

Transformer Routine Test Report

Name: Power Transformer

Type: BS9-M-630-13.8/0.54

No: w2019100-1



ZHEJIANG EZITOWN ELECTRIC CO.,LTD

Date: 2019-12-18

1. Product Specification

Rated Power: 630 kVA
 Rated Voltage: 13.8/0.54kV
 Rated current: 26.36/673.6 A
 Rated Frequency: 60 Hz
 Number of Phases: 3 phase
 Tap Range: $(13.8 \pm 2 \times 2.5\%) / 0.54 \text{ kV}$
 Connection Symbol: Yyn0
 Cooling Method: ONAN
 Insulation Class: A
 Insulation Level: LI 95 AC 35 / AC5

2. Test Standard:

IEEE C57.15, IEEE C57.12.00

3. Test Item and Result:

3.1 Voltage Ratio Measurement and Connection Group test

H.V.Winding		L.V.Winding	Rated Ratio	Voltage Deviation%			Connection Symbol
Tap position	Voltage (V)	Voltage (V)		AB/ab	BC/bc	CA/ca	
1	14490		26.8333	-0.02	-0.03	-0.02	Yyn0
2	14145		26.1944	-0.01	-0.02	-0.02	
3	13800	540	25.5555	0.09	0.09	0.09	
4	13455		24.9167	0.07	0.07	0.07	
5	13110		24.2778	0.05	0.05	0.05	

3.2 Winding Resistance Test

Environment Temperature 15°C

Winding	Tap position	Measured Value (Ω)			Resistance unbalance percentage (%)
		A~B	B~C	C~A	
H.V	1	3.339	3.338	3.361	
	2	3.250	3.249	3.271	
	3	3.164	3.162	3.184	
	4	3.075	3.074	3.095	
	5	2.973	2.971	2.991	
L.V		a~b	b~c	c~a	Resistance unbalance percentage (%)
		0.003828	0.003859	0.003852	

3.3 Insulation Resistance Measurement

Measurement Site	Insulation Resistance ($M\Omega$)
HV—LV TO GROUND	≥ 1500

LV—HV TO GROUND	$\cong 1500$
HV&LV TO GROUND	$\cong 1000$

3.4 AC power withstand voltage Test

Pressurized parts	Test voltage (kV)	Duration (s)	Result
HV—LV TO GROUND	35	60	Approved
LV—HV TO GROUND	5	60	

3.5 No load loss and no load current

Average voltage (kV)	RMS voltage (kV)	No-load current	No-load loss (W)	
		(%)	Measured value	Correction value
0.54	0.54	0.84	973	973

3.6 Induction Pressure Test

Tap position	Apply voltage (kV)	Induction voltage (kV)	Induction multiple	Frequency (Hz)	Duration (s)	Result
	L.V	H.V				Approved
3	1.08	27.6	2	150	48	Approved

3.7 Impedance(%) and load loss test Environment Temperature 17°C

Winding	Tap position	Apply current (A)	Test voltage (V)	Short circuit impedance (%)		Load loss (W)	
				Measured value		Measured value	
				t = 75°C	I=Ir	t = 75°C	I=Ir
H.V- L.V	3	26.36	650	6.15		7859	

4. Test Result:

The transformer is proved to meet the stipulations of IEEE C57.15, IEEE C57.12.00

2019-12-18