.

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REPRODUCTION OF THESE IN ANY FORM IS TO BE DONE WITH THE SPECIFIC PERMISSION OF THE COMPANY.

CREF :



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



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 : APTRANSCO
Title: GA drawing of 145 VTs (Ratio 1)132kV/√3/110V/√3, 2) 132kV/√3/110V/√3/110V/√3)

APPROVED FOR TURKEY PROJECTS
Chief Engineer/Construction-1
APTRANSCO, Vijai Soudra, Hyd.

Sl. No.	Part No.	Description	Material	QTY
01	015	EARTHING BOLTS	MS	
02	014	CABLE GLAND PLATE	MS	
03	013	RATING PLATE	AL ANODISED	
04	012	OIL DRAIN PLUG	MS	
05	011	TERMINAL BOX	MS	
06	010	BOTTOM TANK	MS	
07	009	LEFTING LUGS	MS	
08	008	INSULATOR	FORCELAN	
09	007	TOP TANK	MS	
10	006	PRIMARY TERMINAL (230x60L)	ALUMINIUM	
11	005	OIL LEVEL GAUGE	PERISMA TIC	
12	004	SLING GUIDE	MS	
13	003	RAIN SHIELD	ALUMINIUM	
14	002	NITROGEN FILLING VALVE	BRASS	
15	001	PRESSURE RELEASE DEVICE	BRASS	
16	000			

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

REV	DATE	ALTERED	QA
		CHECKED	



Vijai Electricals Ltd.
Switchgear Products Division
Hyderabad.

TRANSMISSION CORPORATION OF ANDHRA PRADESH

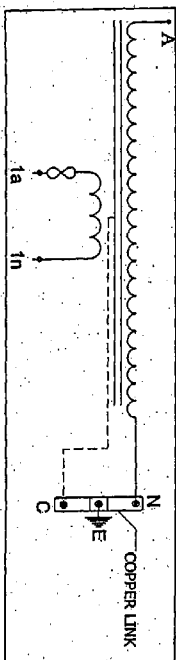
Sl. No.	Part No.	Description	Material	QTY
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11	005	OIL LEVEL GAUGE	PERISMA TIC	
12	004	SLING GUIDE	MS	
13	003	RAIN SHIELD	ALUMINIUM	
14	002	NITROGEN FILLING VALVE	BRASS	
15	001	PRESSURE RELEASE DEVICE	BRASS	
16	000			

GA DRAWING OF 145KV VTs.	DRAWING No. 3-355-00-199	SHEET No. 01	TOTAL SHEETS 02
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4 Nos OF Ø2 HOLES

VOLTAGE TRANSFORMER

STANDARD	IS:3156:1992	RATIO	$\frac{132kV}{\sqrt{3}} / \frac{110V}{\sqrt{3}}$
TYPE	MI45	BURDEN	10 VA
NORMAL SYSTEM VOLTAGE	132 kV	CLASS	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	1115 LITRS±15% (APPROX)



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

Vijai Electricals Ltd., Hyderabad, INDIA.

YEAR OF MANUFACTURING

SL NO.

CUSTOMER:

P.O NO:

CAUTION: 1. TAN DELTA TERMINAL 'C' MUST BE GROUNDED WHILE VT IS IN OPERATION
2. ENSURE SECONDARY (LV) 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.No BLANK SPACES.

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129

119
129

APPROVED FOR TURNKEY PROJECTS

Chief Engineer/Construction-1
APTRANSCO, Vijayut Soudha, Hyd.

Standardised Drawing for 145 kV Voltage Transformers
(M/s Vijai Electricals Limited)
STD/GTP-DWG/Approval No. 279-3/01 sheets Revision No.0
Prepared & Approved during December - 2013

Customer ref : APTRANSCO

Title: Rating & connection Diagram for 145 VTs (Ratio 132kV/√3/110V/√3)

DESCRIPTION OF PARTS	QTY
PFC	01
REV DATE	01/01/2013

VAR TO	FINISH	ITEM	DESCRIPTION	DRAWING No.	V/VAR	MATERIAL CODE	REMARKS
01							

Vijai Electricals Ltd.
Switchgear Products Division
Hyderabad.

TRANSMISSION CORPORATION OF ANDHRA PRADESH

GRADE OF TOL.DIN	SCALE	REF TO ASSY DRG	DRAWING No.	REV
C/145/15/100 or 1 or 010	NTS		3-355-00-199	01

RATING & CONNECTION DIAGRAM FOR 145KV VT

3 355 00 199

03

Customer : APTRANSCO, Hyderabad		
GUARANTEED TECHNICAL PARTICULARS FOR VOLTAGE TRANSFORMERS		
145kV VTs of Ratio : 132kV/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
	b) Rated Secondary Voltage (v)	110/v3
	c) Rated Burden	10
	d) Class of Accuracy	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 : 3-355-00-199 / R01
21	Live parts to ground clearance	
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.

Handwritten signature
14/11/13

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14.11.13