



ASIA-PACIFIC  
LEGAL METROLOGY FORUM

**24<sup>th</sup> APLMF Meeting**  
**Siem Reap, Cambodia**

## Economy Report - 2017

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***[CHINA]***

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## SECTION 1 – Organisation and structure for metrology

### Organisation Structures

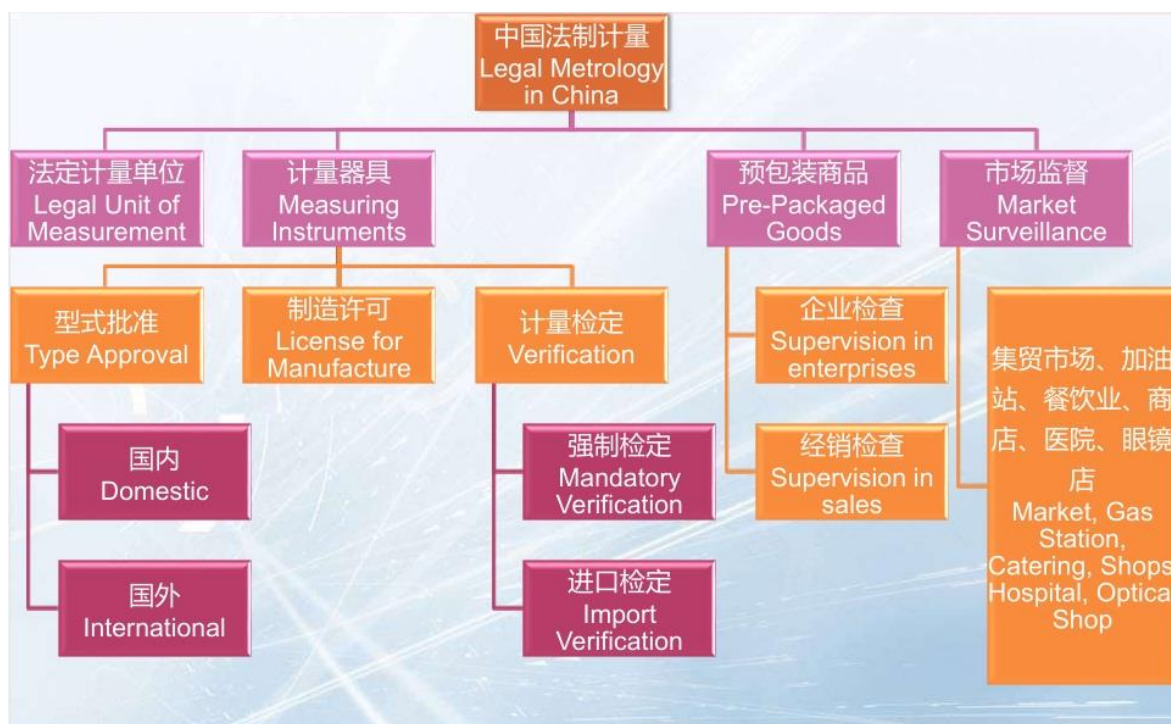
#### Functions :

Department of Metrology organizes the implementation of metrological laws and regulations, popularizes legal metrology units, administers and supervises national primary metrological standards, metrology standards and reference materials, organizes and formulates national verification system for metrology, verification standards and procedures, and technical standards for measurement, organizes national unit value dissemination, supervises and administers metrological instruments all over the country according to the law, standardizes market measuring behavior, organizes the verification of metrological arbitration, standardizes social equity metrological service agencies, undertakes the detailed work of OIML.

#### Major Divisions (6) :

- Genreal Affairs Division
- Unit Value Dissemination Division
- Legal Metrology Division
- Industry and Energy Measurement Division
- Metrology Management Division
- Merology Technical Standards Division

#### Legislative Frameworks





## **International arrangements and engagement**

Foreign-Related Services

Pattern Approval of Imported Measuring Instruments

Examination and Approval of Imported Measuring Instruments of

Non-SI Units

Issuance of License for Manufacturing Measuring Instruments or License

for Repairing Measuring Instruments

Issuance of OIML Certificate of Conformity

## **SECTION 2 – Key activities of 2016/17**

### **Metrology Strategy Research and Top - level Design**

Established a National Metrological Strategy Advisory Committee of 18 experts composed of the academicians, experts, scholars to provide decision support for the development of metrology nationally.

Strengthening the Construction of Metrological Regulation System. Promote the metrology law revision process. Sorted out the current effective measurement administrative regulations, departmental rules and regulations, normative documents comprehensively.

Improve the measurement technical specification system. Up to now, there are 1603 national measurement technical specifications (including 94 verification system tables, 919 national metrological verification regulations and 590 other metrological technical specifications).

### **Basic research on measurement and scientific and technological innovation**

Strengthened the research of measurement technology and frontier technology, especially the precision measurement of physical constants and primary standard of quantum measurement, and established a new generation of high accuracy and high stability quantum measurement primary standard. All the 183 national measurement primary standards were systematically reviewed, which further established the strategic status of national measurement primary standards. The 1343 national calibration and measurement capabilities based on national measurement primary standards were internationally recognized and ranked 4th in the world.

To strengthen the national reference material research and development. At present, a total of 9818 kinds of national reference material have been approved, including 2258 kinds of first class and 7560 kinds of second class, which cover 17 application areas determined by ISO standard materials committees such as food, clinical chemistry, environment, biomedicine and geology, and so on.

