JAY BEE INDUSTRIES
Village- Batwal, Raipur Rani, Panchkula (Haryana) -134204

INSPECTION REPORT OF 3 PHASE DISTRIBUTION TRANSFORMER

Customer	: M/s- SHWETECH TECHNOLOGY PVT. LTD.	Sr. No	:	100024032	(Copper wound)
End Customer	:	Date of Inspection	:	29.08.2024	
P.O. No.	:	EEL	:	2	

TECHNICAL DETAILS OF TRANSFORMER

RATED POWER	: 1000 kVA	CONNECTION / VECTOR GROUP		:	Dyn-11
RATED VOLTAGE		TYPE OF COOLING		:	ONAN
HV	: 11000 Volt	TAPPING RANGE		:	5 % to -5%
LV	: 433 Volt	BIL	HV	:	28 rms / 75kVP
RATED CURRENT			LV	:	3KV rms
HV	: 52.49 Amp.	FREQUENCY		:	50 Hz
LV	: 1333.41 Amp.	REF. STANDARD		:	IS 1180
MAXIMUM LOSSES AS PER GTP. / DRG. / IS :		Temp. Rise in Oil		:	40°C
TOTAL LOSSES AT 50% LOAD	: 2620W	Temp. Rise in Winding		:	45°C
TOTAL LOSSES AT 100% LOAD	: 7000W	IMPEDANCE (%Z) at 75 °C in %		:	5.0

ROUTINE TEST

1. WINDING RESISTANCE AT 32 °C

TAP POSTION		LV Winding Resistance (mΩ)			HV Winding Resistance (Ω)		
		2u-2v	2v-2w	2w-2u	1U-1V	1V-1W	1W-1U
3		0.7475	0.7490	0.751	0.5850	0.5886	0.591

2. VOLTAGE RATIO (TURN RATIO) MEASURMENT : (HV/LV) 11/.433kV (5.0% to -10.0 % IN STEP 2.5 %) TOL. AS PER IS

TAP POSTION	IN %	RATED VOLTAGE RATIO	1U-1V / 2u-2n	1V-1W / 2v-2n	1W-1U / 2w-2n
1	5.0	46.20	46.28	46.28	46.27
2	2.5	45.10	45.17	45.16	45.16
3	NOR	44.00	44.06	44.06	44.06
4	-2.5	42.90	42.96	42.96	42.96
5	-5.0	41.80	41.85	41.85	41.86
6	-7.5	40.70	40.74	40.75	40.74
7	-10.0	39.60	39.63	39.64	39.63

3. VERIFICATION OF VECTOR GROUP :- Dyn 11

Connect 1U & 2u, Keep the Neutra floating an 3 phase , 400 voltage aplied to HV Side and measured the Voltage

Condition of group 1V-2v = 1V2w, 1W2v >1W2w

Measured Value in Volt

1V-2w =	389	1V-2v =	389	1W2v =	401	1W2w = 389

3.1 MAGNETIC BALANCE TEST OF TRANSFORMER

	Applied Voltage	Measured Voltage		
		1U-1V	1V-1W	1W-1U
	U-V	402	300	102
	V-W	200	402	202
	W-U	100	301	401

Note- The test has been carried out and found satisfactory.

Tested by

Er. Daljeer Singh
Jay Bee Industries.

Inspecting Officers

Mr. Manoj
JE, HAFED

Mr. Aman
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4. NO LOAD CURRENT AND LOSSES AT RATED VOLATE AND FREQUENCY

APPLIED VOLTAGE (p-N)	MEASURED CURRENT I avg. IN Amp.	Frequency in Hz	LOSSES MEASURED IN WATTS
250.0	13.17	50	954

5. MEASURMENT OF IMPEDANCE VOLTAGE / SHORT CIRCUIT IMPEDANCE & 100 % LOAD LOSSES AT 32 °C

Tap position	Test current (amp.) I Avg.	Test voltage (P-N) V Avg.	Freq. Hz	Measured losses at ambient Temprature In watts	Calculated Load losses at 75 Deg. C in Watts	% Impedance at 75 Deg. C
3	52.49	310	50	5100	5921.348315	4.9750

6. MEASURMENT OF IMPEDANCE VOLTAGE / SHORT CIRCUIT IMPEDANCE & 50 % LOAD LOSSES AT 32 °C

Tap position	Test current (amp.) I Avg.	Test voltage (V) V Avg.	Freq. Hz	Measured losses at ambient Temprature In Watts	Calculated Load losses at 75 Deg. C in Watts	
3	26.245	142.717	50	1275	1480.337079	

7. TOTAL LOSSES AT 75°C (At 50% Load) = 2434.337079 Watts

8. TOTAL LOSSES AT 75 °C (At 100% Load) = 6875.348315 Watts

9. SEPERATE SOURCE POWR FREQUENCY WITHSTAND TEST

SR. NO.	Test	Applied Voltage In kV	Duration in Sec.	Remarks
a	Between HV winding and LV winding Connected to the Frame and Earth	28	60	ok
b	Between LV winding and HV winding Connected to the Frame and Earth	3	60	ok

10. INDUCE OVER VOLTAGE TEST

Test	Applied Voltage	Applied Frequency	Duration in Sec.	Remarks
Between LV winding with frame coonected to the Earth	866 Volt (P-P)	125Hz	48 Sec.	ok

11. INSULATION RESISTANCE TEST

Between	Applied Voltage	Measure Value
HV-Earth	2500	4000.0 MΩ
LV-Earth	2500	3000.0 MΩ
HV-LV	2500	5000.0 MΩ

Note- The test has been carried out and found satisfactory.

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