



ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

(Accredited by the National Accreditation Board for Testing and Calibration Laboratories, Govt. of India)

ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

EPABX : +91 (0265) 2642942, 2642964, 2642377, 3043128 / 29 / 30 / 31 / 33

Fax : +91 (0265) 2638382

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Web : http://www.erda.org



TEST REPORT

SHEET 01 OF 04

NAME & ADDRESS OF CUSTOMER: M/s. Rajasthan Powergen Transformer Pvt. Ltd. Khasra No. 911-914, Karola-Bhinmal Road, Karola, Santhore, Rajasthan-343041	REPORT NO: RP-1718-055518 DATE: 06/02/2018	
	CUSTOMER REF. NO. & DATE: RPTPL/ERDA/TT/37/2017-18 dt. 01/01/2018	
	DATE OF SAMPLE RECEIPT	DATE OF TESTING
	02/01/2018	25/01/2018
SAMPLE DESCRIPTION: Distribution Transformer [1 No.] 16 KVA, 11/0.433 kV, Energy Efficiency Level-2 Sr. No.: RPTPL-001	SAMPLE IDENTIFICATION: Sr. No.: RPTPL-001 Drawing Nos.: 1] RPTPL/RP16/01/02/18 2] RPTPL/RP16/02/02/18 3] RPTPL-GA-16-02-18, REV. NO. 00 ERDA Sample Code No.: ERDA-00234414	
TEST DETAIL: Determination of Sound levels [A-Weighted Sound Power Level Measurement]	TEST SPECIFICATION: For Test Procedure: 1] IS 1180 (Part 1): 2014 with 2 amendments. 2] IS 2026 (Part 10): 2009 For Test Requirement: As per customer's requirement	
ENCLOSURE: Reference Drawing Nos.: 1] RPTPL/RP16/01/02/18, 2] RPTPL/RP16/02/02/18, 3] RPTPL-GA-16-02-18, REV. NO. 00		
REMARKS: 1] Guaranteed value of sound pressure level is considered as 48 dB(A) as mentioned in customer's letter. 2] Transformer conforms to the requirement of guaranteed value of Sound pressure level. 3] Photographs of test sample & name plate have been attached. [Refer SHEET 04 OF 04]		
 PREPARED BY	 CHECKED BY	 APPROVED BY

Note:

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TC 2451109





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TEST REPORT NO: RP-1718-055518

DATE: 06/02/2018

SHEET 02 OF 04

Particulars of Tests & Cl. No.:

Determinations of sound levels [A- Weighted Sound Power Level Measurement]

[Cl. No. 21.4.a of IS 1180 (Part 1): 2014 & Cl. No. 13 of IS 2026 (Part 10): 2009]

Condition of transformer Transformer was energized at no load condition & excited at the rated voltage of sinusoidal waveform & rated frequency.

Details of equipment used: **Name:** Sound level meter **Make:** Lutron
Meter Type: Type 1 **Serial No.:** I.62852
Calibration Report No. & Date: NCQC-M/141117/01, Dt. 27/11/2017

TEST RESULTS:

A-Weighted sound pressure levels of the background noise

Sr. No.	Measurement Locations (Refer Sketch Below)	At the start of test dB(A)	At the end of test dB(A)
1	A	44.6	44.8
2	B	44.7	44.5
3	C	44.5	44.3
4	D	44.8	44.7
5	E	44.7	44.6
6	F	44.2	44.2
7	G	44.6	44.7
8	H	44.1	44.3
9	I	44.5	44.8
10	J	44.7	44.4
Arithmetic Average $\overline{L_{bgA}}$		44.5	44.5

A-Weighted sound pressure levels at energized condition L_{pAi}

Sr. No.	Measurement Locations (Refer Sketch Below) dB(A)	L_{pAi} dB(A)
1	A	46.2
2	B	46.5
3	C	46.6
4	D	46.5
5	E	46.2
6	F	45.9
7	G	45.7
8	H	46.4
9	I	46.6
10	J	46.8
Arithmetic Average $\overline{L_{pA0}}$		46.4

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TEST REPORT NO: RP-1718-055518

DATE: 06/02/2018

SHEET 03 OF 04

TEST PARAMETERS:

Measurement distance : 1 m,

Microphone Spacing: 1 m

Measurement made : Half of the height of the transformer tank

Method followed: Sound pressure measurement as per Cl. No. 11,11.3 & Table 2 of IS 2026 (Part 10): 2009.

