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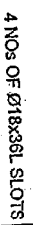


\*01. MIN. CREEPAGE DISTANCE : 6125mm (For heavily polluted) / 7595mm (For very heavily polluted).

SIDE VIEW

ED FOR #81


**FOUNDATION DETAILS**  
**600mm x 600 mm**



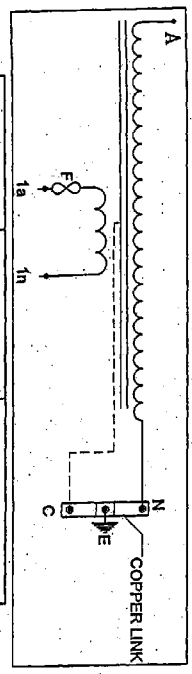
Standardised Drawing for 245 kV Voltage Transformers  
( M/s Vijai Electrical Limited )  
STD/GTP-DWG/Approval No. 280-2-01 sheets Revision No.0  
Prepared & Approved during December - 2013

QTY	FINISH	ITEM No.	DESCRIPTION	DRAWING No.	V.A.R. ITEM No.	MATERIAL SPEC.	MOQ/TAM QTY.
01	---	016	CABLE GLAND PLATE	---		MS	
02	---	015	EARTHING BOLT	---		MS HDG	
01	---	014	RATING PLATE	---		AL ANODISED	
01	---	013	OIL GRAIN PLUG	---		MS	
01	---	012	TERMINAL BOX	---		MS	
01	---	011	BOTTOM TANK	---		MS	
03	---	010	CORONA RINGS	---		ALUMINIUM	
02	---	009	INSULATOR	---		POCELAN	
01	---	008	MIDDLE TANK	---		MS	
01	---	007	TOP TANK	---		MS	
01	---	006	PRIMARY TERMINAL (430x800)	---		ALUMINIUM	
01	---	005	OIL LEVEL GAUGE	---		PRESSURIC	
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			
PPT		QA	
REV	DATE:	ALTERED:	CHECKED:

NAME OF CUSTOMER/PROJECT					
Vital Electricals Ltd.					
Switchgear Products Division					
Hyderabad.					
GRADE OF POLYIM C/NF- P/AN/C/2 100M				SCALE : N.T.S.	
TITLE:					
G.A DRAWING OF 245 KV VT .					
		DATE		D-500	
DRN		LAKSHM		BUN-13	
CD		MATEW		A-500-13	
DO		REV		1	
REF TO LAST DRG.		NO.		REV	
--		NO.		REV	
DRAWING NO.		SHEET No.		No. of SHEETS.	
3-356-00-113		01		02	

VOLTAGE TRANSFORMER		
STANDARD	IS:3156:1992	RATIO
TYPE	M245	BURDEN
NORMAL SYSTEM VOLTAGE	220 kV	CLASS
HIGHEST SYSTEM VOLTAGE	245 kV	INSULATION LEVEL
No. OF PHASES	SINGLE	FREQUENCY
VOLTAGE FACTOR	1.2 Continuous & 1.5 for 30 Sec.	
WEIGHT OF EQUIPMENT	1100 KG±15% (APPROX)	QUANTITY OF OIL
		320 LTRS±5% (APPROX)



VOLTAGE RATIO	PRIMARY CONNECTION	SECONDARY CONNECTIONS
220KV / 110V $\sqrt{3}$ / $\sqrt{3}$	A - N	1a-1n

 **Vijai Electricals Ltd., Hyderabad, INDIA.**

CUSTOMER: \_\_\_\_\_  
P.O.No: \_\_\_\_\_  
YEAR OF MANUFACTURING: \_\_\_\_\_  
SL. 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: 0.5 mm (MIN.)
  4. WHITE BACKGROUND SHALL BE PROVIDED FOR YEAR OF MANUFACTURING & SL NO BLANK SPACES.

4 Nos OF Ø2 HOLES

**APPROVED FOR TURKEY PROJECTS**  
  
Chief Engineer/Construction-1  
APTRANSCO, Vidut Southa, Hyd.

Standardised Drawing for 245 kV Voltage Transformers  
(M/s Vijai Electricals Limited)  
STD/GTP-DWG/Approval No. 280-3-01 sheets Revision No.0  
Prepared & Approved during December - 2013  
Customer ref : APTRANSCO  
Title: Rating & Connection Diagram for 245 kV VTs

VAR. NO.	ITEM	DESCRIPTION	DRAWING No.	VJAR	MATERIAL CODE	APPROVAL
QTY.	FINISH	No.	DATE	DATE	DATE	DATE
REV	DATE	ALTERED	DECIDED			
NAME OF CUSTOMER/PROJECT						
OR						
TRANSMISSION CORPORATION OF ANDHRA PRADESH						
Vijai Electricals Ltd.						
Switchgear Products Division						
Hyderabad.						
GRADE OF TOL.DIN	SCALE	NTS	DATE	DATE	DATE	DATE
C/D/F/REVISION						
TITLE:	RATING & CONNECTION DIAGRAM FOR 245KV VT					
DRAWING No.	3-356-00-113	DATE	11	REV	11	
SHEET No.	42	NO OF SHEETS	42			

Customer : APTRANSCO, Hyderabad		
GUARANTEED TECHNICAL PARTICULARS FOR VOLTAGE TRANSFORMERS		
245kV VTs of Ratio : 220kV/√3 / 110V/√3 - USED FOR EXCLUSIVE METERING.		
S.No.	DESCRIPTION	REQUIRED
1	Type	Out Door, Single Phase, Oil Cooled & Hermetically sealed
2	Manufacturer's Type Designation	M245
3	Mounting of Tank	Pole / Structure Mounting
4	Conforming to Standard	IS:3156
5	System rated Voltage / Highest Voltage(kV)	220 / 245
6	Rated Primary Voltage (kV)	220 / √3
7	Secondary Winding Details	
	a) No. of Secondary Windings	Winding-I
	b) Rated Secondary Voltage (V)	110/√3
	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)	1050
12	One minute power frequency withstand test voltage on primary (kV rms)	460
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 6125mm (For Heavily Polluted) / 7595 mm (For Very Heavily Polluted).
16	Protected Creepage distance of the bushing	-
17	Quantity of insulating oil	320 Lts ±15% (approx.)
18	Weight of Oil	290 kg ±15% (approx.)
19	Total Weight including oil	1100kg ±15% (approx)
20	Mounting Details	Refer Enclosed GA Drawing No :
21	Live parts to ground clearance	3-356-00-113 / R01
22	Whether VT is sealed construction with Nitrogen at top	Yes
23	Overall Dimensions in mm	
	Height	4450±150
	Length	800±100
	Breadth	800±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 Soudha, Hyd.

14/11/13

22/05/13  
14.11.13.

Standardised Drawing for 245 kV Voltage Transformers

( M/s Vijai Electrical Limited)

STD/GTP-DWG/Approval No. 280-1 02 sheets Revision No.0

Prepared & Approved during December - 2013

Customer ref : APTRANSCO

Title: GTP for 245 VTs ( ratio 220kV/√3/110V/√3) used for exclusive metering

