

UNIMAG POWER TRANSFORMER PVT LTD

UNIMAG
POWER

Unit I : 26/A, II PHASE, PEENYA INDUSTRIAL AREA, BANGALORE-INDIA.
Unit II : PLOT NO. 37, SECTOR-8A, INDUSTRIAL AREA HARIDWAR



Licensed Mfg.
UNIVERSAL
POWER

WORKS / CUSTOMER'S INSPECTION TEST REPORT FOR TRANSFORMER

Customer :-	M/s. Shree Electricals & Engineers				Page No	1 of 2
Transformer No	OPGB00167/0001	KVA:	2500	Tested On :	24.07.2017	Std. Ref
Wdg	VOLTS	AMPERES	COOLING	FREQUENCY IN Hz	VECTOR GROUP	IS 1180
HV	33000	43.74	ONAN	50	DYN11	
LV	433	3333.43		Class of Insulation A		
1 MEASUREMENT OF WINDING RESISTANCE			Ambient Temp:		Top Oil Temp.	
1.1 HV Winding:			27	Deg. C.	27	Deg. C.
Tap no	1U-1V	1V-1W	1W-1U	Avg per ph		
5	2.5780	2.6030	2.5840	3.8825	Ohms	
1.2 L.V. Winding :						
TAP	2U-2N	2V-2N	2W-2N	Avg per ph		
---	0.2050	0.2003	0.2080	0.2044	milli Ohms	
2.Measurement of load loss and impedance :			Supply to : HV		Short : LV	
AMBIENT:	27	Deg. C.		top oil temp:	27	Deg. C.
POWER ANALYSER READING						
Tap no	Winding	Voltage in Volts	Current in amps	Load Losses in KW		
5 50% LOAD	U Ph	1064.05	22.04	W1	1.223	
	V Ph	1101.03	22.43	W2	1.323	
	W Ph	1090.61	22.31	W3	1.105	
	Avg	1085.23	22.26	W1+W2+W3	3.651	
5 100% LOAD	U Ph	2115.64	43.79	W1	4.874	
	V Ph	2145.26	43.68	W2	5.038	
	W Ph	2151.66	44.02	W3	4.523	
	Avg	2137.52	43.83	W1+W2+W3	14.435	
3.Measurement of no Load Loss and no Load Current			Supply to : LV		Open : HV	
POWER ANALYSER READING				Frequency : 50.10 Hz		
% of voltage	Winding	Voltage in Volts	Current in amps	No Load Losses in KW		
100	U Ph	428.74	4.34	W1	0.784	
	V Ph	436.03	3.29	W2	0.466	
	W Ph	435.72	4.86	W3	0.684	
	Avg	433.50	4.16	W1+W2+W3	1.934	
4. Measurement of Insulation resistance in G ohms						
Megger used	HV to LV	HV to EARTH	LV to EARTH	AMBIENT:	27	Deg. C.
2500 V (DC)	21.50 G OHMS	16.33 G OHMS	10.68 G OHMS	top oil temp:	27	Deg. C.
5.1 Dielectric Tests for 60 Seconds						
Winding	HV to EARTH	Result	LV to EARTH	Result		
Applied in KV	70	WITHSTOOD	3	WITHSTOOD		
Tested by : SURESHA M K		Tests Witnessed by				
Name		Signature				
Mr. Saravana Kumar.B		[Signature]				
M/s BVIL		[Signature]				
For UMPT Bangalore		[Signature]				
24.07.2017		[Signature]				

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5.2 Dielectric Tests for oil :		60		kv applied between two 12.5mm dia brass electrodes set at 2.5mm gap		
Result :		WITHSTOOD		Insulating Oil conforms to IS 335/IEC 296		
5.3. Induced Over Voltage Test :				Frequency : 99.94		Duration in sec 60
Supply to : LV		Voltage applied 866 V		Result WITHSTOOD		
6. Turns ratio test:		TAP RANGE: +5% to -15% insteps of 1.25%				
Tap	U-PHASE	V-PHASE	W-PHASE	7.Vector Group Test	VECTOR GROUP	DYN11
1	138.60	138.60	138.60	Supply to	HV	
2	136.90	136.90	136.90	Short	1U-2N	
3	135.30	135.30	135.30	1U - 1V	462	V
4	133.60	133.60	133.60	1V - 1W	459	V
5	132.00	132.00	132.00	1W - 1U	460	V
6	130.30	130.30	130.30	Measured voltage		Condition
7	128.70	128.70	128.70	1W-2W	457	V Min
8	127.00	127.00	127.00	1V-2W	462	V Equal
9	125.40	125.40	125.40	1V - 2V	462	V Equal
10	123.70	123.70	123.70	1V - 2U	467	V Max.
11	122.10	122.10	122.10	Results	FOUND OK	
12	120.40	120.40	120.40	MAGNETIC BALANCE TEST		
13	118.80	118.80	118.80	1U - 1V	1V - 1W	1U - 1W
14	117.10	117.10	117.10	461*	339	122
15	115.50	115.50	115.50	233	461*	227
16	113.80	113.80	113.80	105	355	461*
17	112.20	112.20	112.20			
				* Applied Voltage		