Length of prescribed contour: 10.9 m

Transformer Tank Height: 0.70 m

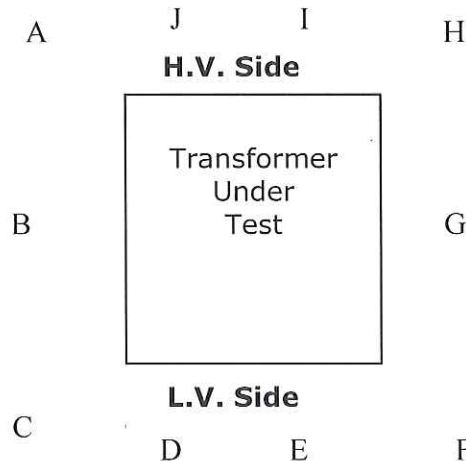
Person present during sound level measurement: 3

A-Weighted sound pressure level ($\overline{L}_{pA0}$):	46.4 dB(A)
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Corrected average A-weighted sound pressure level ($\overline{L}_{pA}$):	39.1 dB(A)
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Calculated A- weighted sound power level (L_{WA}) :	48.9 dB(A)
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REMARKS: A -Weighted sound pressure level ($\overline{L}_{pA0}$) found within guaranteed value given by customer.



Sketch showing the locations of sound measurement

[Signature]
PREPARED BY

[Signature]
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Certificate No. : TC-5389

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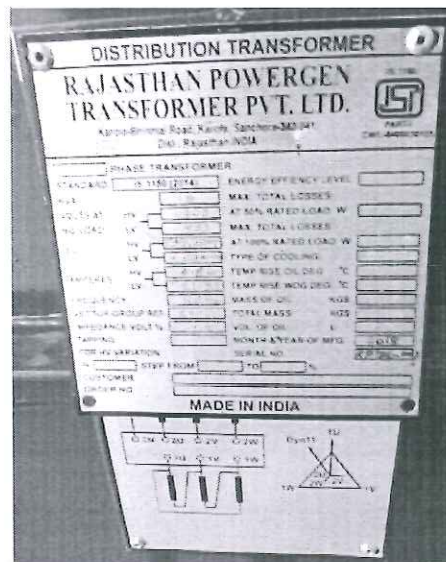
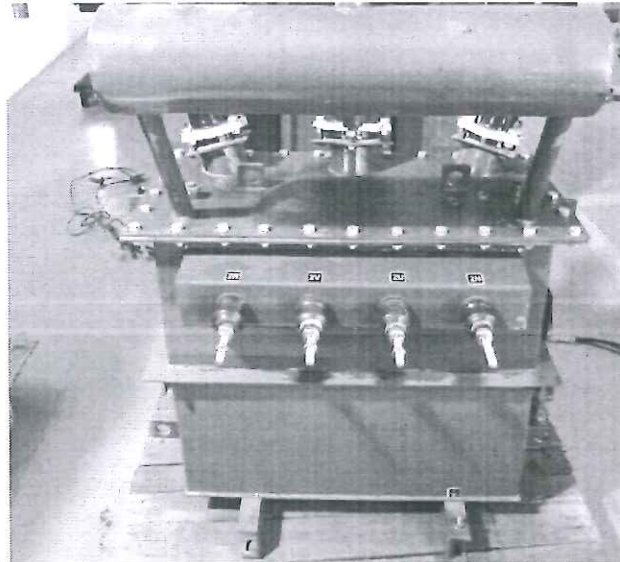