Constructing National Metrology Innovation System. Organized the drafting of the “Construction program of national metrology technology innovation base”. Promote the construction of experimental base and other measurement technology innovation base in Changping Campus of National Institute of Metrology, China .

## **Industrial metrology and energy metrology**

Promote the construction of national industrial metrology centers, approved to set up 16 national industrial metrology test center for equipment manufacturing and other fields. Edited case study of “100 case of how metrology provided service to industry” . Up to now, a total of 4656 enterprises have obtain metrology management system certification, issued 3512 type approval certificate of import measuring instruments. Strengthen the energy metrology work planning and top-level design, drafted the work of energy measurement guidance.

## **Metrology Supervision and Management**

To supervise and inspect the use of legal units of measurement in the press, publishing and television fields. Carried out the nationwide supervision and inspection on net content and packaging of pre-packaged goods.

## **International Cooperation**

Implementation of "The Belt and the Road metrology cooperation vision and action". We will deepen our cooperation with countries along the road, such as Russia, Kazakhstan, Uzbekistan, Belarus, Germany, Canada and other countries.

Work with the German Federal Ministry of Economics and Energy and signed a meeting minutes.

Held the sixth Sino-Russian energy metrology group meeting and the Sino-Russian metrological system briefing session in Wuhan, China. The meeting further promoted the communication between China and Russia, and deepened the understanding and recognition of the two countries in the field of energy measurement such as oil and gas, promoted the unity of trade standards between the two countries.

Actively Utilize Free Trade Agreement Implementation Platform to Promote Sino - Swiss metrology Cooperation.

The implementation of the "The Belt and the Road metrology cooperation" to provide assistance in Cambodia, Mongolia metrology center construction.

Jointly organized a series of meetings of the International Symposium on OIML Certification System, in Shanghai, China. Promote the role and significance of OIML international certificate system, strengthen the important international significance of "value" transmission traceability, and also provide reference for our country to construct the working mechanism to adapt to OIML new certificate system.

Actively participate in international measurement organization activities. Selected personnel to participate in the APLMF / MEDEA national measurement infrastructure seminar.

Conduct interviews with the APEC / SCSC Secretariat on the National Quality Infrastructure (NQI).

Seminar on OIML-Certificated System was held on 15 June 2017, in Shanghai China. This seminar was support by AQSIQ. Over 500 participants of 20 countries from government, institute and Metrology experts, Societies, Manufacture & Supplier for Measuring Instruments has attended this opening.

MEDEA project training on verification of weighbridges was held from 26-29 September 2017, in Beijing China. Over 40 participants including Mr. Pu Changcheng, AG Chair, from 14 countries



attended MEDEA project training on verification of weighbridges. Trainers are from China and New Zealand. The agenda include training, economy report, group discussion and lab tour and on-site visit.

### **Bilateral and Multi-lateral Cooperation in Metrology Field, Such as:**

“The Belt and Road” Vision and Actions for Cooperation in Metrology.

Signed the measurement cooperation agreement or memorandum of cooperation in the field of measurement, with South Korea, Russia, Belarus, Kazakhstan, Cambodia and other countries.

Consultations were held on the signing of the measurement cooperation agreement. Countries such as Vietnam, Britain, New Zealand and Kyrgyzstan.

The first OIML training center of international legal measurement organization (OIML) has been settled in China. An international seminar on OIML non-automatic weighing training and OIML legal measurement management system were held in China.

### **Celebrate "World Metrology Day" and Metrology Popularization**

A nationwide metrology popularization knowledge competition was organized. Technology Progress Award selected Chinese Society for Measurement was announced. 35 national primary standards approved for use. Designed "Metrology Popular Science" special metro carriage to communicate metrology culture in three-dimensional. Mr. Zhi Shuping, Minister of AQSIQ delivered a speech on the theme of "Measure to keep the road steady".

## **SECTION 3 – Future focus**

In future, we will always strive for gearing the metrology with the international standards, insist on the concept of fairness, joint discussion, joint building and sharing, under the principle of opening-up, cooperation, mutual-learning, mutual benefits and win-win, intensify the cooperation with the countries around the world in the aspect of strengthening the communication of metrology policy, promoting the internationally mutual accreditation of metrology, deepening the discussion on metrological technology, improving the service capacity of metrology

### **Future Metrology Work**

- “The Belt and Road” Vision and Actions for Cooperation in Metrology  
Revision of Metrology Law
- Implementation of “Metrology Development Plan of China”
- Introduce Metrology Knowledge

### **International Cooperation in Metrology Field**

- “The Belt and Road” Vision and Actions for Cooperation in Metrology  
Participate in OIML activities
- International training
- WTO/TBT notifications and inquires/WTO/TBT  
Bilateral and Multi-lateral Cooperation in Metrology Field

We will strengthen cooperation in the fields of electricity, quality and other fields with Cambodia and Mongolia.

Work actively involved in measuring the international mutual recognition, to accelerate the process of measuring the bilateral and multilateral mutual recognition, and promote the international mutual recognition of conformity assessment results measuring instruments, promote the international equivalent value, increase measurement capabilities of mutual trust and promote the international mutual recognition of measurement.

To strengthen research on the development strategy of international metrology cooperation. Participate in the process of global metrological governance system reform, continue to work on OIML consulting group (AG), study and track the reform of OIML certification system, and establish a new mechanism for implementing OIML certification system in China.

Etc.