

# THREE-WINDING POWER TRANSFORMER

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## TEST DATA

**Test Data No.**

Station \_\_\_\_\_  
 Equipment ID \_\_\_\_\_  
 Date of Test \_\_\_\_\_  
 Make \_\_\_\_\_  
 Serial No. \_\_\_\_\_  
 Tap Changer Type \_\_\_\_\_

MVA  
 kV HV \_\_\_\_\_ Y [ ]  $\Delta$  [ ]  
 LV \_\_\_\_\_ Y [ ]  $\Delta$  [ ]

Winding Connection \_\_\_\_\_  
 % Impedance \_\_\_\_\_  
 Year Manufactured \_\_\_\_\_

### I. EXCITATION CURRENT TEST

HV TAP	EXITING CURRENT (mA) at 10 KV			RATING (S, P, C)
	H1 - H0	H2 - H0	H3 - H0	

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_

### II. OVERALL INSULATION POWER FACTOR TEST

INSULATION MEASURED	TEST kV	CURRENT mA	WATT-LOSS	% POWER FACTOR		CORRECTION FACTOR	CAPACITANCE pF	RATING (S, P, C)
				Measured	Corrected			
CH + CHL								
CH								
CHL (UST)								
CL + CLT								
CL								
CLT (UST)								
CT + CHT								
CT								
CHT								

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_

### III. TRANSFORMER TURNS RATIO TEST

TAP CHANGER POSITION: As Found      High \_\_\_\_\_ Low \_\_\_\_\_

#### A. HIGH VOLTAGE - LOW VOLTAGE

HV		LV		Comp Ratio	$H1H0$ $X1X0$	%E	$H2H0$ $X2X0$	%E	$H3H0$ $X3X0$	%E	Rating (S, P, C)
Tap	Volts	Tap	Volts								

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_

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## B. HIGH VOLTAGE - TERTIARY VOLTAGE

HV		TV		COMP RATIO	<u>H1H0</u> y_y_-	%E	<u>H2H0</u> y_y_-	%E	<u>H3H0</u> y_y_-	%E	Rating (S, P, C)
Tap	Volts	Tap	Volts								

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_

## IV. INSULATION RESISTANCE TEST

PARTS MEASURE D	TEST KV	TEMP	MEGOHMS			MΩ/KV	POLARIZATION INDEX	RATING (S, P, C)
			30 SEC	1 MIN	10 MIN			
HV-Case								
HV-TV								
TV-Case								

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_

## V. WINDING RESISTANCE TEST

WINDING	TAP	WINDING MEASURED	RESISTANCE (mΩ) corrected at 75°C	RATING (S, P, C)
HV	Highest	H1-H0		mΩ
		H2-H0		mΩ
		H3-H0		mΩ
HV	N	H1-H0		mΩ
		H2-H0		mΩ
		H3-H0		mΩ
HV	Lowest	H1-H0		mΩ
		H2-H0		mΩ
		H3-H0		mΩ
LV	-	X1-X0		mΩ
		X2-X0		mΩ
		X3-X0		mΩ
TV	-	y_y_-		mΩ
		y_y_-		mΩ
		y_y_-		mΩ

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_

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## VI. Oil Dielectric Breakdown Voltage, ASTM D1816

SOURCE OF SAMPLE	TEST NUMBER					AVERAGE (X)	TEMP °C	RATING (S, P, C)
	1	2	3	4	5			
Main Tank								
LTC								

Standards Used: \_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_

Overall Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Tested by :*

*Concurred by :*

\_\_\_\_\_  
Contractor - Test Engineer

\_\_\_\_\_  
Owner's Representative

### TEST INSTRUMENTS:

(Eqpt.ID/Make/Model/SN/  
Date of last calibration)

\_\_\_\_\_  
\_\_\_\_\_

### Legend:

S - Satisfactory  
P - Poor  
C - Critical