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8. TEST RESULTS AT NORMAL TAP POSITION	GTP VALUE	Actual Value	
a) TOTAL LOAD LOSSES AT 75 °c.	----	16963.66	Watts
b) NAME PLATE % IMPEDANCE AT 75 DEG.C	6.25 IS TOL	6.47	%
c) NO LOAD LOSSES AT 50Hz & RATED VOLTAGE	----	1928.50	Watts
d) TOTAL LOSSES @100 %	19888W MAX	18892.16	Watts
e) TOTAL LOSSES @50 %	6611W MAX	6597.18	Watts
f) % OF EFFICIENCY @ 100% LOAD @ UPF	---	99.25	%
g) DIMENTIONS ARE AS PER G.A.DRG No:	A/317 202 R1	FOUND OK	

REMARKS: THE TRANSFORMER HAS PASSED THE REQUIRED INSPECTION AND TESTS AS PER THE ACCEPTANCE CRITERIA OF THE APPLICABLE STANDARDS

Tested by : SURESHA M K

Tests Witnessed by

Name
Mr. Saravana Kumar.B
M/s BVIL

Signature

For UMPT Bangalore
24.07.2017



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Unit II : PLOT NO. 37,SECTOR-8A,INDUSTRIAL AREA HARIDWAR

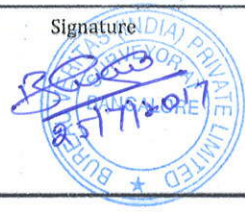
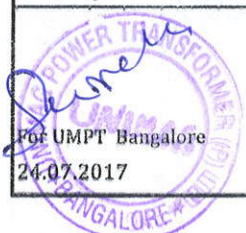


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WORKS / CUSTOMER'S INSPECTION TEST REPORT FOR TRANSFORMER

Customer :-	M/s. Shree Electricals & Engineers				Page No	1 of 2
Transformer No:	OPGB00167/0002	KVA:	2500	Tested On :	24.07.2017	Std. Ref
Wdg	VOLTS	AMPERES	COOLING	FREQUENCY IN Hz	VECTOR GROUP	IS 1180
HV	33000	43.74	ONAN	50	DYN11	
LV	433	3333.43	Class of Insulation : A			
1 MEASUREMENT OF WINDING RESISTANCE			Ambient Temp:		Top Oil Temp.	
1.1 HV Winding: K,M			27	Deg. C.	44	Deg. C.
Tap no	1U-1V	1V-1W	1W-1U	Avge per ph		
5	2.6580	2.6620	2.6560	3.9880	Ohms	
1.2 L.V. Winding :						
TAP	2U-2N	2V-2N	2W-2N	Avge per ph		
---	0.2338	0.2300	0.2189	0.2276	milli Ohms	
2.Measurement of load loss and impedance :			Supply to : HV		Short : LV	
AMBIENT:	27	Deg. C.	top oil temp:		44	Deg. C.
POWER ANALYSER READING						
Tap no	Winding	Voltage in Volts	Current in amps	Load Losses in KW		
5 50% LOAD	U Ph	1061.27	22.41	W1	1.381	
	V Ph	1097.71	23.30	W2	1.233	
	W Ph	1018.50	21.92	W3	0.936	
	Avg	1059.16	22.54	W1+W2+W3	3.550	
5 100% LOAD	U Ph	2043.93	43.15	W1	5.543	
	V Ph	2088.10	44.31	W2	4.646	
	W Ph	2031.98	43.79	W3	5.277	
	Avg	2054.67	43.75	W1+W2+W3	15.466	
3.Measurement of no Load Loss and no Load Current			Supply to : LV		Open : HV	
POWER ANALYSER READING				Frequency : 50.10 Hz		
% of voltage	Winding	Voltage in Volts	Current in amps	No Load Losses in KW		
100	U Ph	429.88	6.07	W1	0.841	
	V Ph	435.22	5.11	W2	0.410	
	W Ph	435.04	7.28	W3	0.687	
	Avg	433.38	6.15	W1+W2+W3	1.938	
4. Measurement of Insulation resistance in G ohms						
Megger used	HV to LV	HV to EARTH	LV to EARTH	AMBIENT:	27	Deg. C.
2500 V (DC)	17.77 G OHMS	14.18 G OHMS	9.59 G OHMS	top oil temp:	44	Deg. C.
5.1 Dielectric Tests for 60 Seconds						
Winding	HV to EARTH	Result	LV to EARTH	Result		
Applied in KV	70	WITHSTOOD	3	WITHSTOOD		
Tested by :	SURESHA M K			Tests Witnessed by		
Name		Signature				
Mr. Saravana Kumar.B						
M/s BVIL						
For UMPT Bangalore						
24.07.2017						

