




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

REPORT OF PERFORMANCE No: 82-0567

INDOOR INSTRUMENT VOLTAGE TRANSFORMERS TYPE VTS 25



  
Jaromír Mudra, Phd

Brno, April 11, 1997

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TEST REPORT No 82 - 0567

Tested Instrument Voltage  
subject: Transformer

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pages: 3

TYPE:

VTS 25

KIND OF TEST: partial test

TESTING ACC. TO:

IEC 186  
ČSN 35 1360

RATED VALUES:

Rated primary voltage  
10/ $\sqrt{3}$  kV  
15/ $\sqrt{3}$  kV  
22/ $\sqrt{3}$  kV

TEST REQUEST ISSUED BY:

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

ORDER NUMBER:

KPB 22/97 of April 9, 1997

TESTED SPECIMEN REG. NUMBER:

Reg. No. 346-348/97  
Prod. No. KPB 2200001-2200003  
Drawing No. KPB-T-25001

ENVIRONMENTAL CONDITIONS:

TEMPERATURE: 22°C  
ATMOSPHERIC PRESSURE: 1021.2 hPa  
AIR HUMIDITY: 44%

PRODUCT MANUFACTURER

KPB Intra, s.r.o.  
Fučíkova 860  
685 01 BučoviceTHIS TEST REPORT  
INCLUDES:TEXT PAGES: 3  
TABLES:  
OSCILLOGRAMMES:  
DIAGRAMMES:  
DRAWINGS:  
PHOTOS:DISTRIBUTION  
LIST:KPB 2x  
IVEP ŘZ 1x  
IVEP ŘT 1x  
IVEP  
archive 1x

TESTED SPECIMENS DELIVERED ON:

April 9, 1997

TEST RESULT:

The VTS 25 instrument voltage transformer, manufactured by  
the company KPB Intra, s.r.o.; for rated primary voltages of  
10/ $\sqrt{3}$  kV; 15/ $\sqrt{3}$  kV; 22/ $\sqrt{3}$  kV

c o m p l i e s

with the insulation test requirements to ČSN 35 1360 and IEC 186  
standards

DATE OF TEST:

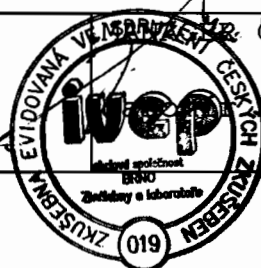
April 11,  
1997

TEST PERFORMED BY:

Jaromír Mudra, PhD.  
Vlastimil Rada

OF TEST LAB.

Mudra, PhD.





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Tested subject:  
Instrument Voltage Transformer

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On the day of April 11, 1997, and based on the order No. 22/97 KPB Intra, s.r.o., insulation tests by impulse and AC testing voltage was conducted on three pieces of instrument voltage transformers of VTS 25 type, with  $U_N = 10/\sqrt{3}$  kV,  $U_N = 15/\sqrt{3}$  kV,  $U_N = 22/\sqrt{3}$  kV rated voltages.

### Testing equipment

Impulse generator 1.2 MV, manufactured by Haefely; 1.2/50  $\mu$ s; 30 kJ, arranged for 200 kV  
Two-beam impulse oscilloscope, Haefely, 72 E type  
Impulse, peak oscilloscope, Haefely, 64 M type  
Transformer cascade, 500 kV, 150 kVA, manufactured by Siemens  
Capacitive voltage divider, 600 kV, Haefely, with Trüb-Taüber peak voltmeters

### Test procedures and scope of the testing

Conformably to the ČSN 35 1360 and the IEC 186 standards the transformer was subjected to the 1.2/50  $\mu$ s lightning impulse test, with both polarities, by using a short-time AC 200/50 Hz voltage, during a time period of 30 sec./1 minute, respectively. The tested transformers were mounted horizontally to a metallic earthed platform. One terminal of each winding was earthed in the course of the test.

### Test results

Symbols used:


+U, -U - rated withstand voltage at the 1.2/50  $\mu$ s lightning impulse test, with positive and negative wave (peak value)

The 15/0 and 5/0 records indicate 15 or 5 impulses, without flashover

$\sim U_s$  - rated short-time AC withstand voltage, dry test with frequency 200 Hz (rms value)

1. Instrument voltage transformer, type VTS 25,  $U_N=22/\sqrt{3}$  kV  
prod. No. 2500003, prod. year 1997, reg. No.348/97,  
22000/ $\sqrt{3}$ /100/ $\sqrt{3}$ V//100/3 V; 50 Hz; 500 VA; test performed  
to ČSN 35 1360

+ U = 125 kV/15/0	- test passed
- U = 125 kV/15/0	- test passed
$\sim U_s = 50$ kV/200 H <sub>Z</sub> /30 s	- test passed (IEC)
$\sim U_s = 55$ kV/200 H <sub>Z</sub> /30 s	- test passed

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2. Instrument voltage transformer, type VTS 25,  $U_N=15/\sqrt{3}$  kV  
 prod. No. 2500002, prod. year 1997, reg. No.347/97,  
 15000/ $\sqrt{3}$ /100/ $\sqrt{3}$ V//100/3 V; 50 Hz; 400 VA; test performed  
 to ČSN 35 1360

+ U = 95 kV/15/0	- test passed
- U = 95 kV/15/0	- test passed
~ $U_S = 38$ kV/200 $H_z$ /30 s	- test passed

3. Instrument voltage transformer, type VTS 25,  $U_N=10/\sqrt{3}$  kV  
 prod. No. 2500001, prod. year 1997, reg. No.346/97,  
 10000/ $\sqrt{3}$ /100/ $\sqrt{3}$ V//100/3 V; 50 Hz; 500 VA; test performed  
 to ČSN 35 1360

+ U = 75 kV/15/0	- test passed
- U = 75 kV/15/0	- test passed
~ $U_S = 28$ kV/200 $H_z$ /30 s	- test passed

**Summary:**

All the instrument transformers of VTS 25 type, for rated primary voltages of 10/ $\sqrt{3}$  kV; 15/ $\sqrt{3}$  kV; 22/ $\sqrt{3}$  kV, have passed the insulation tests to ČSN 35 1360 and IEC 186 standards.