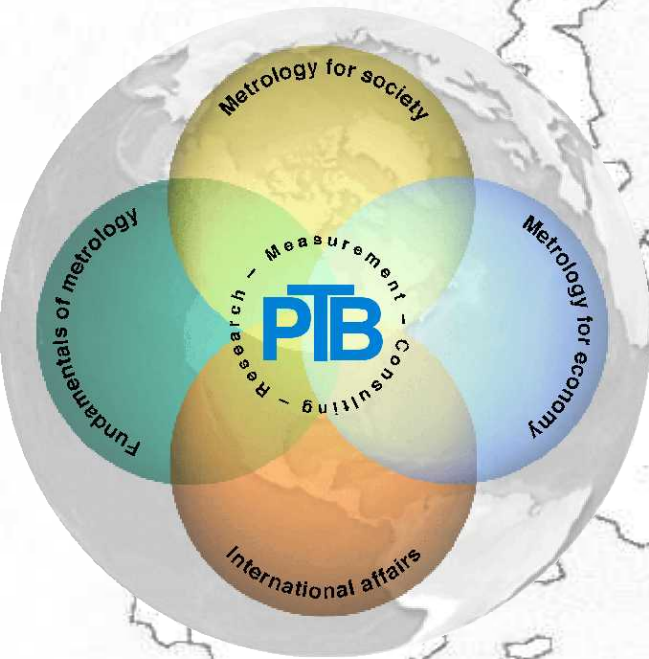
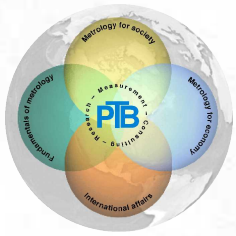


WELMEC WG 10



**Einheitliche Vorgehensweisen bei
Verfahren und Prüfprozeduren für
Messanlagen für Flüssigkeiten
außer Wasser nach der MID**



Inhalt

WG 10 Umfeld

MID, MI005, OIML R117....

Mitglieder

WG 10 Themen

„Terms of reference“

am Beispiel „Test procedures“

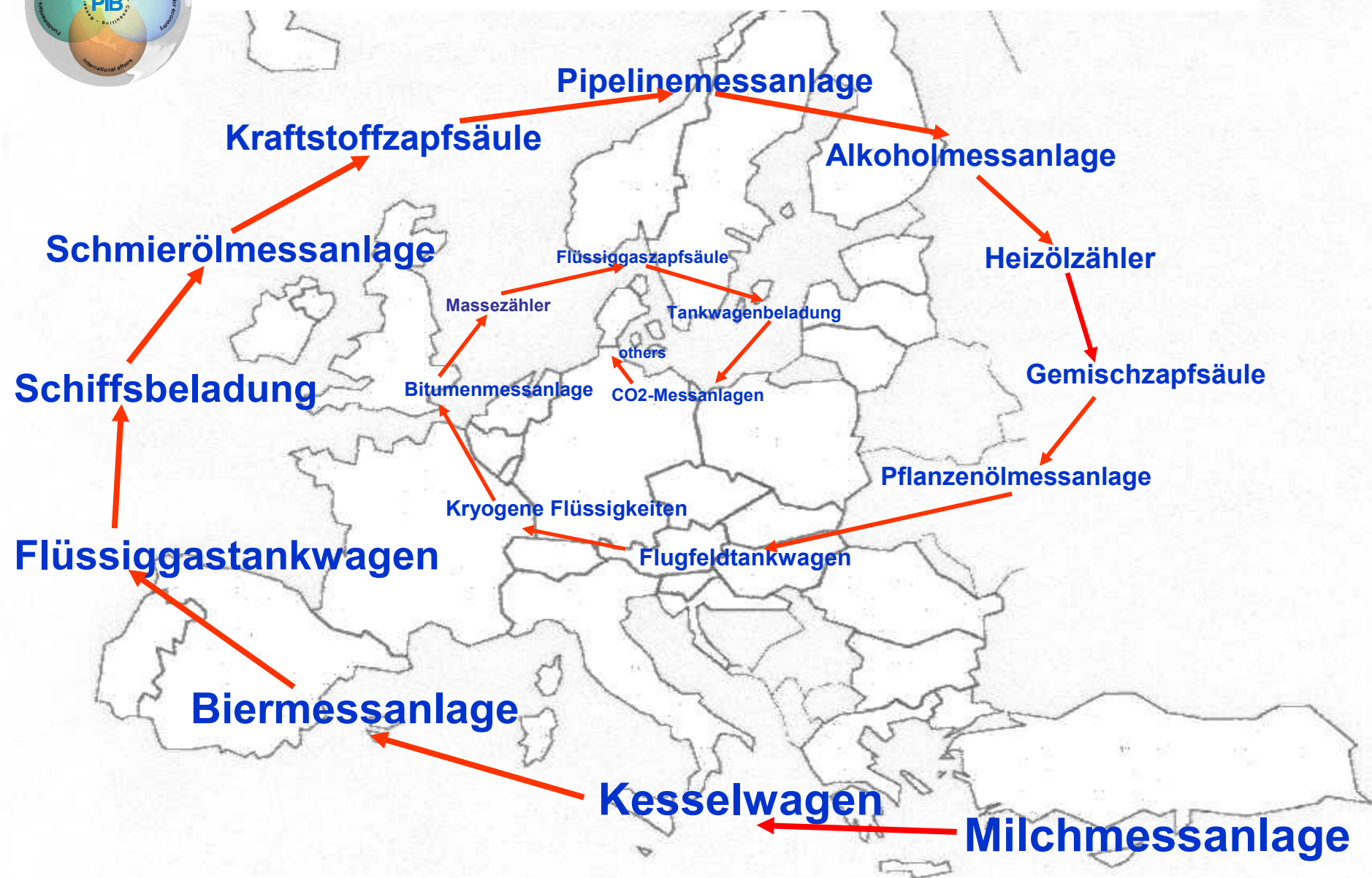
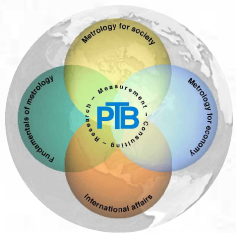
- for electronic conversion devices
- for a family of meters

