

8454160/2024/EMPTY ENEST BE CHECKED DURING ACCEPTANCE TESTS

2. FOR EPC CONTRACTS ONLY

STRATON®**GUARANTEED TECHNICAL PARTICULARS OF OIL IMMERSSED VOLTAGE TRANSFORMER (25mm/kV)**

Customer Name	M/s. Transmission Corporation of Andhra Pradesh Limited.	Drawing No	APT/033OV/01A
Project Name	-	Model. No.	033OV12LDG
PO # & Date	-	Rev.	0
Item Desc.	33kV Oil Immersed Dead Tank Voltage Transformer (0.2/10VA)		

S.N O	PARTICULARS	UNITS	DESCRIPTION
1	Manufacturer's name and country of manufacture		M/s. Straton Electricals Pvt Ltd, Sy No. 42/A1/1, Alinagar, Gaddapotaram (GP), Jinnaram(M), Sangareddy(Dist.), Hyderabad 502319, Telangan, India
2	Type		Single Phase, Oil immersed, Dead tank
3	Installation type		Outdoor / Pedestal Mounted
4	Rated Voltage / Highest System Voltage	kV	33/36
5	Insulation Class		A
6	Rated frequency	Hz	50
7	Conforming to Standard		IS 16227(Part 1 & 3)2015
8	No. of secondary windings		One
9	Rated System Voltage	V	33000
10	Winding details		Wdg I
11	Rated Primary Voltage	V	33000/ $\sqrt{3}$
12	Rated Secondary Voltage	V	110/ $\sqrt{3}$
13	Accuracy Class		0.2
14	Rated Secondary Burden	VA	10
15	Rated Voltage Factor		1.2 cont. & 1.5 for 30s
16	Basic Insulation Level	kVp	36/70/170
17	Primary terminal material and details	mm	Nickle Plated Copper stud of 30mm diameter 80mm length
18	Secondary terminal material and details		M6 stud type terminal blocks
19	One minute power frequency withstand voltage test on primary winding	kVrms	70
20	Lightning impulse withstand voltage	kVp	170
21	One minute power frequency withstand voltage test on secondary winding	kVrms	3
22	Measurement of Partial Discharge @ $1.2 \cdot U_m / \sqrt{3}$	pC	< 5
23	Measurement of Partial Discharge @ U_m	pC	< 10
24	Type & make of porcelain housing		CJI / Ravi Kiran / Modern / Any std. make
25	Material of tank		Mild steel
26	Gauge of the MS tank with Paint shade 631 as per IS 5		- Min 5mm for top cover and bottom - Min 3.15mm for remaining tank & base
27	Hardware exposed to air		Hot dip galvanized / Alu. Zinc
28	Total creepage distance	mm	900
29	Live part to ground clearance	mm	400(min)
30	Temperature rise over ambient		<50 as per IS 16227(Part 1 & 3)
31	Oil Filling Arrangement		Oil filling valve on top of the tank & Bump valve at the bottom
32	Whether all O-rings are fixed in properly machined grooves?		Yes
33	Sealing arrangement (Gasket with groove)		1. Insulator flange interfaces at top tank & base. 2. The secondary terminal interface of molded epoxy cast resin monoblock with O-ring. 3. Oil level indicator & primary stud interface with tank
34	Type of Insulator Construction		Both Flanges cemented on the top & bottom of bushing.
35	O-rings & gaskets' material		Nitrile Butyl Rubber
36	Weight of Steel	Kgs	55 Approx
37	Weight of Copper	Kgs	3.5 Approx
38	Weight of oil	Ltr.	35 Approx
39	Total weight of equipment	Kgs	150 (Approx)

GUARANTEED TECHNICAL PARTICULARS OF OIL IMMERSSED VOLTAGE TRANSFORMER (25mm/kV)

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Project Name	-	Model. No.	033OV12LDG
PO # & Date	-	Rev.	0
Item Desc.	33kV Oil Immersed Dead Tank Voltage Transformer (0.2/10VA)		

