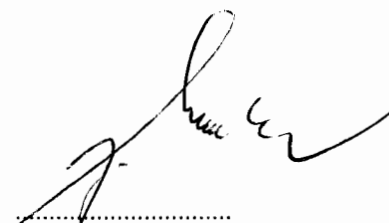




Electrotechnical Engineering and Production, joint-stock company
619 00 BRNO, Vídeňská 117

REPORT OF PERFORMANCE No: 88-0122

INSTRUMENT VOLTAGE TRANSFORMERS TYPE VTS 25



.....
Jaromír Mudra,Phd

Brno, June 4, 1997

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TEST REPORT No: 88 - 0122
Tested Instrument Voltage.
subject: Transformers

Page No.:2

Number of
pages: 6

TYPE:

VTs 25

KIND OF TEST: test informing

TESTING ACC. TO:

IEC 186, Clause 12
(Short-circuit withstand
capability test)

RATED VALUES:

(see Tested specimen
identification)

TEST REQUEST ISSUED BY:

KBP INTRA s.r.o.
Fučíkova 860
685 01 Bučovice

ORDER NUMBER:

43/97

TESTED SPECIMEN REG. NUMBER:

346/97

348/97

ENVIRONMENTAL CONDITIONS:

TEMPERATURE: 22°C
ATMOSPHERIC PRESSURE:
AIR HUMIDITY:

PRODUCT MANUFACTURER

KPB Intra, s.r.o.
Fučíkova 860
685 01 Bučovice

**THIS TEST REPORT
INCLUDES:**

TEXT PAGES: 6
TABLES:
OSCILLOGRAMMES: 4
DIAGRAMMES:
DRAWINGS:
PHOTOS:

**DISTRIBUTION
LIST:**

Client 2x
IVEP Brno
Archives 1x

TESTED SPECIMENS DELIVERED ON:

June 3, 1997 (Shift 97-023)

TEST RESULT:

All the instrument voltage transformers under test did

c o m p l y

with the short-circuit withstand capability requirements to
IEC 186, Art. 12.

DATE OF TEST:

June 4
1998

TEST PERFORMED BY:

Mr. Petr Kalus



MANAGER OF TEST LAB.

Jaroslav Mudra, PhD.

	TEST REPORT No. : 88-0122	page: 3
	Tested subject: Instrument Voltage Transformer	number of pages: 6

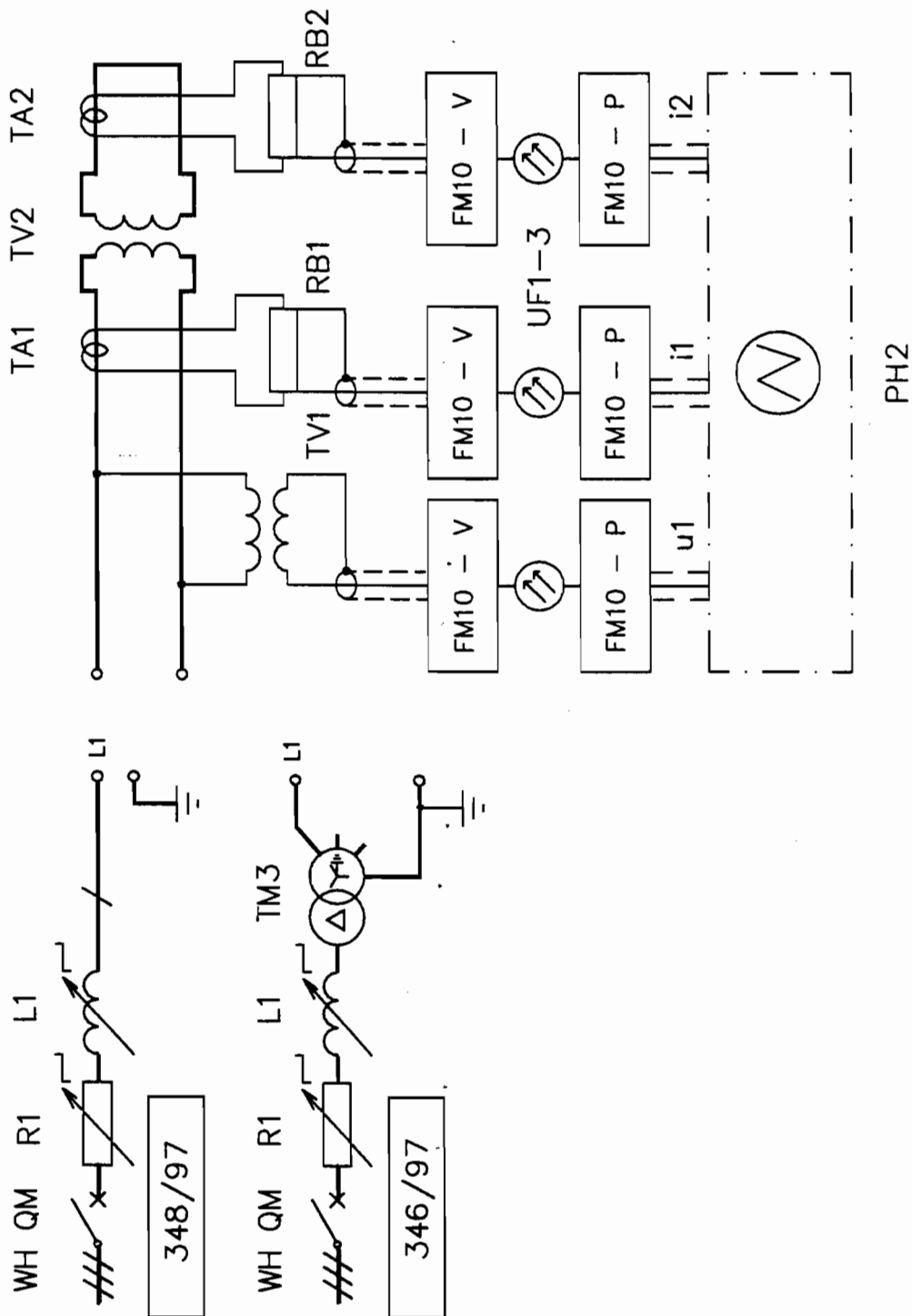
1 Tests required and the respective parameters