am Beispiel „Interpretation“

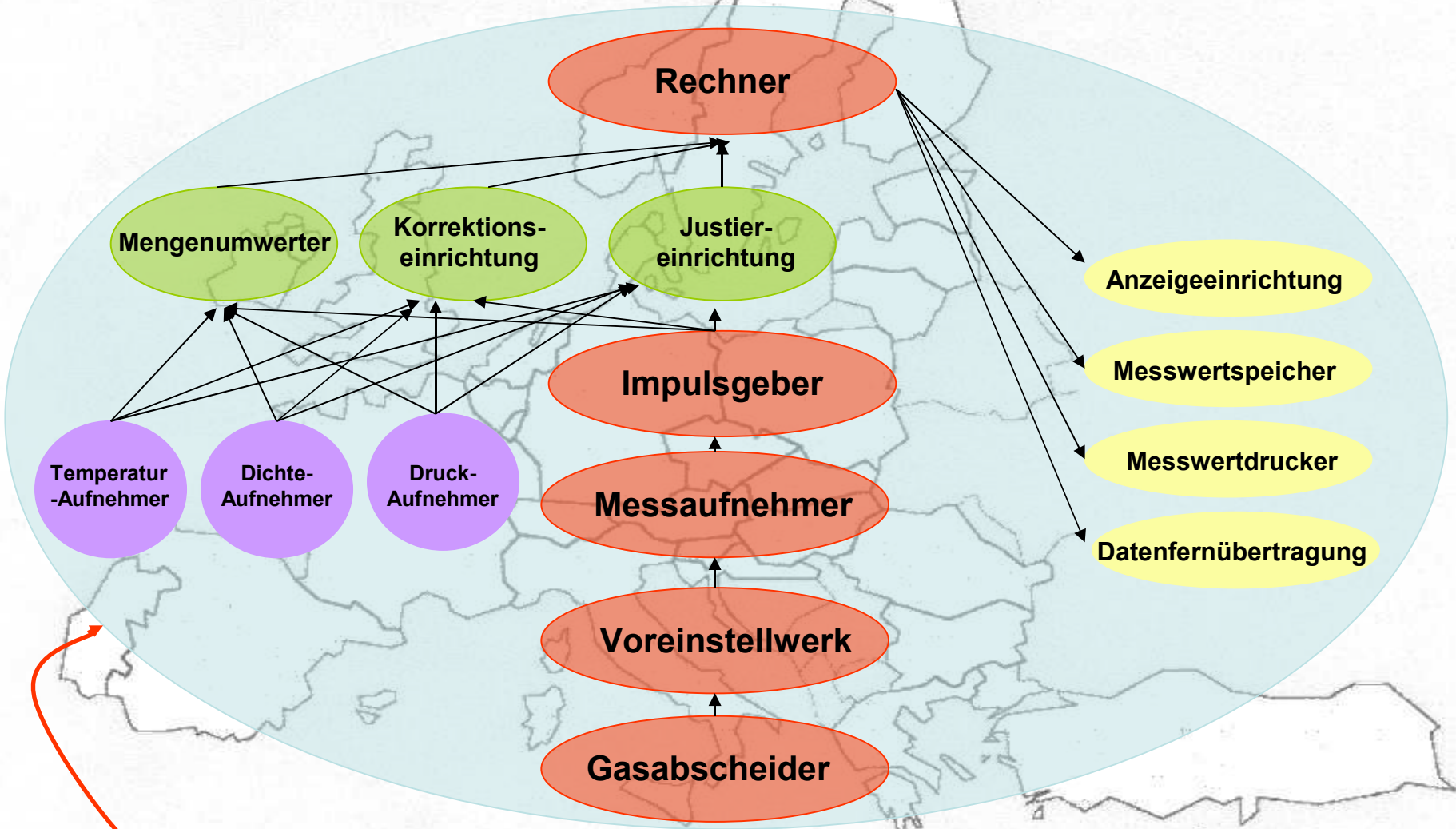
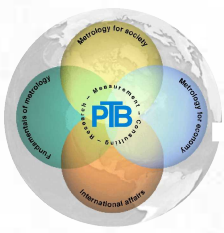
- Sealing of fuel dispensers
- Preventing fraud

