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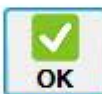
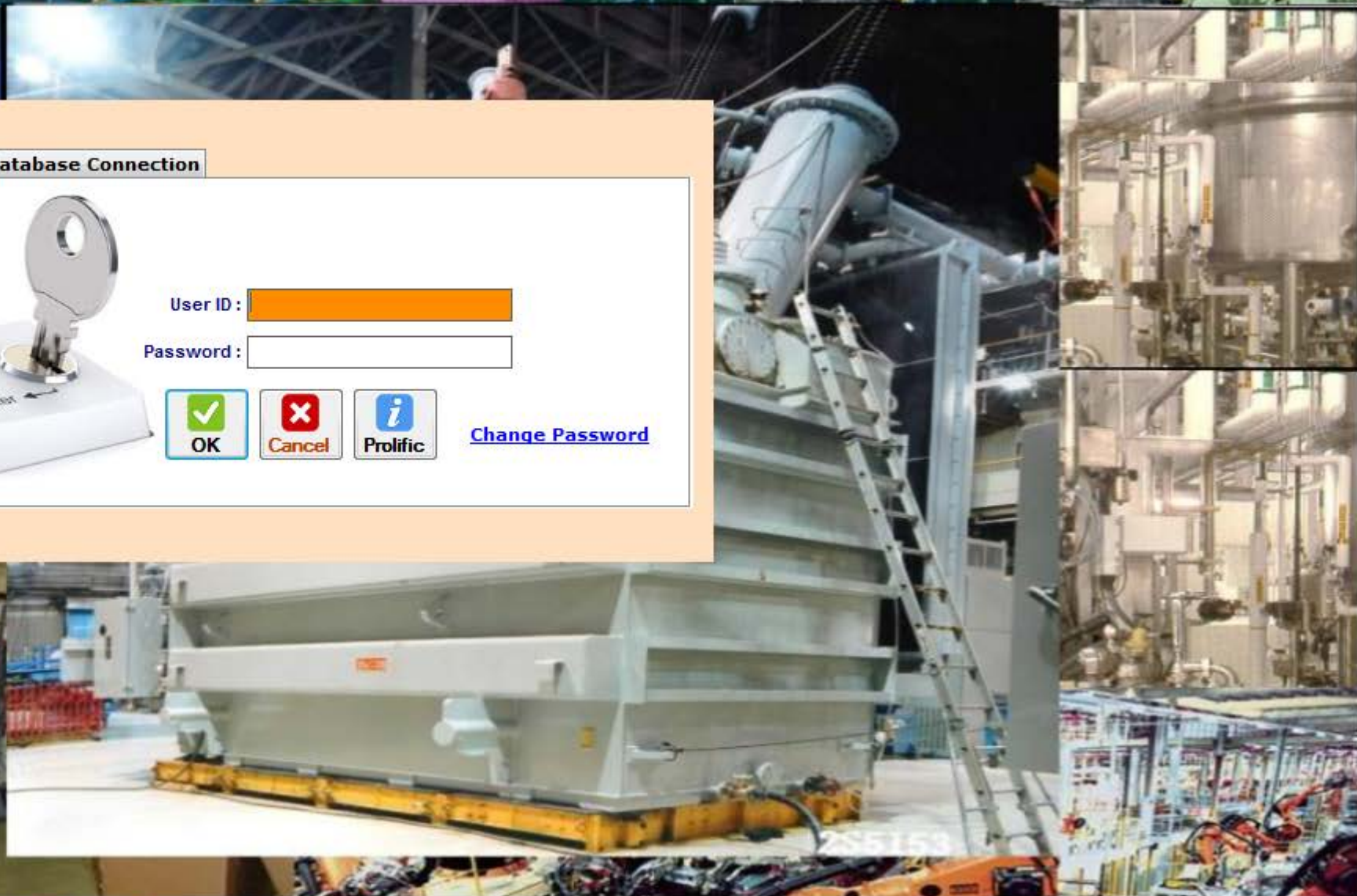


Login Database Connection



User ID :

Password :

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Instruments Used For Testing

