Test Report

Type Test Of Bushing Type Current Transformer

Standard NO : IEC 60044-1

1-University of Tehran High Voltage Lab.

Test Results (3 Pages)

Technical Specification

Input current:	800 A
Output current:	1 A
Rated VA:	15 VA
Insulation Voltage:	0.75/4 kV
Frequency:	50 HZ
Class:	5P20
Thermal Current (I_{th}):	25 KA/1Sec
Dynamic Current (I_{dyn}):	2.5 I_{th}

University of Tehran

High Voltage Laboratory

Test Report

No: 891105

Temperature-rise test of current transformer, 800/1A Pars Shar Barez Company production

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Test Report No 891105

Test Object:	Bushing Current transformer
Type:	800/1A CL5P20 15VA
Manufacturer:	**Pars Shar Barez Co.**
Test Performed on order of:	**Pars Shar Barez Co.**
Test Scope:	Type Test
Test Procedure:	According to standard IEC 60044-1
Test Result:	Indicated in Report The test result refers to the tested object only.

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Test Procedure

The bushing current transformer was immersed in oil, supplied with 800 amperes and during a long time until the temperature of the secondary winding was constant. The burden of the secondary winding was 15 ohms. The DC resistivity of secondary winding before temperature rise test was 13.14ohms. Table 1 shows the variation of DC resistance after power shutdown in the temperature rise test

Time(sec)	DC Resistivity(ohms)
15	13.395
30	13.352
45	13.330
60	13.321
90	13.315

Table 1: DC resistivity of the secondary winding versus time

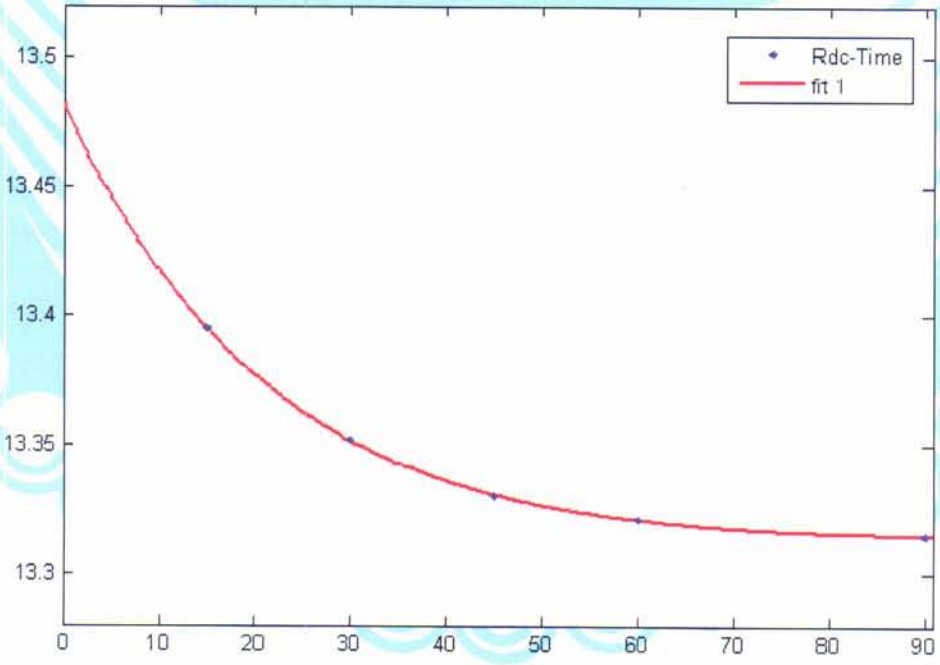

Figure 1: Variation of DC resistance after power shutdown in temperature rise test and extrapolation to the time zero

According to extrapolation of the R_{dc}-Time curve to the time zero, the DC resistivity of the secondary winding in the time zero is 13.4813Ω. Maximum variation of secondary winding temperature is calculated as below:

Oil Temperature: T_1=27.5°C T_2=24.3°C

$$R_1 = R_0(1 + \alpha\Delta T)$$

$$\frac{R_1 - R_0}{R_0} = \alpha\Delta T$$

$$\frac{13.4813 - 13.14}{13.14} = 0.0039 * \Delta T$$

$$\Delta T = 6.66^o C$$