TEST REPORT NO: RP-1718-055518

DATE: 06/02/2018

SHEET 04 OF 04

PHOTOGRAPHS OF TEST SAMPLE & NAME PLATE



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DISTRIBUTION TRANSFORMER

**RAJASTHAN POWERGEN
TRANSFORMER PVT.LTD**

BHINMAL-KAROLA ROAD KAROLA SANCHORE
RAJASTHAN. (INDIA)

IS: 1180



PART-I
CM/L-8400030105

3 PHASE TRANSFORMER		ENERGY EFFICIENCY LEVEL	2
STANDARD	IS:1180 (2014)	MAX. TOTAL LOSSES AT 50% RATED LOAD W	135
KVA	16	MAX. TOTAL LOSSES AT 100% RATED LOAD W	440
VOLTS AT NO LOAD	HV 11000 LV 433	TYPE OF COOLING	ONAN
BIL	HV 75 KVP / 75 KV rms LV - / 3 KV rms	TEMP RISE OIL DEG C	35
AMPERES	HV 0.84 LV 21.33	TEMP RISE WDG DEG C	40
FREQUENCY	50 Hz	MASS OF OIL KGS	70
VECTOR GROUP REF.	Dyn-11	TOTAL MASS KGS	303
IMPEDANCE VOLT %	4.5	VOL. OF OIL L	82
TAPPING	-	MONTH & YEAR OF MFG.	2018
FOR HV VARIATION	SERIAL NO.		RPTPL-0111
IN STEP FROM TO %			

CUSTOMER
ORDER NO.

MADE IN INDIA

Test Report No. RP-1718-055518

Date 06/02/18

Product Transformer

Verified by P. A.

The drawing has been used for reference only.

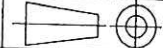
SIZE: 105x105 mm IIOLE CENTER: 95x95 mm

OTE:

RIAL NO, ACTUAL IMPEDANCE(%) VOLTAGE,
EAR OF MANUFACTURE &
ONTH OF MANUFACTURE
LL BE PUNCHED AT THE TIME OF DESPATCH
TERIAL : ANODISED ALUMINIUM SHEET
ICKNESS : 0.9 mm

RAJASTHAN POWERGEN TRANSFORMER PVT.LTD
BHINMAL-KAROLA ROAD KAROLA SANCHORE
RAJASTHAN. (INDIA)

DRN BY		RATING & TERMINAL MARKING PLATE FOR 16 KVA ,11/0.433 KV DISTRIBUTION TRANSFORMER 3 PHASE, ENERGY EFFICIENCY LEVEL-2
CHD BY	S.G.M.	
APPD BY	J.P.C.	

