



MADE IN INDIA BY

EMCO TRANSFORMERS LTD.

THANE

MAHARASHTRA

POWER TRANSFORMER

SPECIFICATION REF. NO.

TYPE OF COOLING

RATED POWER { HV kVA
LV kVARATED VOLTAGE { HV kV
AT NO LOAD LV kVRATED LINE CURRENT { HV A
LV AGUARANTEED MAX { TOP OIL °C
TEMPERATURE RISE WINDING °C
REFERENCE AMBIENT °CIMPEDANCE VOLTAGE { TAP No. 1
HV - LV TAP No. 13
(ON 100 MVA BASE) TAP No. 17

IS, 2026/1977

ONAN	ONAF	OFAF
50000	70000	100000
50000	70000	100000

220	220	220
66	66	66

131.215	183.702	262.431
437.386	612.341	874.773

45		
55	60	60
40		

14.10 %		
14.93 %		
15.34 %		

NO. OF PHASES

FREQUENCY

VECTOR GROUP

INSULATION

LEVEL

CORE & WINDING MASS

TANK & FITTING MASS

MASS OF OIL

TOTAL MASS

TRANSPORT MASS (WITHOUT OIL)

VOLUME OF OIL

CORE WEIGHT

WINDING WEIGHT

DIAGRAM PLATE DRG. No.

MAKER'S SERIAL No.

YEAR OF MANUFACTURE

THREE

Hz

50

- YNyn0

HV	LI 1050 kV/AC 460 kVrms
HVn	LI 95 kV/AC 38 kVrms
LV	LI 350 kV/AC 160 kVrms
LVn	LI 95 kV/AC 38 kVrms