T e s t	U_z [kV]	t_k [s]	Number of short-circuits
Short-circuit with- stand capability	22/ $\sqrt{3}$	1	1
	10/ $\sqrt{3}$	1	1

2 Tested specimen identification

Reg. No.	Type	U_{1n} [kV]	U_{2n} [V]		Prod. No.
348/97	VTS 25	22/ $\sqrt{3}$	100/ $\sqrt{3}$	100/3	2200003
346/97	VTS 25	10/ $\sqrt{3}$	100/ $\sqrt{3}$	100/3	2200001

3 Testing circuit wiring diagram



	TEST REPORT No. : 88-0122	page: 5
	Tested subject: Instrument Voltage Transformer	number of pages: 6

4 Measuring instruments and symbols used

WH	- Outdoor, power supply line No. 165; 22 kV;
QM	- Protective SF6 circuit-breaker; VF 251225; 25 kV; 1 250 A; p=0.5 MPa; EJJ Brno;
TM3	- KobU 825/20 Testing transformer; 1.25 MVA; 22//12.7/11/7.34/6.35/3.67 kV; D//y/d; $u_k=1,8/2.31\%$; BEZ Bratislava;
R1, L1	- Medium voltage burdens at the short-circuit station;
R2	- 0.01Ω burden of tested transformer;
TV1	- Instrument voltage transformer; D225; 22000/100 V; EJJ;
TA1	- Instrument current transformer; PE225; 200/5 A; EJJ;
TV2	- Tested instrument voltage transformer;
RB1	- Shunt 3.344 A/V; IVEP Brno;
UF1-3	- FM 10 Analogous, opto-electronic measuring system; (V=transmitter, P=receiver); VÚSE Běchovice;
PH2	- PCL 818 Data recording card;
KO	- Cathode oscillogram;
ZO	- Testing operation;
T	- Test by temperature current;
u_1	- Instantaneous value on transformer primary terminals
u_k	- Transformer short-circuit voltage, in percent;
U_{n1}	- Transformer rated primary voltage;
U_{n2}	- Transformer rated secondary voltage;
U_1	- Rms voltage value on transformer primary terminals;
U_z	- Rms current value of line testing voltage;
i_1	- Instantaneous value of current through the primary winding;
i_2	- Instantaneous value of current through the secondary winding;
I_1	- Rms value of current flowing through the primary winding;
I_2	- Rms value of current flowing through the secondary winding;
t_k	- Short-circuit time period; time period of current pass-through;
$\cos \varphi$	- Testing circuit power factor;

5 Sequence and progress of the test

The sequence of tests carried through results from the table shown in chapter 6. In all the testing operations the waveforms of primary and secondary currents was picked-up by the PCL 818 data registration card.

All the registered cathode oscillogrammes, being a part of this test report, are documented and archived.

	TEST REPORT No. : 88-0122	page: 6
	Tested subject: Instrument Voltage Transformer	number of pages: 6

Oscill. No.	Reg. No.	Type	U_{1n} [kV]	U_1 [kV]	short-circuited winding (terminals)	I_1 [A]	I_2 [A]	t_k [s]
972301 972302	348/97	VTs 25	22/ $\sqrt{3}$	12.9	a - n da -dn	0.7 0.2	162 76	1 1
972303 972304	346/97	VTs 25	10/ $\sqrt{3}$	7.1	a - n da -dn	1.9 0.5	191 85	1 1

7 Test results

The tested instrument voltage transformer did **c o m p l y** with the testing requirements to IEC 186, Clause 9.7 and 12 :

348/97 - VTs 25 : 22000/ $\sqrt{3}$ // 100/ $\sqrt{3}$ / 100/3 - $U_z = 12.9$ kV;
346/97 - VTs 25 : 10000/ $\sqrt{3}$ // 100/ $\sqrt{3}$ / 100/3 - $U_z = 7.1$ kV.

8 Persons taking part in the test

IVEP Brno, a. s. :

Mr. Petr Kalus
Mr. Vlastimil Rada

