

**EURAMET 1187**  
**ANNEX 6**  
**MEASUREMENT METHODS**

**BEV**

The travelling transformer was compared with a standard instrument current transformer RITZ NTTSO using a Tettex 2767 automatic transformer test set.

**BIM**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2767 automatic transformer test set.

**CMI**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2767 automatic transformer test set.

**DMDM**

The travelling transformer was compared with a standard instrument current transformer EST using a current transformer test set INST-2A.

**GUM**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2767 automatic transformer test set.

**INRIM**

The travelling transformer was compared with a standard current comparator Tettex 4764 and standard instrument current transformer CGS ARK using a Tettex 2763 automatic current transformer test set.

**LCOE**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2767 automatic transformer test set.

**LNE**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2767 automatic transformer test set.

**METAS**

The travelling transformer was compared with a standard current comparator Tettex 4764 using a Tettex 2761 automatic current transformer test set.

**NPL**

The travelling transformer was compared with a Kuster's type compensated current comparator using a Guildline 9908 bridge.

**PTB**

The travelling transformer was compared with a standard instrument current transformer IW 17 using a self-calibrating current transformer test set SEKAM II.

**RISE (SP)**

The travelling transformer was compared with a standard instrument current transformer ITVM using a Guildline 9908 bridge.

**UME**

The travelling transformer was compared with a home-made multi-range electronically-compensated current transformer/comparator using two different test sets.

**VSL**

The travelling transformer was compared with a reference multistage current transformer using a sampling current ratio bridge.

**VTT MIKES**

Primary and secondary currents of the travelling transformer were measured using a home-made Rogowski coil and a home-made current shunt. The calibration was performed in two steps. First the Rogowski coil was calibrated against the current shunt using a relatively low current. Then the travelling transformer was connected to the circuit, and ratio error and phase displacement of the travelling transformer were measured using the same Rogowski coil and current shunt. In this way the absolute values of the mutual inductance of the Rogowski coil and the resistance of the current shunt, as well as related phase displacements, cancel out. Primary current was measured with a Rogowski coil and a sampling voltmeter. Output current of the CT under calibration was measured using a current shunt and another sampling voltmeter. An external trigger generator is used to synchronize the two sampling voltmeters. Synthesizing power source with low harmonic distortion was used to generate current.