kg 67300

kg 35000

kg 43900

kg 146200

kg 84000

lit 49325

kg 48900

kg 18400

3/11/0106/R-

HT1438/11890

1999

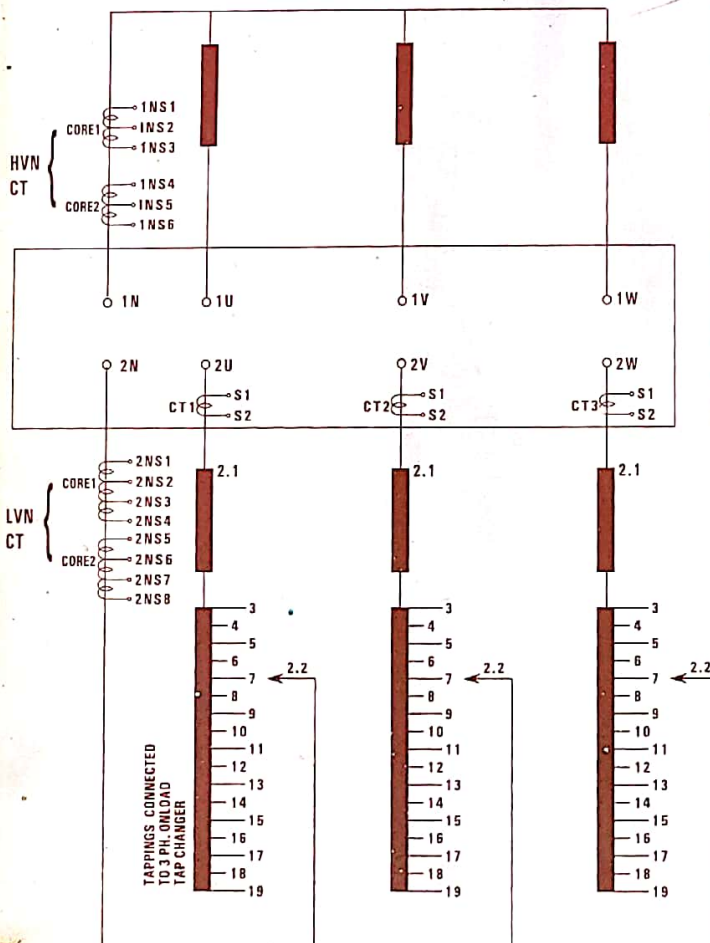
CUSTOMER'S REFERENCE

CUSTOMER

P.O.NO SP/1828/1/EMCO/1148 DTD. 8/9/1998

M/s. GUJARAT ELECTRICITY BOARD

3/11/0105/R0

DIAGRAM OF CONNECTIONS**TAPS ON LV WINDING FOR LV VARIATION**

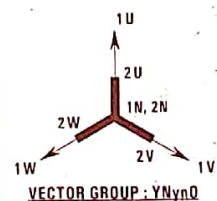
TAP POS. NO.	OLTC CONNECTION	HV LINE TERMINALS		LV LINE TERMINALS	
		VOLTAGE (VOLT)	CURRENT (AMPS)	VOLTAGE (VOLT)	CURRENT (AMPS)
1	2.2 - 19			75900	760.67
2	2.2 - 18			75075	769.03
3	2.2 - 17			74250	777.37
4	2.2 - 16			73425	786.31
5	2.2 - 15			72600	795.24
6	2.2 - 14			71775	804.38
7	2.2 - 13			70950	813.74
8	2.2 - 12			70125	823.31
9	2.2 - 11			69300	833.11
10	2.2 - 10			68475	843.15
11	2.2 - 9			67650	853.43
12	2.2 - 8			66825	863.97
13	2.2 - 7	220000	262.431	66000	874.77
14	2.2 - 6			65175	885.84
15	2.2 - 5			64350	897.20
16	2.2 - 4			63525	908.85
17	2.2 - 3			62700	920.81

NEUTRAL C.T DETAILS

CT	CURRENT RATIO (AMPS)	CLASS	BURDEN (VA)	KNEE POINT VOLTAGE	Imag (mA)
HVN C.T	CORE1: 600 - 300 / 1 CORE2: 600 - 300 / 1	5P 20 PS	15 VA	600V & 300V	≤ 30 at V _k /2
LVN C.T	CORE1: 1200 - 600 - 300 / 1 CORE2: 1200 - 600 - 300 / 1	5P 20 PS	15 VA	1200V, 600V & 300V	≤ 30 at V _k /2

WTI CT DETAILS

CT	CURRENT RATIO (AMPS)	BURDEN (VA)	CLASS
CT1(U-PH)	920.8 / 1.8	10 VA	5
CT2(V-PH)	920.8 / 1.8	10 VA	5
CT3(W-PH)	920.8 / 1.8	10 VA	5



2/11/0106/R1



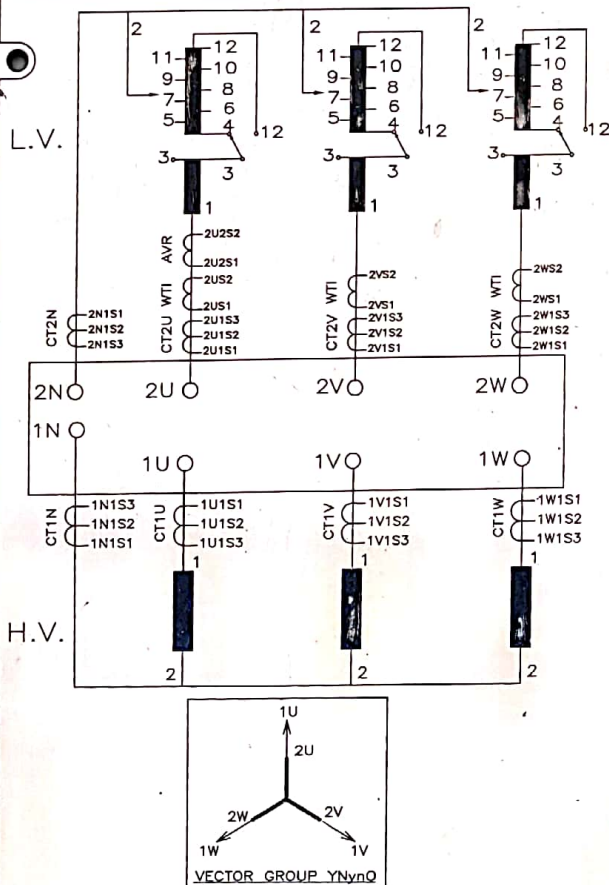
transformers & rectifiers (india) ltd.