INSTRUMENT TYPE	INSTRUMENT MAKE	TYPE OF CONNECTION	PORT NAME	PC NAME	ACTIVE
Resistance Meter ▼	TINSLEY 5815 ▼	GPIB ▼	15 ▼	DOTNET-3 ▼	☐
Power Analyser ▼	AV Power ▼	USB ▼	▼	DESKTOP-MB1HPPF ▼	☐
Temperature Scanner ▼	NIPPON ▼	USB ▼	▼	DESKTOP-MB1HPPF ▼	☐



Close



Add Row



Del. Row



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- Report Header
- Formulae Sheet For Losses
- Formulae Sheet For Temp.Rise
- User details
- DataBase BackUp
- Analysis Report
- View Calibration status list
- Vector Label and Image Maintenance
- Web Upload

- Restore Database Backup
- Control Panel
- Language Setting Panel
- Third Party Server Mapping
- Equipment Rating
- CT Ratio / PT Ratio Rating
- Fault Diagnosis Trail

ies Pvt. Ltd.



Work Order Entry

Work Order Entry

* Sales Order Number :	ET10575-00	Serial Number :	ET10575/2-00
Unit :	1	Rev No./DQM No :	-
Job Rating :	THREE PHASE TWO WINDING	* Root 3 :	1.732
* Customer :	TOSHIBA T & D SYSTEM ASIA SDN BHD A/C TNB, MALAYSIA	TOSHIBA T & D SYSTEM ASIA/	
LAO Ref No. :	-		
* Ref. Standard :	IEC:60076	☐ * Type Of Transformer :	PT
Other Std. :	-	Ref. :	CGL/T1/TTR/ET10575/1
* Type of Inspection :	Final Inspection	Testing date From :	04/11/2016 To : 06/17/2016
☐ Approved By :	Pravin Zagade	Sr.Manager	Issue Date : 04/11/2016
☐ Checked By :	--	False	☐ Recommended By : -- False
Witnessed By-Name :	-	-	-
Designation :	-	-	-
Performance :	-		
Transformer Make :	-		
Job Type :	Manufacturer	* Rating Unit :	MVA
Note :	-		
	-		
	-		
	-		

Report Setting

☐ Tested By :

 Clear	 Cancel	 Save	 Print	 Close	 Next	 Delete	 Save As	 Search
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Work Order Display

Work Order Display

Work Order	Serial No	Job Rating	Issue Date	Inspection	kV	Rating	Ref. Std.
Customer12345	Cust 12345	2500	2016-06-28 12:17 PM	Final Inspection	52	100 [MVA]	IEC:60076
ssssssss	ssssssssssss	-	2016-06-27 12:04 PM	Final Inspection	50	100 [MVA]	IEC:60076
sa1234	sa1234	-	2016-06-24 3:22 PM	Final Inspection	123	1000 [MVA]	IS:11171
s2	s2	-	2016-06-24 11:38 AM	Final Inspection	22	2000 [KVA]	IEC:60076
s	s	2000	2016-06-24 11:17 AM	Final Inspection	22	2000 [MVA]	IS:2026
Amol-Test	Amol-Test-1	2000	2016-06-22 3:24 PM	Final Inspection	22	2000 [KVA]	IS:2026
sa	sa	THREE PHASE TW...	2016-06-16 1:59 PM	Final Inspection	69	30 [MVA]	IEC:60076
ET10552-akshay	ET10552/2-akshay	THREE PHASE TW...	2016-06-14 12:02 PM	Final Inspection	69	30 [MVA]	IEC:60076
akshay-2	akshay-3	-	2016-06-13 11:25 AM	Final Inspection	288.683602771363	250 [MVA]	IEC:60076
ET09912-s	ET09912/1.21-s	1 Ph 3 Wdg Transf...	2016-06-06 12:59 PM	Final Inspection	132.790623827257	65 [MVA]	ANSI / IEEE:C57
sagar	sager	-	2016-05-26 11:46 AM	Final Inspection	132	23 [MVA]	IEC:60076
AkshayTest	ET10194-Akshaytest	-	2016-05-25 12:08 PM	Final Inspection	132	23 [MVA]	IEC:60076
S1-1	S1-1	-	2016-05-21 6:00 PM	Final Inspection	33	30 [MVA]	IEC:60076
ET10194-A	ET10194-A-1	1	2016-05-20 1:39 PM	Final Inspection	132	23 [MVA]	IEC:60076
S1	S1	-	2016-05-19 9:56 AM	Final Inspection	33	30 [MVA]	IEC:60076
asasas	-asaas	asasasas	2016-05-18 1:39 PM	Final Inspection			IEC:60076
C-09116-5	C-09116-5-1A	54000/72000/90000	2016-05-13 2:45 PM	Final Inspection	230	90000 [KVA]	ANSI / IEEE:C57
C-09116-5-A	C-09116-5-1-A	54000/72000/90000	2016-05-11 12:46 PM	Final Inspection	230	90000 [KVA]	ANSI / IEEE:C57
C-0967-5	C-0967-5-1aa	-	2016-05-09 3:59 PM	Final Inspection	68.8	56000 [KVA]	ANSI / IEEE:C57
ET10176-a	ET10176/6-a	THREE PHASE TW...	2016-04-26 10:30 AM	Final Inspection	66	23 [MVA]	IEC:60076
C-0967-5	C-0967-5-1a	-	2016-04-23 3:35 PM	Final Inspection	68.8	56000 [KVA]	ANSI / IEEE:C57