40	Mounting details	mm	400mm x 400mm
41	Overall Dimensions		As per GA drawing

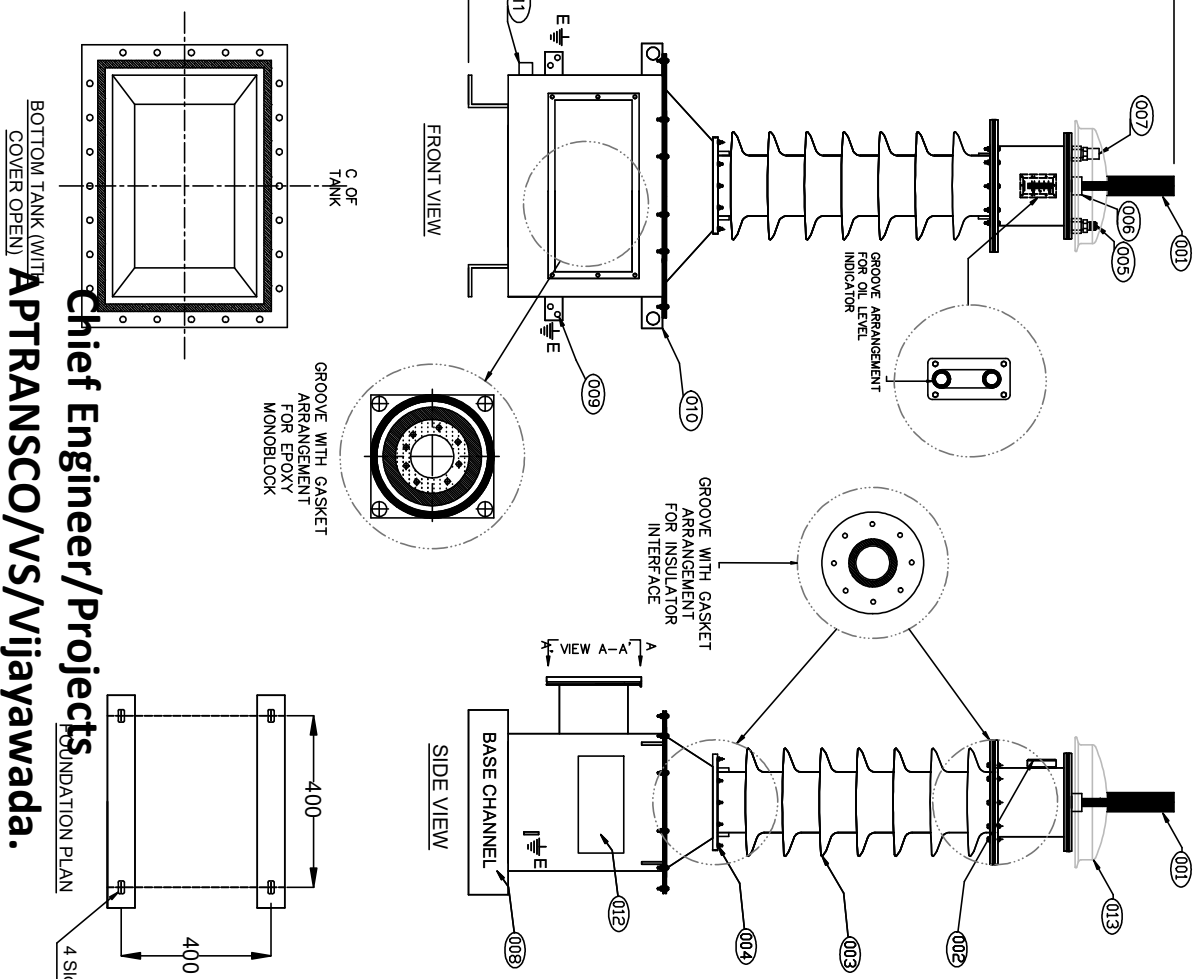
NOTE: 1. DRAWING APPROVAL SUBJECT TO VALID TYPE TEST
REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS
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1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/Isolators/IV/LA/Breakers in the Substation during foundation works to ensure safe live to ground clearance as per IE rules.
2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor shall be instructed to supply the same in line with CT/PT/CVT/Isolator/IVT/LA/Breakers requirement and compatibility.

