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Organisation

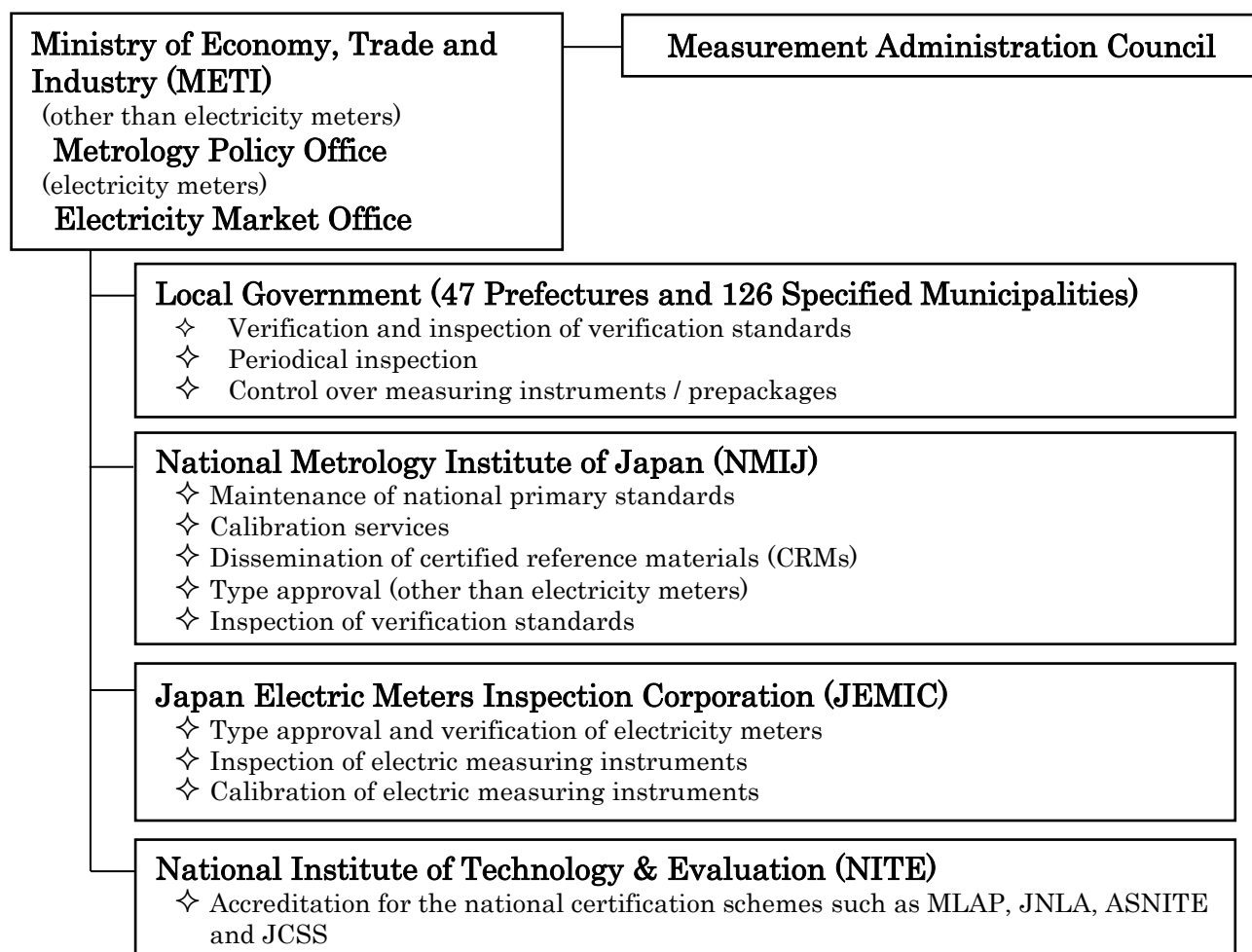
METI and NMIJ

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SECTION 1 – Organisation and structure for metrology

Organisation Structures and Legislative Frameworks



The Measurement Act, which underpins modern metrological control system in Japan, had been established in 1891, and was fully amended in 1992.

METI (Ministry of Economy, Trade and Industry) is responsible for the Measurement Act as the basis of scientific metrology and legal metrology. METI supervises legal systems based on the Measurement Act from a viewpoint of consumer protection and support for the industry.

The Measurement Administration Council, composed of the experts from interested parties including a consumer's group, is established in METI, and it is convened by the Minister of Economy, Trade and Industry. The primary roles of this Council are consideration and review of the present metrological control system toward the future.

METI also coordinates other public originations in metrology, such as the local governments (47 prefectures and 126 municipalities specified by the Cabinet Order), NMIJ (National Metrology Institute of Japan), JEMIC (Japan Electric Meters Inspection Corporation) and NITE (National Institute of Technology and Evaluation as the accreditation body).

NMIJ provides; most of the national primary measurement standards, calibration/testing services, certified reference materials (CRMs), domestic training programs and international cooperation

activities. In legal metrology, NMIJ conducts testing for issuing national/OIML type approval certificates and measurement standards used for verifications which are conducted by the local governments and designated manufacturers.

International arrangements and engagement

■ Participation in the OIML Activities

In 1961, Japan participated in the OIML Convention. NMIJ, which was formerly known as NRLM, has provided a CIML member, who is assigned by Minister of METI, for a long period. Dr. Yukinobu Miki, as Director of NMIJ, has been a CIML member of Japan since May, 2005, and has served as the second CIML Vice President since October, 2013. As a part of the second CIML Vice President's responsibility, he also chairs the RLMO (Regional Legal Metrology Organization) Round Table attended by the representatives from the organizations including APLMF.