Clear
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Transformer Rating Data Sheet

Transformer Rating 1

Transformer Rating 2

Guaranteed Values

Design Parameters

Phase(s) :

Three

Type :

Two Winding

Vector :

YNd1

Winding Designation :

Primary :

HV

Secondary :

LV

Tertiary :

-

Terminal Notation :

1U1

1V1

1W1

1N

2U1

2V1

2W1

Rated Capacity and Type of Cooling MVA

MVA

MVA

MVA

ONAN

60

60

0

ONAF

90

90

0

0

0

0

0

0

0

Rated Parameters

Dual Volt

Dual Volt

Dual Volt

Rated Voltage (kV) :

132

0

33

0

0

0

Rated Current (A) :

393.66

0

1574.64

0

0

0

Connection :

STAR

DELTA

Winding Material :

COPPER

COPPER

Select One

☐ Conn. in 3 Phase Bank

Frequency [Hz] :

50

Ref. Temp. [°C] :

75

Voltage Class [kV] :

145



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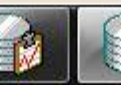
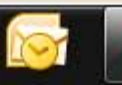
Close



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Guaranteed



Transformer Rating Data Sheet

Transformer Rating 1 Transformer Rating 2 Guaranteed Values

Insulation Levels (kV)

	HV			LV			Ter (LV) / Aux.		
	LI :	SI :	AC :	LI :	SI :	AC :	LI :	SI :	AC :
Line Terminals :	650	-	275	200	-	70	0		0
Neu. Terminals :	200		70	0		0	0		0

Primary

☐ FW/CW ☒ None

Primary(N)

☐ FW/CW ☒ None

Secondary

☐ FW/CW ☒ None

Secondary(N)

☐ FW/CW ☒ None

Type of Tap Changer : OLTC

☐ Multi Tap

Tap Changer

☒ Linear ☐ Reversing

Voltage Variation

OLTC Taps Provided on HV Winding for Variation of HV Voltage 10 % To -15 % In 1.667 % Steps In 15 steps

Resistance (Only for Star Winding)

☐ Ph - Ph ☒ Ph - N

Guaranteed Temperature Rise

Temperature Rise [° C]

Oil : 55

Winding : 60

☐ Auxillary Winding For Testing Purpose [V]

0

Insulation Class : A

Note :



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Guaranteed



Transformer Rating Data Sheet

Transformer Rating 1 Transformer Rating 2 **Guaranteed Values**

No Load Loss Guaranteed Figures

% Volt	Guar. Losses (kW)		Guar. Current(%)	
90			0	
100		Tolerance (%)	0	Tolerance (%)
110			0	