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

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S/NO	ITEM DESCRIPTION	MATERIAL	QTY
001	HT TERMINAL	Ø30mm NICKEL PLATED COPPER	01
002	OIL LEVEL INDICATOR (OIL)	AL. DIE CASTED (PRISMATIC)	01
003	INSULATOR	PORCELAIN	01
004	BUSHING ENDS	CEMENTED FLANGE TYPE	02
005	N2 FILLING VALVE	BRASS	01
006	OIL FILLING PLUG	MILD STEEL	01
007	PRESSURE RELIEF VALVE (1/2")	BRASS (Operating Pres: 1 Kg/Cm2)	01
008	MOUNTING BASE	MILD STEEL	01
009	EARTH PADS	SS (50x8x70(L)mm)	02
010	LIFTING HOLES	MILD STEEL	04
011	DRAIN PLUG	MILD STEEL	01
012	NAME PLATE	ALUMINIUM	01
013	DOVE COVER	MILD STEEL	01

- NOTE:
1. CONFORMING TO IS : 16227 (Part 1 & 3)
 2. INSULATING OIL CONFORMING TO IS: 335
 3. PT WILL BE HERMETICALLY SEALED.
 4. DIMENSION TOLERANCES ±5%.
 5. TANK FINISHING WILL BE PAINTED, WITH PAINT SHADE 631 AS PER IS 5
 6. ALL HARDWARE EXPOSED TO ATMOSPHERE WILL BE HOT DIP GALVANIZED OR AL. Zn.
 7. CREEPAGE DISTANCE : 900mm min.
 8. TOTAL OIL QUANTITY : 35 Kgs (Approx).
 9. TOTAL ESTIMATED WEIGHT: 150 Kgs (Approx).
 10. SECONDARY TERMINALS : M6 STUD TYPE TERMINAL BLOCKS.

Chief Engineer/Projects
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REV.# REVISION NOTE

DATE

PROJECTION:

SCALE: NTS

DRAWN

CHECK

DWG. NO.:

SHEET NO.:

NO OF SHEETS:

TITLE: GA DRAWING OF 33KV OUTDOOR OIL COOLED DEAD TANK, VOLTAGE TRANSFORMER OF RATIO (0.2/10VA) 0330V/12LDG

NAME

SS

AP/T/0330V/01A

01

04

STRATON ELECTRICALS PVT. LTD., HYDERABAD

NH

DS

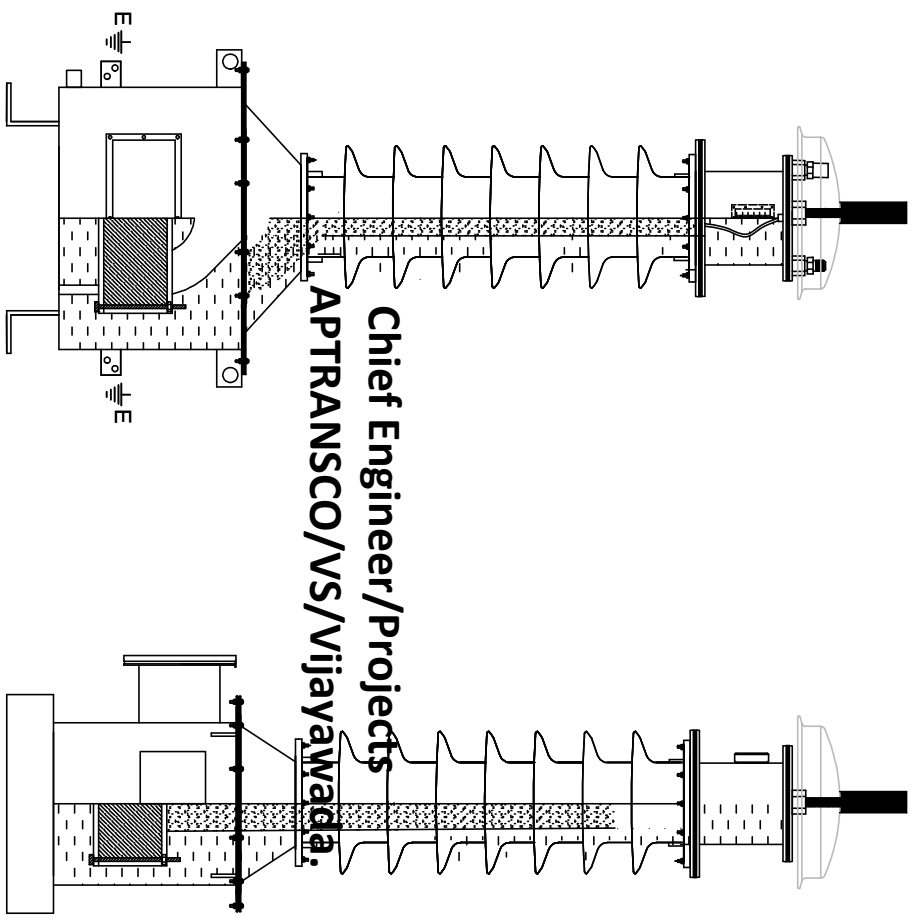
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DESIGN DATA:

PRIMARY WINDING:

- a. Area of Crosssection: 0.29Sq.mm
- b. Conductor material: Electrolytic Copper
- c. Weight of conductor: 4.5Kgs approx.

SECONDARY WINDING:

- a. Area of Crosssection:
Winding-l: 16SWG (2.078Sq.mm)
- b. Conductor material: Super enameled Copper wire
- c. Weight of conductor: 0.5Kgs approx.

FRONT VIEW

SIDE VIEW

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						DS		11-01-2024
						APPT/0330V/01A		REV.: 00
								NO OF SHEETS: 04

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STRATON®		INDUCTIVE VOLTAGE TRANSFORMER		MADE IN INDIA	
TYPE DESIGNATION	33kV OUTDOOR OIL IMMERSIED VT	HIGHEST SYSTEM VOLTAGE (kV)	36	QTY. OF OIL (Lts)	35(Approx).
REF. STANDARD	IS 16227 (PART 1&3):	RATED SYSTEM VOLTAGE (kV)	33	WEIGHT OF VT (Kg)	150(Approx).
RATED FREQUENCY	50Hz	INSULATION LEVEL (kVrms/kVp)	70/170	TEMP. CAT.	-5/50°C
RATED VOLTAGE FACTOR	1.2 CONTINUOUS & 1.5 FOR 30 SEC.	INSULATION CLASS	A	MIN. CREEPAGE (mm)	900
CONNECTION DIAGRAM					
VT RATIO (V/V)		33000/√3//110/√3	CAUTION: 1. ENSURE LV TERMINALS ARE NOT SHORT CIRCUITED		
WINDING		WINDING - 1			
PURPOSE		METERING			
RATED VOLTAGE	PRIMARY (V) SECONDARY (V)	33000/√3 110/√3			
TERMINALS	PRIMARY SECONDARY	A - N a - n			
RATED BURDEN (VA)		10			
ACCURACY CLASS		0.2			
YEAR OF MANUFACTURING					
VT SERIAL NUMBER					
CUSTOMER/CLIENT NAME	M/s. Transmission Corporation of Andhra Pradesh Limited.				
ORDER NO.:	STRATON ELECTRICALS PVT. LTD., HYDERABAD - 502 319.				

1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/isolators/IV/LA/Breakers in the Substation during foundation works to ensure safe live to ground clearance as per IE rules.
2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor shall be instructed to supply the same in line with CT/PT/CVT/isolator/IV/LA/Breakers requirement and compatibility.