Vergangene und zukünftige Aufgaben

Messanlagen für die kontinuierliche und dynamische Messung von Mengen von Flüssigkeiten außer Wasser

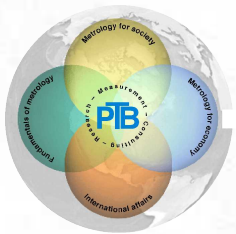


Messanlagen für die kontinuierliche und dynamische Messung von Mengen von Flüssigkeiten außer Wasser



„Measuring Instrument“

WG 10 - Mitglieder



Austria (BEV)

Belgium (MINECO)

Bulgaria (NCM)

Croatia

Cyprus

Czech Republic (CMI)

Denmark (DANAK, FORCE)

Finland (TUKES)

France (SDM; LNE)

Germany (PTB)

Greece

Hungary

Iceland

Ireland

Italy

Latvia (LMNC)

Luxembourg

Malta

Netherlands (NMI)

Norway (JUSTERVESENET)

Poland (GUM)

Portugal (IPQ) Republic of Lithuania

Romania

Slovakia (SMU)

Slovenia

Spain

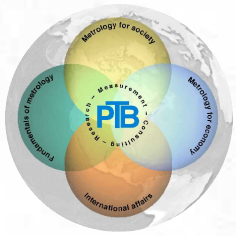
Sweden (SP; SWEDAC)

Switzerland (METAS)

Turkey

United Kingdom (NWML)