Load Loss Guaranteed Figures

TestBetween HV/LV

		Guar. Values at Ref. Temp.				Guar. Values at Amb. Temp.				
Tap No.	MVA	% v _Z	Tol.	IEC TOL	Guar. Loss	Tol.	Max	Guar. Loss	Tol.	+
1	90	12.5		max	262		max	0		0
7		13.5		max	250		max	0		0
16		12.5		max	320		max	0		0



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Guaranteed



Measurement of Voltage Ratio

Ref. Standard:

Decimal Places : 4 Test Date : 11/19/2015

HV/LV(132/33kV)

Tap No.	Voltage(KiloVolts)		Calculated Ratio	Measured Ratio			Tolerance Acceptance Criteria :
	☐ HV	LV		1U1-1N	1V1-1N	1W1-1N	
				2U1-2V1	2V1-2W1	2W1-2U1	+/- 0.5 %
1	145.2000	33.0000	2.5404	2.5352	2.5357	2.5371	2.5277 to 2.5531
2	142.9956	33.0000	2.5018	2.4972	2.4968	2.4972	2.4893 to 2.5144
3	140.8044	33.0000	2.4635	2.4601	2.4603	2.4598	2.4512 to 2.4758
4	138.6000	33.0000	2.4249	2.4200	2.4210	2.4203	2.4128 to 2.4371
5	136.3956	33.0000	2.3864	2.3835	2.3830	2.3832	2.3744 to 2.3983
6	134.1912	33.0000	2.3478	2.3446	2.3445	2.3443	2.3361 to 2.3595
7	132.0000	33.0000	2.3095	2.3053	2.3062	2.3057	2.2979 to 2.3210
8	129.7956	33.0000	2.2709	2.2681	2.2675	2.2685	2.2595 to 2.2823
9	127.5912	33.0000	2.2323	2.2306	2.2301	2.2297	2.2212 to 2.2435
10	125.4000	33.0000	2.1940	2.1916	2.1918	2.1915	2.1830 to 2.2050
11	123.1956	33.0000	2.1554	2.1525	2.1535	2.1542	2.1447 to 2.1662
12	120.9912	33.0000	2.1169	2.1147	2.1196	2.1153	2.1063 to 2.1274
13	118.8000	33.0000	2.0785	2.0773	2.0771	2.0766	2.0681 to 2.0889

☐ Print Voltage Ratio with % Error

Result Pass

Note

Note : Please Select any cell of the row in table before you press the acquire button.

Test Passed Satisfactory ☒

Acceptance Criteria

a

☒

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Instrument



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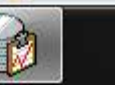
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Procedure



Acquire



Vector Voltage Measurement

Key : YNd1 ▾

Ref. Standard : ▾

Test Date : 11/19/2015 ▾

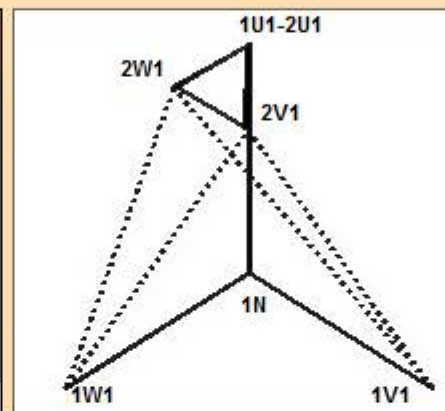
☐ Neutral Shorting

Shorted : 1U1-2U1

Supply : 1U1-1V1-1W1

Measured

Measured Between	Measured Values	Unit
1U1-1V1	430	Volts
1V1-1W1	428	Volts
1W1-1U1	432	Volts
1W1-2V1	341	Volts
1W1-2W1	341	Volts
1V1-2W1	438	Volts
1V1-2V1	339	Volts



Condition Checks

$(1W1-2V1) = (1W1-2W1)$	341 = 341
$(1W1-2V1) = (1W1-2W1)$	341 = 341
$(1U1-1N) = (1U1-2V1) + (2V1-1N)$	

Result ▾

Test Passed Satisfactory ☐

Acceptance Criteria

Note



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Acquire



Instrument



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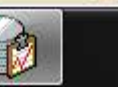
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Procedure