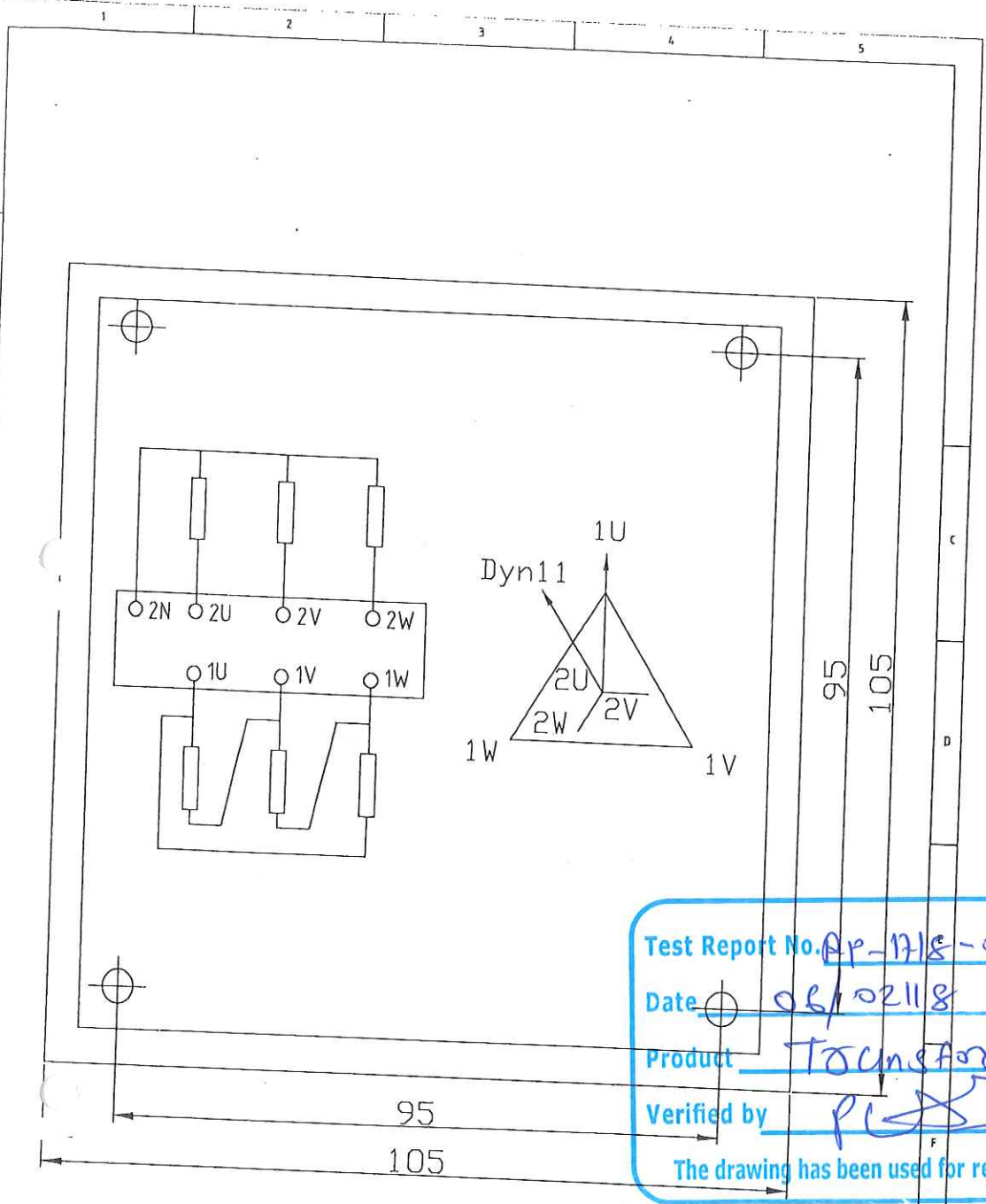


DRG. NO. RPTPL/RP16/01/02/1B

REV. NO.