CECOD, Orgalime

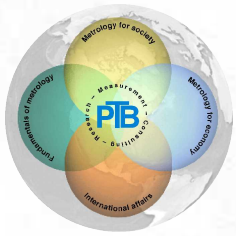


WG 10: Terms of Reference

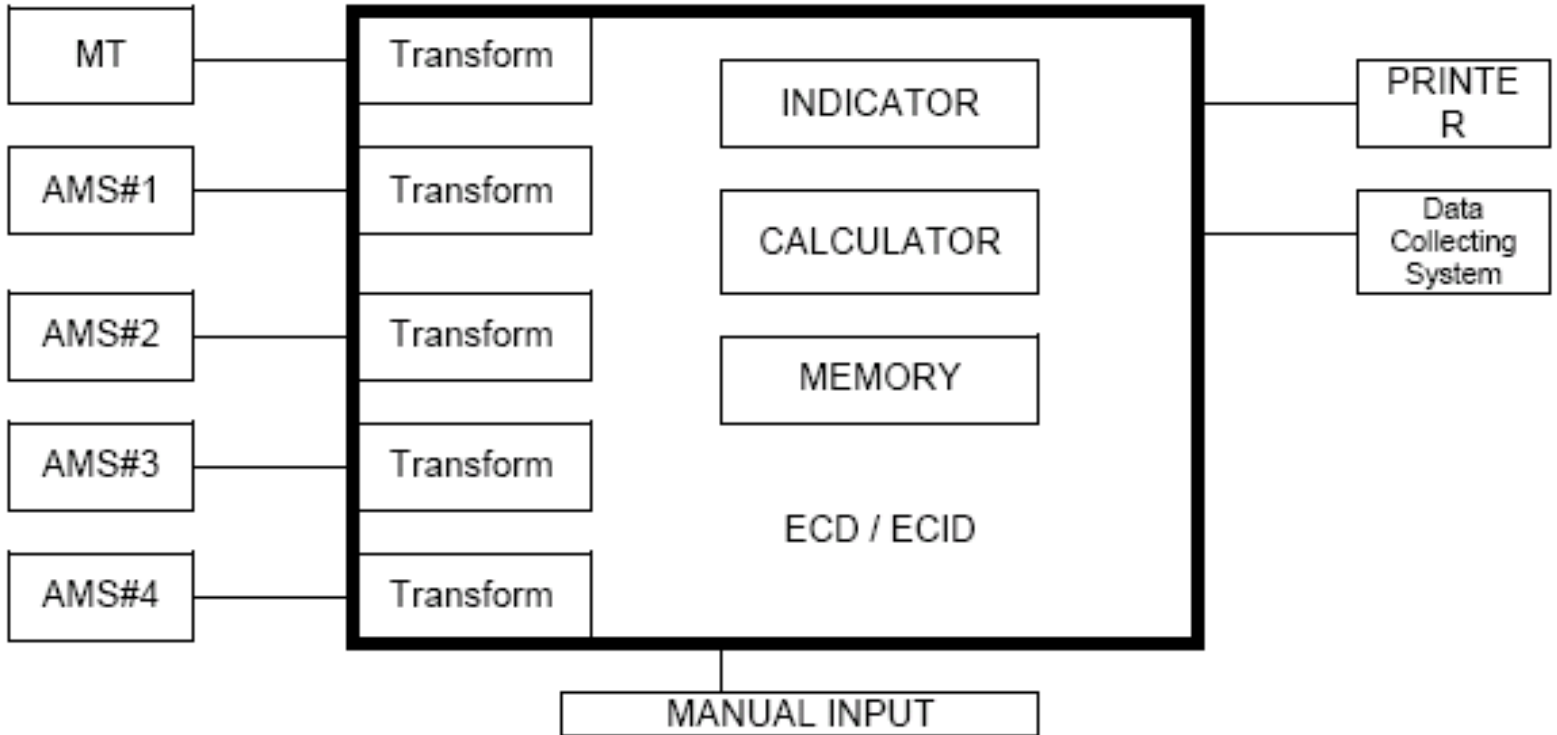
To harmonize type approval examination and initial verification with respect of Measuring Systems for Liquids other than water by, among other things, development of guides for

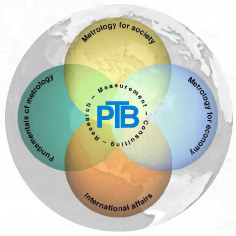
interpretation,
testing and test report format

with respect of the OIML Recommendations
R117 Measuring systems for liquids other than water
R105 Direct mass flow measuring systems for quantities of liquids
R81 Dynamic measuring devices and systems for cryogenic liquids
The (European) Measuring Instruments Directive (MID)



Testing of conversion devices



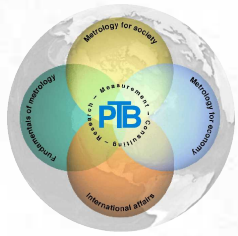


Testing of conversion devices

First Approach (for more information see 6.1.8.1 of OIML R117) testing a calculator / indicating device with conversion device, with all Associated Measuring Devices connected

Second Approach (6.1.8.2 of OIML R117) separately testing the Associated Measuring Devices and the calculator / indicating device with conversion device

Third Approach Testing the Associated Measuring Sensors and the calculator / indicating device with conversion device completely separately



Test procedures for a family of meters

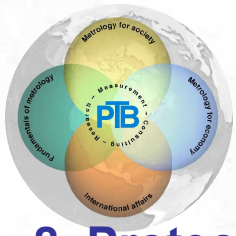
DEFINITION OF A FAMILY OF METERS

A family of meters is a group of meters, in which all the meters have:

- the same manufacturer,
- a similar design and build standard,
- the same materials for those components that are critical to the performance of the meter but each meter has a different size and/or flow rate.

METER SELECTION

- The smallest meter in any family of meters shall always be tested. In general, the largest member of the family shall also require testing.
- Larger meters in the family may be accepted without further testing provided:
 - The maximum flow rate of the untested meter(s) is not greater than twice the maximum flow rate of a tested meter and
 - the ratio Q_{max} to Q_{min} of the untested meter(s) are smaller or the same as the tested one.
- Any other meter, which provides more-extreme operating parameters, should be considered for testing, e.g. largest flowrate range, highest peripheral (tip) speed, etc.