Measurement of Winding Resistance

Ref. Standard: Test Date : 11/19/2015 Top Oil Temp. [°C] 39.3 Unit : Ohms Avg. Oil Temp. [°C] 38.05 ☐ Ph - PhBottom Oil Temp. [°C] 36.8 Decimal Places : 4 Winding under Test HV (132 kV) ☒ Ph - N

HV (132 kV)

Tap No.	1U1-1N	1V1-1N	1W1-1N	Avg. Resist. at 38.05 °C	Total Resistance at 75 °C
1	0.2505	0.2510	0.2507	0.2507	0.8538
2	0.2457	0.2462	0.2458	0.2459	0.8376
3	0.2409	0.2414	0.2410	0.2411	0.8211
4	0.2360	0.2365	0.2361	0.2362	0.8046
5	0.2311	0.2317	0.2314	0.2314	0.7881
6	0.2265	0.2268	0.2265	0.2266	0.7719
7	0.2216	0.2221	0.2217	0.2218	0.7554
8	0.2168	0.2173	0.2170	0.2170	0.7392
9	0.2121	0.2125	0.2122	0.2123	0.7230
10	0.2073	0.2078	0.2074	0.2075	0.7068
11	0.2021	0.2029	0.2025	0.2025	0.6897
12	0.1978	0.1981	0.1978	0.1979	0.6741

Tolerance 1.5 %

Select Channel Current Selection Result Pass

Note

Note : Please select the cell for the connected Tap before you press the Acquire Button.

Test Passed Satisfactory ☒Acceptance Criteria abcd ☒

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Delete



Acquire



Procedure



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Measurement of Insulation Resistance of Windings

Insulation Resistance Test

No. of Records [Time] **Manually** Condition **Once** Top Oil Temp. [°C] **39.1** **At 60 Sec** Test Date **11/19/2015**

No. of Readings **3** ☒ Core Frame Tank (CFT) Btm. Oil Temp. [°C] **34.5** **1** **Core/Frame** **1230** **Core/Tank** **4010**

☐ Extra Insulation levels Avg. Oil Temp. [°C] **36.8** **Acquire** **Frame/Tank** **4560** **Factor** **0**

P.I. Ratio 1 **600/60** **Clear** P.I. Ratio 2 **Ratio** P.I. Ratio 3 **Ratio** **Voltage (Volts)** **2000**

Unit **MegaOhms**

Measurement

Wdg. Under Test	HV / LV + E	LV / HV + E	HV / LV
Voltage [Volts]	5000	5000	5000

Time (Secs)

Insulation Resistance Values [MegaOhms]

15	3270	2210	2120
60	4630	4830	4080
600	7050	14100	13700

PI Ratio1	1.52	2.92	3.36
PI Ratio2			
PI Ratio3			

Note

Test Passed Satisfactory ☐

Acceptance Criteria



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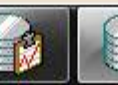
Delete



Acquire



Procedure



Measurement Of No Load Loss And No Load Current

☐ IntermediateRef. Standard: Test Date 11/19/2015 Key 7/BHV/LV/90 Tap Position No 7 Condition of Test BHV Base MVA 90 Energized From LV Rated Voltage [kV] 33 Rated Current [A] 1574.64 Flux Density [T] 0 Show Guar. Loss Loss at % Volt. 90 To 110 Ptr 33000/110 Ctr 7.5/1 WMC 1

Voltage V[P-N]				Voltage V[P-P]		Measured Current [A]			Measured Power [Watt]			Constants		Test Freq. [Hz]	M.Factor [TMF]	Pm (kW)
% Volt	V1	V2	V3	V rms	V mean	CT1	CT2	CT3	W1	W2	W3	PTR	CTR			
90	0	0	0	29692.7	29710.3	0.7162	0.5312	0.9809	7896	6224	4508	33000/110	7.5/1	50.044	2250	18.63
100	0	0	0	33015.3	33087.1	1.5368	1.1552	1.1074	11509	10542	5000	33000/110	7.5/1	50.114	2250	27.05
110	0	0	0	35918.2	36337.4	7.2999	5.7731	5.7471	16593	26102	-2386	33000/110	7.5/1	50.056	2250	40.31

☐ Applied Voltage Tolerance As per IECTol☐ 2 Watt MeterResult 3P4W

Note

Note : Please select any cell of the row in Table, before press the Acquire Button.