DATE SIGN	BRIEF DESCRIPTION
01 of 02	

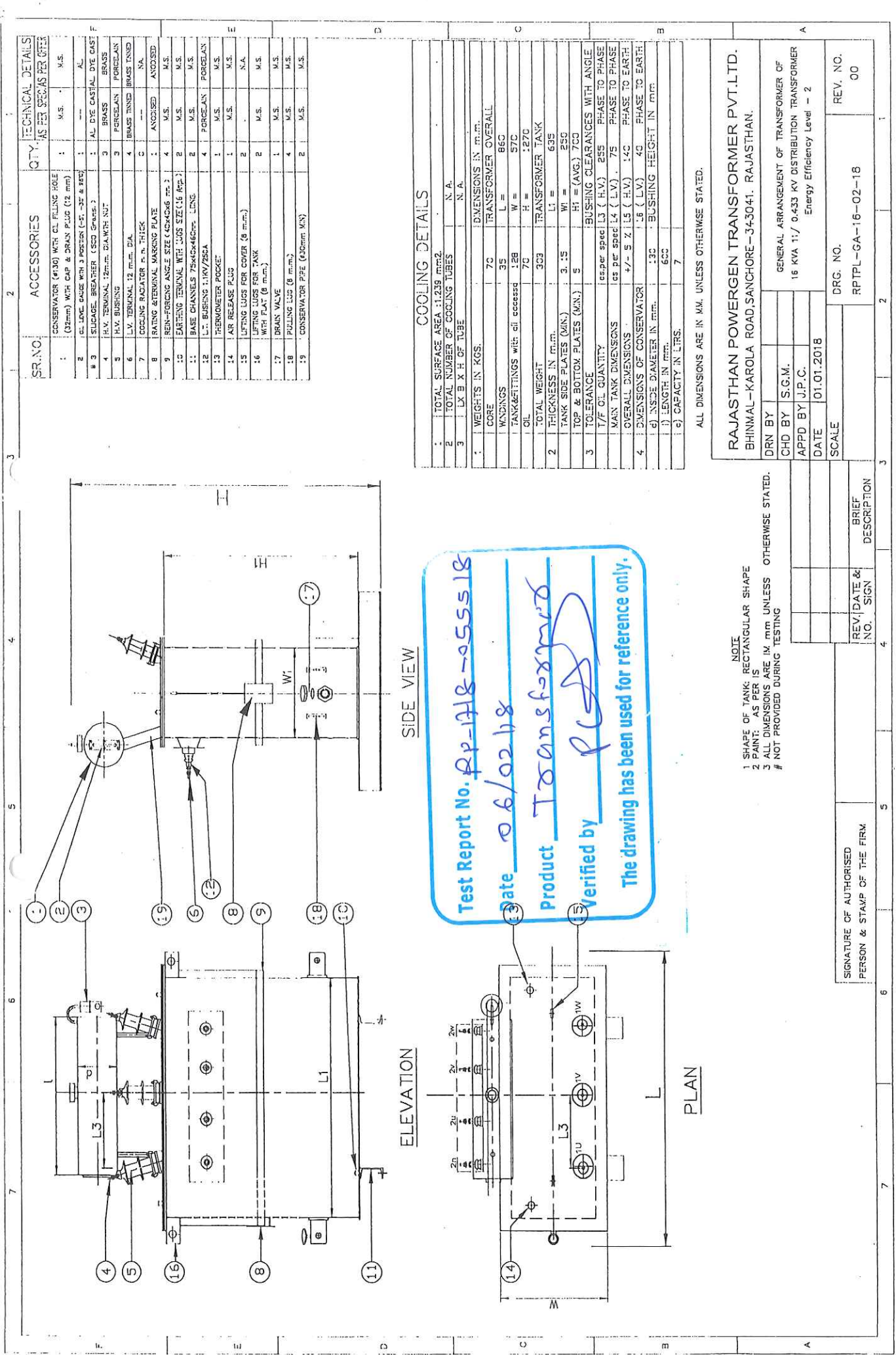
1	2	3	4	5
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SIZE: 105x105 mm HOLE CENTER: 95x95 mm

NOTE:
1. SERIAL NO., ACTUAL IMPEDANCE(%) VOLTAGE,
2. YEAR OF MANUFACTURE &
3. MONTH OF MANUFACTURE
4. SHALL BE PUNCHED AT THE TIME OF DESPATCH
5. MATERIAL : ANODISED ALUMINIUM SHEET
6. THICKNESS : 0.9 mm

RAJASTHAN POWERGEN TRANSFORMER PVT.LTD			
BHINMAL-KAROLA ROAD KAROLA SANCHORE			
RAJASTHAN. (INDIA)			
DRN BY		RATING & TERMINAL MARKING PLATE FOR 16 KVA ,11/0.433 KV DISTRIBUTION TRANSFORMER 3 PHASE, ENERGY EFFICIENCY LEVEL-2	
CHD BY	S.G.M.		
APPD BY	J.P.C.		
DATE	02 of 02	DRG. NO. RPTPL/RP16/02/02/18	
SIGN	BRIEF DESCRIPTION	REV. NO.	



SIDE VIEW

ELEVATION

PLAN

Test Report No. RP-1718-055518
Date 06/02/18
Product Transformer
Verified by [signature]
The drawing has been used for reference only.

