



**26<sup>th</sup> ASIA-PACIFIC LEGAL  
METROLOGY FORUM AND  
WORKING GROUP MEETINGS**  
6-8 November 2019, Ha Long City,  
Quang Ninh Province, Viet Nam



## Working Group Report - 2019

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### *Working Group on Utility Meters*

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## **SECTION 1 – Details of the membership of the Working Group**

### **BACKGROUND**

The Working Group on Utility Meters was established at the second Asia-Pacific Legal Metrology Forum meeting held in Beijing on 22 October 1995. Utility meters comprise a range of measuring instruments that are used for trade and these include water meters, gas meters, electricity meters, taximeters, telephone meters and parking meters. There is a need to ensure that the pattern approval requirements for these instruments are harmonized, as there is significant international trade in these meters. The Working Group aims to identify the usage of, and requirements for, utility meters in Asia-Pacific economies with the view of harmonization and uniformity of utility meters requirements in the region.

### **SCOPE**

The Working Group on Utility Meters covers utility meters including water meters, gas meters, electricity meters, taximeters, telephone meters, heat meters and electric vehicle charging equipment.

### **OBJECTIVES**

To ensure that requirements for utility meters, namely water meters, gas meters, electricity meters, taximeters, telephone meters, parking meters and electric vehicle charging equipment are harmonized within the Asia-Pacific region.

The current membership is:

1. Cambodia
2. Canada
3. China
4. Republic of Korea
6. Malaysia
5. Philippines
7. Thailand
8. Vietnam

## **SECTION 2 – Key activities of 2018/19**

### **TRAINING ON UTILITY METERS**

Training session on Pattern Approval and Verification of Water Meters - OIML R49 was held on 15-18 October 2019, Sepang, Malaysia. This program was support by National Metrology Institute of Malaysia (NMIM) and PTB. There are 26 participants from 14 economies, 10 of which are APLMF

members. Trainers, Dr. Rahman, Mr. Mohd Noor Mohd Ghaffar and Mr. Hafidzi Hamdan are all from Malaysia. This program was designed for authority personnel who approve / verify water meters for use in urban water systems or have responsibility to ensure that these instruments are pattern approved / verified in accordance with OIML recommendations.

## 2018/19 OIML ACTIVITIES

Work on OIML front related to Utility Meters:

TC 3/SC 4/p 2 working on New Document: Surveillance of utility meters in service on the basis of sampling inspections

PG phase: Project group started in January 2019.

Comment: First working draft (1WD) to be issued in 2019.

TC 5/SC 2/p 3 conducted Revision of D 31: General requirements for software controlled measuring instruments

CIML consultation phase (preliminary ballot): 1 DRAFT submitted to CIML preliminary ballot

Comment: CIML members to vote on Final Draft Recommendation (FDR) at the CIML annual meeting on 22-25 October 2019 in Bratislava, Slovakia.

TC 12/p 1 working on Revision of R 46: Electricity Meters

Proposal phase: Project Approved; project group forming in October 2016.

Comment: 2WD issued in February 2019. A PG meeting was held 22-24 May 2019 in Helsinki, Finland.

Subgroup(s) of TC 12/p 1

SG 1 Quantities and Harmonics

SG 2 Electric Vehicle Charging Stations

SG 3 Smart Street Lighting

SG 4 [Not in use - merged with SG1]

SG 5 Remote displays and meters with modular components

The WG chair and experts in China attended the meetings of TC 12/p 1 and provided some comments.

NTEP (National Type Evaluation Program, United States)

Has established an electric vehicle supply equipment work group. The charge of the Electric Vehicle Supply Equipment (EVSE) Work Group is important in providing appropriate type evaluation criteria based on specifications, tolerances and technical requirements of Handbook 44 Sections 1.10.

General Code and 3.40. Electric Vehicle Fueling Systems and all applicable portions of Section 5.55. Timing Devices.

NIST is also working on EV Fueling and submetering.

Metrology Technical Committee on Electromagnetic (China)

Has issued two national verification regulations for electric vehicle supply equipment.

JJG 1148-2018 AC Charging Spot for Electric Vehicles

JJG 1149-2018 Off-board Charger for Electric Vehicles

## **SECTION 3 – Future focus - Recommendations**

### TRAINING ON UTILITY METERS

At 25th APLMF meeting we set an expectation that we would have 1 utility meter course each year to be funded by the MEDEA 2 programme:

In 2020 the plan was to deliver a training course on Electricity Meters. Korea agreed they would provide trainers and China was going to be the host. The course will be called: Pattern Approval and Verification of Electricity Meters. The training course will be hold in Chang Sha of Hunan province. There are one of the biggest electricity meter manufacturer (Wasion), the metering test bench manufacturer (Tunkia) and Hunan metrology institute. The trainees can visit and practice in these companies and institute. The time to hold the meeting is in September of 2020.

In 2021 plan was to deliver a training course on Gas Meters. The host and the trainers will be decided at 26th APLMF and Working Group Meeting.

Other training courses/workshops in areas of gas, water, electricity meters and electric vehicle charging equipment can be discussed at WG meeting.

### DEVELOP E-LEARNING MODULE

At 25th APLMF meeting the timeline of development of an e-Learning module in water meters was agreed in 2020. What kind of training materials to be developed and the expectations need to be discussed. All members of this WG will be involved.

## **SECTION 4 – Future focus – emerging issues**

### UTILITY METERS IN OIML-CS

Electricity meters, gas meters are included in the OIML-CS and will transit from Scheme B to Scheme A on 1 January 2020. That means the national metrology authorities and test laboratories for type approval of utility meters will be assessed by 3rd party accreditation or OIML expert peer assessment. In APLMF there are three members (NMIA, NIM, NMIJ) involved in the OIML-CS. Experience and competency in type approval of utility meters from these members will be helpful in our WG's future work.