Test Passed Satisfactory ☒Acceptance Criteria 25 ☒

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Add Rows



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Print Sheet



Instrument



Acquire



Diagram



Log



Procedure



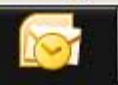
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Graph



Browse



Measurement Of Load Loss And Impedance Voltage

Observation Table Calculations Test Results And Guar. Values

☐ Decimal Places

Ref. Std:

Test Date 11/26/2015

Load Loss Test 2W/HV/LV/ONAF/90/90/33

Cooling ONAF

Voltage

Temperature

Tap Positions

Test Between HV/LV

HV[MVA] 90

132

Top Oil Temp. [°C]

33.5

Load Tap[HV] 4

☐ All TapsSupply ☒ HV ☐ LV Short - LV

LV[MVA] 90

33

Bot. Oil Temp. [°C]

31.2

Load Tap[LV] 1

☐ All Taps

Avg. Oil Temp. [°C]

32.35

Measurements for Tap - 16

Load loss [kW] At 75 °C At Test Freq 271.96

Impedance %[Z] At 75 °C 12.51

HT Capacitor Selection

PTR 66000/110

Test Freq. (Hz) 49.824

CTR 1000/1

WMC 1

V rms Description

0

0

0

Show Guar. Values

☐ Three Winding Losses☐ 2 Watt Meter

Tap	Rated Parameters								Meas.V	Measured load Current			Measured loss. (W)			CTPT		Pm (kW)	Test Frq [Hz]
HV	HV [kV]	HV [A]	LV [kV]	LV [A]					V rms	CT1	CT2	CT3	W1	W2	W3	PTR	CTR		
1	145.2	357.87	33	1574.64	-	-	-	-	20562.1	355.59	355.59	355.59	98235	55605	48105	33000...	500/1	201.9450	49.925
7	131.9...	393.67	33	1574.64	-	-	-	-	18089.8	393.503	393.503	393.503	105540	57015	47565	33000...	500/1	210.1200	50.04
16	112.1...	463.16	33	1574.64	-	-	-	-	13992.3	463.1...	463.1...	463.1...	105315	67005	73335	33000...	500/1	245.6550	49.824

Select Channel of Temp. Scanner

Top Oil Temp.

CH1

Bot. Oil Temp.

CH1

Acquire

Result

Note

 Note : Please select any cell of the row in Table, before you press the Acquire Button. Test Passed Satisfactory ☒ Acceptance Criteria 25 ☒


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Loss 3W



Acquire



Log



Instrument



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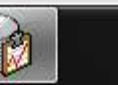
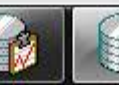
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Procedure



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Measurement Of Load Loss And Impedance Voltage

Observation Table Calculations Test Results And Guar. Values

☐ Decimal places

Ref. Std:

Test Date 11/26/2015

Measurement of Load Loss and Impedance Voltage

Supply From HV Short Circuit LV Cooling[MVA] ONAF[90] Temperature [q1] °C

Tap No. HV	Meas.Volt [kV]HV	Corr. Volt [kV]HV	Meas.Curr [A]HV	Rated Curr [A] HV	Meas.Load loss(Pm) [kW] At 32.35 °C	Corr.Load loss(Pc) [kW] At 32.35 °C	Impedance. % Z At 32.35 °C	Resistance. % [R] At 32.35 °C	Reactance. % [X] At 32.35 °C	Rated line Curr.[A] HV	Rated I Curr.[A]
1	20.56	20.69	355.59	357.87	201.95	204.55	14.27	0.23	14.27	357.87	1574.64
7	18.09	18.10	393.50	393.67	210.12	210.30	13.70	0.23	13.70	393.67	1574.64
16	13.99	13.99	463.18	463.16	245.66	245.64	12.51	0.27	12.51	463.16	1574.64