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

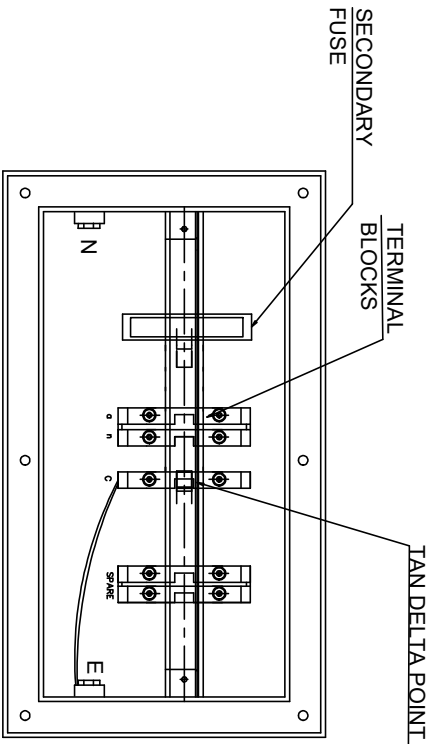
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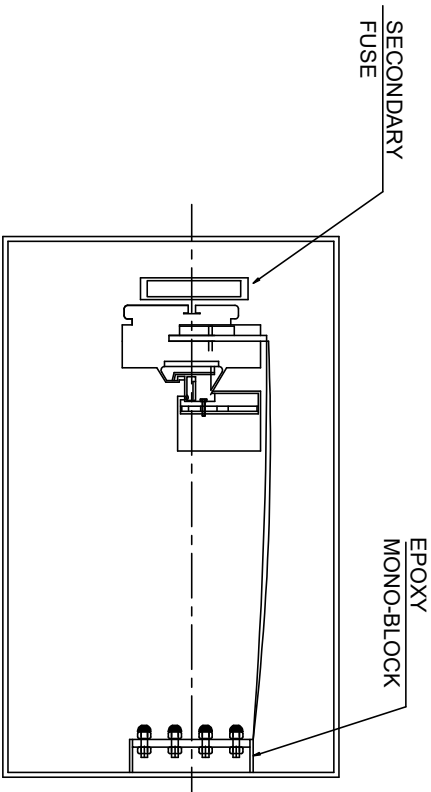
1	2	3	4	5	6	7	8		
TITLE: NAME PLATE DRAWING OF 33kV OUTDOOR OIL COOLED DEAD TANK VOLTAGE TRANSFORMER OF RATIO (0.2/10VA) 0330V/12LDG				STRATON® ELECTRICALS PVT. LTD., HYDERABAD		DWG. NO.:	AP/T/0330V/01A	REV.:	00
						SHEET NO.:	03	NO OF SHEETS:	04

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VIEW A-A' (FOR WINDING-I)



SIDE VIEW

Chief Engineer/Projects APTRANSCO/VS/Vijayawada.

- NOTES:**
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- NOTES:**
1. SECONDARY TERMINAL BOX SHALL BE PROVIDE REMOVABLE GLAND PLATE WITHOUT HOLE.
 2. SECONDARY TERMINAL BOX SHALL BE PROVIDED WITH COVER WITH EPDM GASKET.
 3. DEGREE OF PROTECTION FOR SECONDARY TERMINAL SHALL BE IP55
 4. 20% SPARE TERMINALS SHALL BE PROVIDED
 5. FERRULES SHALL BE PROVIDED FOR WIRES IN SECONDARY TERMINAL BOX.

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PROJECTION: **SCALE:** NTS

TITLE: TERMINAL BOX DRAWING OF 33kV
 OUTDOOR OIL COOLED DEAD TANK VOL TAGE
 TRANSFORMER OF RATIO (0.2/10VA) 0330V/12LDG
 APPR.

STRATON
 ELECTRICALS PVT. LTD., HYDERABAD