Interpretation: Sealing of fuel dispensers

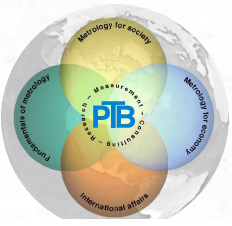
8. Protection against corruption

8.1. The metrological characteristics of a measuring instrument shall not be influenced in any inadmissible way by the connection to it of another device, by any feature of the connected device itself or by any remote device that communicates with the measuring instrument.

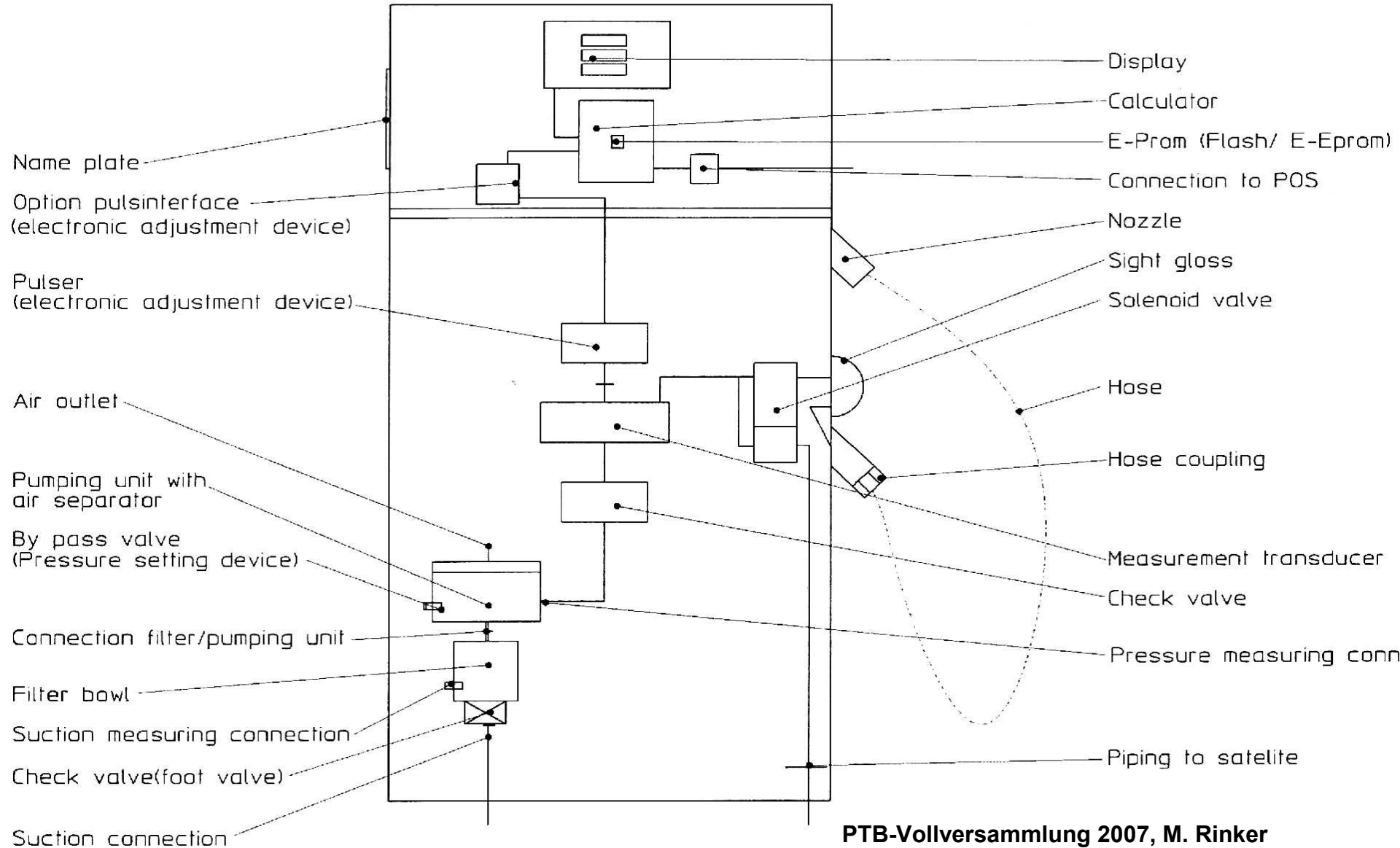
8.2. A hardware component that is critical for metrological characteristics shall be designed so that it can be secured. Security measures foreseen shall provide for evidence of an intervention.