Regarding OIML MAA, NMIJ has been an Issuing Participant for OIML R 60 (load cells) and R 76 (non-automatic Weighing Instruments) since 2006. In the OIML Basic Certificate System, NMIJ issues certificates for R 49 (water meters) and R 117 (fuel dispensers). At present, NMIJ is actively submitting comments to the CSPG (Certification System Project Group) to reform the current OIML systems.

At the 51st CIML Meeting in October, 2016, Japan proposed a new project to revise R 139 (2014) *Compressed Gaseous Fuels Measuring Systems for Vehicles* in order to add technical requirements for hydrogen dispensers. A new JIS (Japan Industrial Standard) for hydrogen dispensers has been already issued on 20 May, 2016.

As a domestic activity, there are many national mirror committees corresponding to OIML TCs/SCs which are composed of the members of METI, NMIJ, the manufacturers belong to the Japan Measuring Instruments Federation (JMIF) and the consumers. These committees support Japan's activities for OIML through discussing approximately 30 issues of revisions (or new drafts) of OIML documents in one year.

■ Cooperation with APLMF

Japan participated in APLMF in 1994 and NMIJ provided President and Secretariat in the period 2001-2007. Since 2001, we have also supported the APLMF WG on Quality Measurement of Agricultural Products. This WG conducted a training course on rice moisture measurement in Phnom Penh in November, 2015. Japan also supported APLMF Training Course on Mass Standards in Jakarta, Indonesia in August and APMP (Asia-Pacific Metrology Programme) Workshop on Laser Interferometers for Length Measurement held in NMIJ in October. Since 2013, Japan provided two members for the CC (Coordination Committee) of the MEDEA project supported by PTB in Germany. These members attended many meetings including those held online.

SECTION 2 – Key activities of 2015/16 and Future focus

Major projects - What we did and what we will do

■ Review of metrological control system

Meetings of Measurement Administration Council were convened in multiple times in 2016 in order to respond technological innovations in measuring instruments and changes in social environment surrounding administrations in metrology. This Council discussed the directions of revisions in the present metrological infrastructure from the following three viewpoints.

(Viewpoints)

(1) Promote entry of private business operators.

(Examples)

- ◇ Allow test reports for type approval to be issued by third party organizations or laboratories.
- ◇ Permit third-party entities to execute verifications and/or inspections in legal metrology. (Now, only the designated verification bodies are permitted to conduct such activities.)

(2) Respond technological innovations and changes in social environment.

(Examples)

- ◇ Add automatic weighing instruments as a new category of specified measuring instruments and execute verification according to the Measurement Act (in 5-10 years).
- ◇ Consider whether hydrogen dispensers should be added to the specified measuring instruments, according to their practical utilization in Japan.

(3) Reclassify and/or clarify the scope and the provisions of current regulations.

To respond above directions and viewpoints, some amendments of the cabinet orders and ministerial ordinances are being prepared, and they are planned to be issued on 1st April in 2017 (The enforcement date may differ depending on the contents of each amendment. METI plans that all of them will be enforced by October in 2017 at the latest). NMIJ supports this procedure as a group of technical experts.

■ Technical requirements of measuring instruments in JIS

The technical requirements in the Measurement Act have been transferred into JIS in order to catch up with up-to-date technological development. Most of these standards are based on OIML Recommendations although some of them include our original requirements. Table 1 shows current situation of these activities.

Table 1: Technical requirements transferred into JIS

OIML Recommendations used as the basis of JIS	JIS numbers correspond to the OIML Recommendations
R 7 Clinical thermometers, mercury-in-glass with maximum device	JIS T 4206:2014
R 16-1 Mechanical non-invasive sphygmomanometers	JIS T 4203:2012
R 21 Taximeters	JIS D 5609:2014
R 49-1/2 Water meters	JIS B 8570-2:2013
R 75-1/2 Heat meters	JIS B 7550:2014

R 76-1 Non-automatic weighing instruments.	JIS B 7611-2:2015
R 80-1 Road and rail tankers with level gauging	JIS B 8573:2011
R 101 Recording pressure gauges with elastic sensing elements	JIS B 7505-2:2013
R 111-1 Weights of classes E ₁ , E ₂ , F ₁ , F ₂ , M ₁ , M ₁₋₂ , M ₂ , M ₂₋₃ and M ₃	JIS B 7611-3:2015
R115 Clinical electrical thermometers with maximum device	JIS T 1140:2014
R 117 (1995) Measuring systems for liquids other than water	JIS B 8572-1:2008
R 117-1 (2007) Dynamic measuring systems for liquids other than water	JIS B 8572-2:2011
	JIS B 8574:2013 (covers only LPG dispensers for motor vehicles)
R 136-1 Instruments for measuring the areas of leathers	JIS B 7614:2010
R 137-1 Gas Meters.	JIS B 8571:2015

Other training activities

METI and NMIJ have been conducted many training program in cooperation with JICA (Japan International Cooperation Agency). We had conducted multilateral training courses in legal metrology from 1973 to 2010 inviting the experts/officers from the economies in Asia, Middle/South America, Middle East and Africa.

We are proposing a new multilateral training program to JICA. If it is approved, this training program will be conducted in 2018 or later. As a basic policy of JICA, a program is selected and implemented based on a request from target countries through a formal diplomatic route of JICA and Japan Embassy. NMIJ also accepts trainees from NMIs (National Metrology Institutes) abroad in scientific metrology.