VILLAGE : CHANGODAR, TA : SANAND, DIST. : AHMEDABAD (Gujarat)

DOUBLE COPPER WOUND TRANSFORMER

COOLING	ONAN/ONAF/OFAF	REF. STANDARDS	IS: 2026/77-81
RATING	MVA 50/70/100	FREQUENCY	Hz 50
RATED VOLTAGE	HV V 220000 LV V 66000	IMPEDANCE VOLTAGE. (100MVA BASE)	MAX. TAP % 14.82 NOR. TAP % 14.17 MIN. TAP % 14.14
FULL LOAD CURRENT	HV A 131.2/183.7/262.4 LV A 437.4/612.3/874.8	VECTOR GROUP REF.	YNyn0
BASIC INSU. LEVEL IMP/P.F.	HV kV 1050 / 460 HV (N) kV 95 / 38 LV kV 350 / 160 LV (N) kV 95 / 38	MASS OF CORE	kg. 45300
		MASS OF COPPER	kg. 22600
		CORE & COIL MASS WITH CLAMP STRUCTURE	kg. 80000
		TANK & FITTINGS MASS	kg. 35000
		MASS OF TOTAL OIL	kg. 45000
GTD. TEMP. RISE	OIL °C 45 at ONAN 55 at ONAF/OFAF WDG (ONAN) °C 55 WDG (ONAF/OFAF) °C 60	10% EXTRA OIL	kg. 4500
PHASES.	3	TOTAL MASS	kg. 160000
YEAR OF MANUFACTURE	2011	QUANTITY OF OIL IN OLTC	Ltrs. 300
A.T.NO.		TRANSFORMER OIL QUANTITY	Ltrs. 50500

CE(P)/Proc/E-2144/II/e-51459/T&R/1278 Date 12.11.2010



TAP POSN. NO.	OLTC CONNECTION IN EACH PHASE	PRE SELECTION POS.	H.V. VOLTAGE (V)	H.V. CURRENT (A)	L.V. VOLTAGE (V)	L.V. CURRENT (A)
1	2 - 12				75900	380.33
2	2 - 11				75075	384.51
3	2 - 10				74250	388.78
4	2 - 9				73425	393.15
5	2 - 8				72600	397.62
6	2 - 7				71775	402.19
7	2 - 6				70950	406.87
8	2 - 5				70125	411.65
9a	2 - 4				69300	416.55
9b	2 - 3				69300	416.55
9c	2 - 12				69300	416.55
10	2 - 11				68475	421.57
11	2 - 10				67650	426.71
12	2 - 9				66825	431.98
13	2 - 8				66000	437.38
14	2 - 7				65175	442.92
15	2 - 6				64350	448.60
16	2 - 5				63525	454.42
17	2 - 4				62700	460.40

CT	RATIO AMP.	ACC. CLASS	BURDEN (VA)	kpV ≥ (Volt)	Imag at V _k /2 ≤ (in mA)	MAX SEC. RES. (OHM)	TERMINAL MARKING	QTY.
CT1U	900-1200/1	PS	-	1400V at 1200A	30	-	1U1S1-1U1S2-1U1S3	1
CT1V	900-1200/1	PS	-	1400V at 1200A	30	-	1V1S1-1V1S2-1V1S3	1
CT1W	900-1200/1	PS	-	1400V at 1200A	30	-	1W1S1-1W1S2-1W1S3	1
CT1N	900-1200/1	PS	-	1400V at 1200A	30	-	1N1S1-1N1S2-1N1S3	1
CT2U	900-1200/1	PS	-	1400V at 1200A	30	-	2U1S1-2U1S2-2U1S3	1
CT2V	900-1200/1	PS	-	1400V at 1200A	30	-	2V1S1-2V1S2-2V1S3	1
CT2W	900-1200/1	PS	-	1400V at 1200A	30	-	2W1S1-2W1S2-2W1S3	1
CT2N	900-1200/1	PS	-	1400V at 1200A	30	-	2N1S1-2N1S2-2N1S3	1
AVR	921/1	5	5.0	-	-	-	2U2S1-2U2S2	1
WT CT LV	921/2	5	15	-	-	-	2US1-2US2 2VS1-2VS2 2WS1-2WS2	3

NOISE LEVEL: _____ dB

VACUUM WITHSTAND CAPACITY 760 Hg

OLTC: 3xMI 1203,72.5/B 10.19.3W MAKE : "EMR".

REF.DRG.: G.A.NO.: PM0100031/01/01

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