Inženýrsko-výrobní elektrotechnický podnik, a.s.
619 00 Brno, Videnska 117a

MEASURING TRANSFORMERS LABORATORY

TEST PROTOCOL No. 73-0073/06

CTS 12 Current measuring transformer

(laboratory stamp)

(signature)
Ing. Rada Vlastimil
Measuring transformers laboratory manager
IVEP a.s.

Brno, 14 April 2006

Changes and amendments in this protocol can be done only in measuring transformers laboratory of IVEP a.s.

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ivep®	**Test protocol No.** 73 – 0073/06 **Test subject:** CTS 12 Current measuring transformer	**Sheet:** 1 **Number of sheets:** 2

Type: CTS 12	**Test type:** Partial type test
Nominal values: Highest voltage for appliance: 12 kV Serial number: 1200003 Nominal transfer: 3200 // 5 / 1 A Nominal load: 60 VA 60 VA Accuracy class 0.2 5P5 Nominal frequency: 50 Hz Isolation class: E	**Tested according to:** CSN EN 60044-1 IEC 60044-1 **Test customer:** KPB INTRA s.r.o. Zdanska 477 685 01 Bucovice **Order Number:** KPB 003000195
Serial Number: 1200003	**Atmospheric conditions:** Temperature: °C Pressure: hPa Humidity: %
Products manufacturer: KPB INTRA s.r.o. Zdanska 477 685 01 Bucovice	**Samples delivered on:** 3 April 2006

Test result:

CTS 12 current measuring transformers with nominal transfer 3200 // 5 / 1 A

of producer KPB INTRA s.r.o.

comply

with temperature-rise test conditions

in accordance with CSN EN 60044-1 and IEC 60044-1 for isolation class E.

(laboratory stamp)

Test date: 10 – 11 April 2006	**Tested by:** Ing. Vlastimil Rada *(signature)*	**Chief:** Ing. Vlastimil Rada *(signature)*

ivep®	**Test protocol No.** 73 – 0073/06 **Test subject:** CTS 12 Current measuring transformer	**Sheet:** 2 **Number of sheets:** 2

At CTS 12 current measuring transformer was in IVEP a.s. measuring transformers laboratory performed temperature-rise test at stable nominal thermal current corresponding to primary nominal current and for information also at 0,8 multiple of primary nominal current. Tests were performed according to CSN EN 60044-1 and IEC 60044-1 standards and these results were achieved.

1. Temperature-rise test at primary nominal current

Temperature-rise test at primary nominal current of 3200 A. Secondary windings 1S1-1S2 and 2S1-2S2 were loaded by nominal loads of 60 VA with power factor $\cos\beta = 1$. Temperature rise of secondary windings was measured by winding resistance change. P1 and P2 primary terminals temperature was measured by Hexagon contact thermometer.

These values of temperature rise and temperatures were measured:

Primary winding	P1	82 °C	T_{ok} = 18 °C
	P2	85 °C	
Secondary winding	1S1-1S2	62.4 K	
	2S1-2S2	64.5 K	
Transformer surface temperature		58 °C	

2. Temperature-rise test at 0.8 multiple of primary nominal current

For information other temperature-rise test was performed at 0.8 multiple of primary nominal current of 2.560 A. Test was performed on the same current measuring transformer at same conditions and way of temperature-rise measurement.

These values of temperature rise and temperatures were measured:

Primary winding	P1	71 °C	T_{ok} = 17 °C
	P2	74 °C	
Secondary winding	1S1-1S2	49.0 K	
	2S1-2S2	49.8 K	
Transformer surface temperature		50 °C	

CTS12 current measuring transformer with nominal transfer of 3200 // 5 / 1 A, accuracy class 0.2 and 5P, complied with temperature-rise test by thermal current of 3200 A for E isolation class in accordance with CSN EN 60044-1 and IEC 60044-1 standards.