Tap No. HV	Copper loss [kW] HV At 38.05 °C	Copper loss [kW] LV At 38.05 °C	Total Copper loss[kW] At 38.05 °C	Total Copper loss [kW] At 32.35 °C	Corrected Load loss(Pc) [kW] At 32.35 °C	Stray loss [kW] At 32.35 °C	Total Copper loss [kW] At 75 °C	Stray loss [kW] At 75 °C At Test Freq	Stray loss [kW] At 75 °C @ 50 Hz	Load loss [kW] At 75 °C At Test Freq	Load loss [kW] At 50 °C
1	96.33	91.62	187.95	184.03	204.55	20.52	213.39	17.70	17.75	231.09	231.14
7	103.12	91.62	194.74	190.67	210.30	19.63	221.09	16.93	16.91	238.02	238.00
16	115.00	91.62	206.62	202.31	245.64	43.33	234.58	37.38	37.64	271.96	272.22



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Measurement Of Load Loss And Impedance Voltage

[Observation Table](#)
[Calculations](#)
[Test Results And Guar. Values](#)
☐ Decimal Places

Ref. Std:

Test Date 11/26/2015



Rated Parameters			Measured Values at room Temperature					Load Loss at		75	°C	% Impedance at		75	°C
Tap Position	Rated Vol. (kV)	Rated Curr. (kV)	Voltage [kV]	Im [A]	Pm [kW]	Calculated Loss [kW]		Calc. [kW]	Guar. [kW]	Tol. [%]		Calcul. [%]	Guar. [%]	Tol. [%]	
						P corr.	I ² R Loss								
1	145.2	357.87	20.56	355.59	201.9450	204.55	187.95	17.75	262	-		14.27	12.5	-	
7	131.99735...	393.67	18.09	393.50	210.1200	210.30	194.74	16.91	250	-		13.70	13.5	-	
16	112.19339...	463.16	13.99	463.18	245.6550	245.64	206.62	37.64	320	-		12.51	12.5	-	



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Applied Voltage Test

Ref. Standard: Test Date 11/19/2015

Winding under test	☐ *Ur [kV]	Test Voltage [kV]	Test Duration [seconds]	Frequency [Hz]	Leakage Current [mA]	Remarks
HV wdg to other wdg and Tank	132	70	60	50		WITHSTOOD OK
LV wdg to other wdg and Tank	33	70	60	50		WITHSTOOD OK

☐ LeakageResult Note Test Passed Satisfactory ☒Acceptance Criteria 26 ☒

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Procedure



Diagram

Magnetic Balance and Excitation Current Test

Key Ref. Standard: Test Date At Volts on TAP

Winding under Test

- ☒
- HV
-
- ☒
- LV

Excitation Current

- ☒
- Single Phase
-
- ☐
- Two Phase
-
- ☐
- Three Phase

Test Condition

Terminal Excited	Voltage Measured across the Terminals [Volts]			Single Phase (Amp)			Two Phase			Three Phase		
	1U1 - 1N	1V1 - 1N	1W1 - 1N	Terminal	Voltage	Current	Terminal	Voltage	Current	Terminal	Voltage	Current
1U1 - 1N	245	202.2	42.9	1U1 - 1N	245	3.7						
1V1 - 1N	120.7	244	123.7	1V1 - 1N	244	2.67						
1W1 - 1N	49.7	201.3	243.7	1W1 - 1N	243.7	3.53						
	2U1 - 2V1	2V1 - 2W1	2W1 - 2U1	Terminal	Voltage	Current	Terminal	Voltage	Current	Terminal	Voltage	Current
	2U1 - 2V1	244.5	187.1	56.9	2U1 - 2V1	244.5	16.19					
	2V1 - 2W1	119.8	244.1	123.9	2V1 - 2W1	244.1	11.75					
	2W1 - 2U1	16.2	182.3	244.1	2W1 - 2U1	244.1	16.37					