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5.2 Dielectric Tests for oil :		60 kv applied between two 12.5mm dia brass electrodes set at 2.5mm gap	
Result :	WITHSTOOD		Insulating Oil conforms to IS 335/IEC 296
5.3. Induced Over Voltage Test :		Frequency :	99.94 Duration in sec 60
Supply to : LV	Voltage applied	866 V	Result WITHSTOOD
6. Turns ratio test:		TAP RANGE: +5% to -15% insteps of 1.25%	
Tap	U-PHASE	V-PHASE	W-PHASE
1	138.60	138.60	138.60
2	136.90	136.90	136.90
3	135.30	135.30	135.30
4	133.60	133.60	133.60
5	132.00	132.00	132.00
6	130.30	130.30	130.30
7	128.70	128.70	128.70
8	127.00	127.00	127.00
9	125.40	125.40	125.40
10	123.70	123.70	123.70
11	122.10	122.10	122.10
12	120.40	120.40	120.40
13	118.80	118.80	118.80
14	117.10	117.10	117.10
15	115.50	115.50	115.50
16	113.80	113.80	113.80
17	112.20	112.20	112.20
7. Vector Group Test :			
Supply to HV		VECTOR GROUP DYN11	
Short		1U-2N	
1U - 1V		473 V	
1V - 1W		470 V	
1W - 1U		470 V	
Measured voltage		Condition	
1W-2W		467 V Min	
1V-2W		472 V Equal	
1V - 2V		472 V Equal	
1V - 2U		477 V Max.	
Results		FOUND OK	
MAGNETIC BALANCE TEST			
1U - 1V		1V - 1W	
470*		344	
247		468*	
106		359	
* Applied Voltage			
8. TEST RESULTS AT NORMAL TAP POSITION			
a) TOTAL LOAD LOSSES AT 75 °c.		GTP VALUE	Actual Value
b) NAME PLATE % IMPEDANCE AT 75 DEG.C		6.25 IS TOL	6.23
c) NO LOAD LOSSES AT 50Hz & RATED VOLTAGE		---	1932.49
d) TOTAL LOSSES @100 %		19888W MAX	19056.80
e) TOTAL LOSSES @50 %		6611W MAX	6600.35
f) % OF EFFICIENCY @ 100% LOAD @ UPF		---	99.24
g) DIMENTIONS ARE AS PER G.A.DRG No:		A/317 202 R1	FOUND OK
REMARKS: THE TRANSFORMER HAS PASSED THE REQUIRED INSPECTION AND TESTS AS PER THE ACCEPTANCE CRITERIA OF THE APPLICABLE STANDARDS			
Tested by : SURESHA M K		Tests Witnessed by	
Name		Signature	
Mr. Saravana Kumar.B		25/7/2017	
M/s BVIL			

Format No. 5.5/a R3 did.



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Unit II : PLOT NO. 37, SECTOR-8A, INDUSTRIAL AREA HARIDWAR



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WORKS / CUSTOMER'S INSPECTION TEST REPORT FOR TRANSFORMER

Customer :-	M/s. Shree Electricals & Engineers				Page No	1 of 2
Transformer No:	OKGB00170/0001	KVA:	800	Tested On :	24.07.2017	Std. Ref
Wdg	VOLTS	AMPERES	COOLING	FREQUENCY IN Hz	VECTOR GROUP	IS 1180
HV	33000	14.00	ONAN	50	DYN11	
LV	433	1066.70		Class of Insulation : A		

1 MEASUREMENT OF WINDING RESISTANCE			Ambient Temp:		Top Oil Temp.	
1.1 HV Winding:			26	Deg. C.	26	Deg. C.
Tap no	1U-1V	1V-1W	1W-1U	Avg per ph		
5	8.1400	8.1390	8.1490	12.2140	Ohms	
1.2 L.V. Winding :						
TAP	2U-2N	2V-2N	2W-2N	Avg per ph		
---	0.5817	0.5686	0.5797	0.5767	milli Ohms	
2.Measurement of load loss and impedance :			Supply to : HV		Short : LV	
AMBIENT:	26	Deg. C.		top oil temp:	26	Deg. C.