SR.NO	ACCESSORIES	QTY.	TECHNICAL DETAILS
1	CONSERVATOR (#130) WITH OIL FILLING HOLE (12mm) WITH CAP & DRAIN PLUG (12 mm)	1	M.S.
2	OIL LEVEL GAUGE WITH 3 POSITION (-5, -25 & +25)	1	M.S.
3	SILICAGE BREATHER (SSO Grams)	1	AL DYE CASTAL DYE CAST
4	H.V. TERMINAL 12mm DIA WITH NUT	3	BRASS
5	H.V. BUSHING	3	POREGLAN
6	L.V. TERMINAL 12 mm DIA	4	BRASS TINED
7	COOLING RADIATOR 12 mm THICK	2	POREGLAN
8	RATING & TERMINAL MARKING PLATE	1	ANODISED
9	REIN-FORCING ANGLE SIZE (42x45x6 mm)	4	M.S.
10	EARTHING TERMINAL WITH LUGS SIZE (16 mm)	2	M.S.
11	BASE CHANNELS 75x45x6mm LONG	2	M.S.
12	L.V. BUSHING 11KV/25CA	4	POREGLAN
13	THERMOMETER POCET	1	M.S.
14	AIR RELEASE PLUG	1	M.S.
15	LIFTING LUGS FOR COVER (8 mm)	2	N.A.
16	LIFTING LUGS FOR TANK WITH FLAT (8 mm)	2	M.S.
17	DRAIN VALVE	1	M.S.
18	PULLING LUG (8 mm)	4	M.S.
19	CONSERVATOR PPE (40mm M.N)	2	M.S.

COOLING DETAILS

1	TOTAL SURFACE AREA	1239 mm ²
2	TOTAL NUMBER OF COOLING TUBES	N.A.
3	L X B X H OF TUBE	N.A.
1	WEIGHTS IN KGS.	DIMENSIONS IN mm.
CORE	70	TRANSFORMER OVERALL
WINDINGS	35	L = 860
TANK&FITTINGS with oil excess	128	W = 570
OIL	70	H = 1270
TOTAL WEIGHT	303	TRANSFORMER TANK
TANK THICKNESS IN mm.	3.15	L1 = 635
TANK SIDE PLATES (M.N.)	5	W1 = 250
TOP & BOTTOM PLATES (M.N.)	5	H1 = (AVG.) 700
T/OIL QUANTITY	100 per spec L3 (H.V.)	255 PHASE TO PHASE
MAIN TANK DIMENSIONS	100 per spec L4 (L.V.)	75 PHASE TO PHASE
OVERALL DIMENSIONS	+/- 5 %	L5 (H.V.) 140 PHASE TO EARTH
DIMENSIONS OF CONSERVATOR	130	L6 (L.V.) 40 PHASE TO EARTH
d) INSIDE DIAMETER IN mm.	600	BUSHING HEIGHT IN mm
f) LENGTH IN mm.	7	
g) CAPACITY IN LTRS.	7	

ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE STATED.

RAJASTHAN POWERGEN TRANSFORMER PVT.LTD.
BHINMAL-KAROLA ROAD,SANCHORE-343041, RAJASTHAN.

DRN BY	SG.M.	GENERAL ARRANGEMENT OF TRANSFORMER OF
CHD BY	J.P.C.	16 KVA 11/ 0.433 KV DISTRIBUTION TRANSFORMER
APPD BY	J.P.C.	Energy Efficiency Level - 2
DATE	01.01.2018	

SCALE	DRG. NO.	REV. NO.
	RP1PL-GA-16-02-18	00

NOTE
1 SHAPE OF TANK: RECTANGULAR SHAPE
2 PAINT: AS PER IS
3 ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
NOT PROVIDED DURING TESTING

SIGNATURE OF AUTHORISED PERSON & STAMP OF THE FIRM	REV. DATE & NO.	SIGN	BRIEF DESCRIPTION