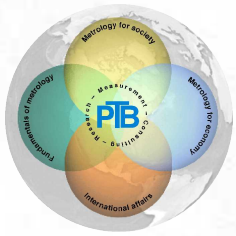
8.3. Software that is critical for metrological characteristics shall be identified as such and shall be secured. Software identification shall be easily provided by the measuring instrument. Evidence of an intervention shall be available for a reasonable period of time.

8.4. Measurement data, software that is critical for measurement characteristics and metrologically important parameters stored or transmitted shall be adequately protected against accidental or intentional corruption.



Interpretation: Sealing of fuel dispensers

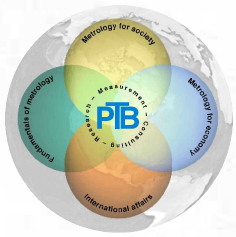




Interpretation: Preventing fraud

7. Suitability

7.1. A measuring instrument shall have no feature likely to facilitate **fraudulent** use, whereas possibilities for unintentional misuse shall be minimal.



Interpretation: Preventing fraud

WELMEC

European cooperation in legal metrology
WG 10 Measuring Systems for Liquids other than Water

Discussion Paper 17 – 01 Rev 0.1
Sofia, Bulgaria

Paris, France

The Hague, Netherlands

~~23 – 24 November 2006~~

~~26 – 27 April 2007~~

08 – 09. November 2007

Subject:

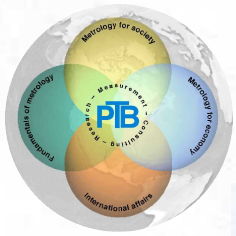
**Road tankers for direct selling to the public
– preventing fraud -**

Author:

Michael Rinker

Organisation:

**Physikalisch-Technische-Bundesanstalt
Bundesallee 100
38116 Braunschweig
GERMANY**

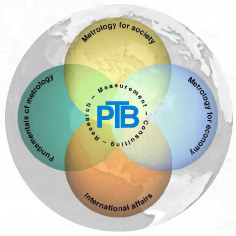


Interpretation: Preventing fraud

Discussion Paper X – YY
Sofia, Bulgaria
Paris, France
The Hague, Netherlands
23–24 November 2006
26–27 April 2007
08 – 09. November 2007
Page 4 of 12

Contents

- 1 Scope
- 2 Definitions
- 3 General requirements ~~advices~~
- 4 Containers
- 5 Connections and construction of the Pipe system
- 6 Gas separating devices
- 7 Control lines and control units
- 8 Inscriptions and markings
- 9 Market surveillance



Vergangene und zukünftige Aufgaben

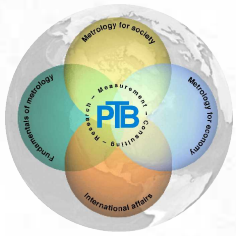
Guide for Pattern Examination (10.1)

Guide to Metrological Devices for Transferring Measured Quantities (DTMQ) associated to bottom loading measuring systems (10.2)

Guide for the use of an alibi recording device (printer or memory) in Measuring Systems for Liquids other than Water (10.3)

Guide for Testing of Electronic Calculators with Conversion Function and Conversion Devices (10.4)

Guide for Common Application of Marking of Fuel Dispensers (10.5)



Vergangene und zukünftige Aufgaben

Sealing of fuel dispensers

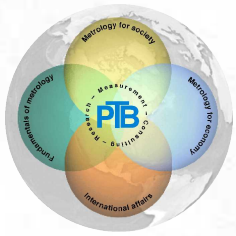
**Road Tankers for direct selling to the public
- preventing fraud -**

Testing of printers

On-site-verification

Test procedures of electronic meters

Testing of digital devices

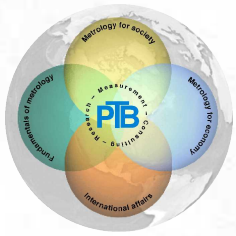


Vergangene und zukünftige Aufgaben

Updating of cross-reference table due to updated R117-1

Updating of published guides due to updated R117-1

Naming parts eligible for modular approval approach



Vergangene und zukünftige Aufgaben

Vielen Dank für Ihr Interesse

www.welmecc.org/wgi.asp

www.welmecc.org/pubs.asp