Note

Test Passed Satisfactory ☐Acceptance Criteria

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Procedure

TESTS TAP-CHANGERS

Ref. Standard:

Test Date

11/27/2015

☒ TEST ON ON-LOAD TAP-CHANGER ☐ OFF CIRCUIT TAP-CHANGER

OLTC Make :

MR

Serial Number :

1628578

Type :

VMII650Y-72.5/C-16160

Description :

☒	Eight complete operating cycles with the transformer not energized
☒	One complete operating cycle with the transformer not energized, with 85% of the rated auxiliary supply voltage
☒	One complete operating cycle of OLTC with the transformer energized at rated voltage and frequency at No-Load
☒	Ten tap-changed operations with ± 2 steps on either side of the principal tapping with rated current of the transformer
☐	Auxiliary power and control circuit, one minute power frequency withstand test with 2kV rms to Earth-withstood.
☐	
☐	

Note

Test Passed Satisfactory ☐

Acceptance Criteria

☐

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Procedure



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Measurement of Capacitance and Dissipation Factor

Key Ref. Standard: Test Date ☐ Winding☒ BushingTop Oil Temp. [°C] Bot.Oil Temp. [°C]

Test Voltage

No. of Bush under Test Avg. Oil Temp. [°C] ☒ 5 kV ☐ 10 kV☐ C. factor

Phase	Bushing Under Test	Make/Serial No.	Test Volt [kV]	Capacitance pF	Tan Delta [Dissipation Factor] in %		
					36.8°C	20° C	
▶	1U1	ABB/1ZSCT21...	0.5	388.26		0.854	
	1V1	ABB/1ZSCT21...	0.5	389.25		0.852	
	1W1	ABB/1ZSCT21...	0.5	389.88		0.812	

Note Test Passed Satisfactory ☐

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Calculator



Diagram



Browse

Measurement Of Harmonics On The No Load Voltage / Current

Measurement of Harmonics at No Load Voltage

Measurement of Harmonics at No Load Current

Ref. Standard:

Test Date

07/25/2016

Transformer excited at rated Frequency

90

100

110

0

% rated voltage and % harmonics measured on the No-load Current

Phase	Frequency (Hz)	At 90 % Ur			At 100 % Ur			At 110 % Ur			
		1U1	1V1	1W1	1U1	1V1	1W1	1U1	1V1	1W1	
01 st	50	100	100	100	100	100	100	100	100	100	
03 rd	150	0.682	1.655	1.569	0.489	2.722	2.222	0.139	1.961	1.778	
05 th	250	1.372	1.496	1.138	3.217	3.351	3.221	3.716	3.91	3.885	
07 th	350	0.645	0.704	0.668	1.98	2.053	1.891	1.943	2.203	2.162	
09 th	450	0.021	0.151	0.142	0.042	0.568	0.628	0.035	0.084	0.039	
11 th	550	0.164	0.148	0.223	0.624	0.586	0.692	0.06	0.187	0.26	

Note



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Add Row



Del. Row



Save



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Instrument



Log



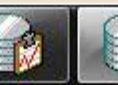
Acquire



Procedure



Delete



Induced over voltage Withstand Test with Partial Discharge Measurement (without line Current)

Test Type : ☐ ACSD [Ph-E] ☐ ACSD [Ph-Ph] ☐ ACLD ☒ IVPD Per. Standard: Test Date:

Winding

☒ HV☐ Calibration☐ LV☐ Phase Selection☒ Ur, U2, U1 Test Frequency HzCalibration Signal

Measurement In pC

			Phase 1			Phase 2			Phase 3		
Time In (Minutes)	Test Voltage (kV)	Time Notation	1U1			1V1			1W1		
1	91.45	A	45			46			52		
5	120.42	B	48			49			51		
30 Sec	137.18	C	0			0			0		
5	120.42	D	52			55			54		

Guaranteed :

Background Noise Level Background PD Level

Background PD Level

Before Test

14

After Test

15

Note Test Passed Satisfactory ☐Acceptance Criteria ☐

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Add row



Del Row



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Diagram



Procedure



Delete