POWER ANALYSER READING

Tap no	Winding	Voltage in Volts	Current in amps	Load Losses in KW	
5 50% LOAD	U Ph	845.04	6.97	W1	0.373
	V Ph	860.22	7.17	W2	0.361
	W Ph	835.01	6.98	W3	0.287
	Avg	846.76	7.04	W1+W2+W3	1.021
5 100% LOAD	U Ph	1676.92	13.83	W1	1.650
	V Ph	1703.08	14.19	W2	1.570
	W Ph	1683.33	14.07	W3	1.770
	Avg	1687.78	14.03	W1+W2+W3	4.990

3.Measurement of no Load Loss and no Load Current	Supply to : LV	Open : HV
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POWER ANALYSER READING

% of voltage	Winding	Voltage in Volts	Current in amps	Frequency :	50.10 Hz
100	U Ph	429.76	3.26	No Load Losses in KW	
	V Ph	434.70	2.46	W1	0.502
	W Ph	435.39	3.92	W2	0.186
	Avg	433.28	3.21	W3	0.353
				W1+W2+W3	1.041

4. Measurement of Insulation resistance in G ohms

Megger used	HV to LV	HV to EARTH	LV to EARTH	AMBIENT:	26 Deg. C.
2500 V (DC)	21.30 G OHMS	6.48 G OHMS	17.30 G OHMS	top oil temp:	26 Deg. C.

5.1 Dielectric Tests for 60 Seconds

Winding	HV to EARTH	Result	LV to EARTH	Result
Applied in KV	70	WITHSTOOD	3	WITHSTOOD

Tested by : SURESHA M K

Tests Witnessed by

Name

Signature

Mr. SARAVANA KUMAR.B
M/s BVIL

For UMPT Bangalore
24.07.2017

Format No. 5.5/a R3 dtd. 01/06/2013

5.2 Dielectric Tests for oil :		62 kv applied between two 12.5mm dia brass electrodes set at 2.5mm gap	
Result :		WITHSTOOD Insulating Oil conforms to IS 335/IEC 296	
5.3. Induced Over Voltage Test :		Frequency :	99.94 Duration in sec 60
Supply to : LV	Voltage applied	866 V	Result WITHSTOOD
6. Turns ratio test:		TAP RANGE: +5% to -15% insteps of 1.25%	
Tap	U-PHASE	V-PHASE	W-PHASE
1	138.60	138.60	138.60
2	136.90	136.90	136.90
3	135.30	135.30	135.30
4	133.60	133.60	133.60
5	132.00	132.00	132.00
6	130.30	130.30	130.30
7	128.70	128.70	128.70
8	127.00	127.00	127.00
9	125.40	125.40	125.40
10	123.70	123.70	123.70
11	122.10	122.10	122.10
12	120.40	120.40	120.40
13	118.80	118.80	118.80
14	117.10	117.10	117.10
15	115.50	115.50	115.50
16	113.80	113.80	113.80
17	112.20	112.20	112.20
7.Vector Group Test :			
Supply to HV		VECTOR GROUP DYN11	
Short 1U-2N		Measured voltage Condition	
1U - 1V 456 V		1W-2W 454 V Min	
1V - 1W 458 V		1V-2W 456 V Equal	
1W - 1U 457 V		1V - 2V 456 V Equal	
Results FOUND OK		V Max.	
MAGNETIC BALANCE TEST			
1U - 1V		1V-1W 1W-1U	
460*		368 89	
217		461* 244	
123		333 460*	
* Applied Voltage			
8. TEST RESULTS AT NORMAL TAP POSITION			
GTP VALUE		Actual Value	
a)TOTAL LOAD LOSSES AT 75 °c.		5689.25 Watts	
b) NAME PLATE % IMPEDANCE AT 75 DEG.C		5.00 IS TOL 5.11 %	
c) NO LOAD LOSSES AT 50Hz & RATED VOLTAGE		1038.04 Watts	
d) TOTAL LOSSES @100 %		6882W MAX 6727.29 Watts	
e)TOTAL LOSSES @50 %		2455W MAX 2415.07 Watts	
f) % OF EFFICIENCY @ 100% LOAD @ UPF		99.17 %	
g) DIMENTIONS ARE AS PER G.A.DRG No:		A/317 203 R2 FOUND OK	
REMARKS: THE TRANSFORMER HAS PASSED THE REQUIRED INSPECTION AND TESTS AS PER THE ACCEPTANCE CRITERIA OF THE APPLICABLE STANDARDS			
Tested by : SURESHA M K		Tests Witnessed by	
Name		Signature	
Mr. SARAVANA KUMAR.B			
M/s BVIL			