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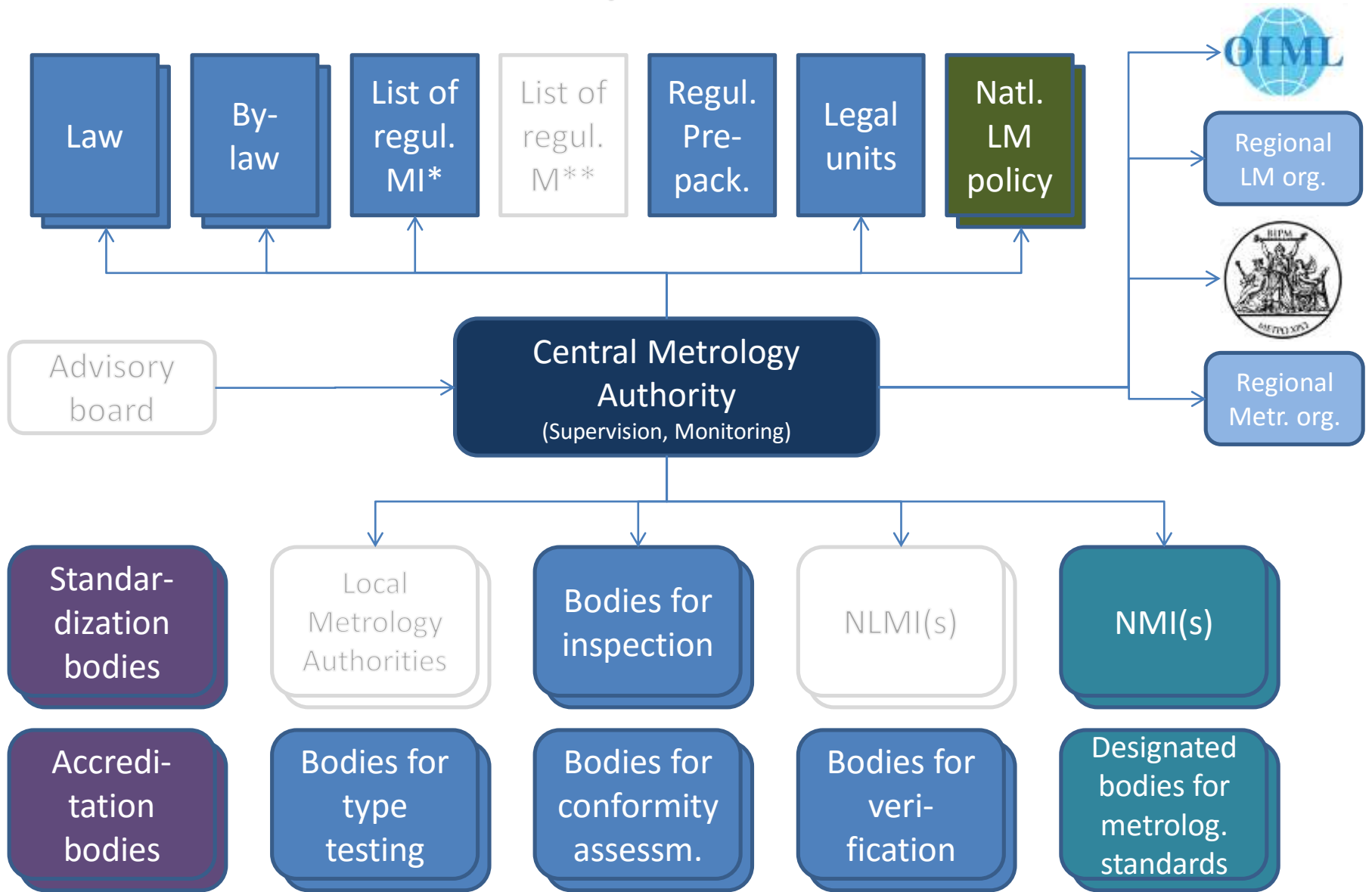
OIML Seminar on Metrology Management System

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Legal Metrology Management System according to OIML D1 - Republic of Korea



*MI = Measuring Instruments LM = Legal Metrology
**M = Measurements

NMI = National Metrology Institute
NLMI = National Legal Metrology Institute

1) Questions related to the Central Metrology Authority (1/2)

Which authority was given the task to be the **Central Metrology Authority**?

- KATS(Korean Agency for Technology and Standards), Metrology & Measurement Division

Is it responsible for **all laws resp. by-laws dealing with metrology**?

- 3 laws (legal metrology)
 - Measures Act
 - Enforcement decree of the Measures Act(presidential decree)
 - Enforcement rule of the Measures Act (ordinance of the ministry of trade, industry and energy)
- 10 Administrative rules related to 12 MIs' testing.
- 10 Administrative rules for implementation of legal metrology
 - Service Fee
 - Special Technical Committee
 - Self-Declaration of Conformity for Prepackaged Products
 - Designation of Dealers Capable of Conducting Regular Self-Inspection
 - Procedure on Type Approval
 - Consumer Monitors' activities
 - Criterion on Re-calibration of Measurement Standard Devices
 - Correction of Defective MIs
 - The criteria, method and procedure for granting rewards for report on tempering MIs

1) Questions related to the Central Metrology Authority (2/2)

Is it responsible for the supervision/monitoring of institutes or bodies?

➤ Yes

Is it a **member of a regional metrology organization** resp. regional legal metrology organization?

➤ Yes, APLMF(Asia-Pacific Legal Metrology Forum)

Is it a **member of the metre convention and the OIML**?

➤ Yes, since 1959 for BIPM and since 1978 for OIML

Is there any **advisory board** for the Central Metrology Authority?

(If yes, how many people from which stakeholder groups are taking part?)

➤ No.

- But we have 'Specialized Technical Committee' to deliberate on matters related to type approval.

2) Questions related to Legal Documents (1/5)

Is there one law or are there several **lawing with metrology**?

- MEASURES ACT for legal metrology
- FRAMEWORK ACT ON NATIONAL STANDARDS for measurement standards

Is there one by-law or are there several **by-laws dealing with metrology**?

- There are several by-laws such as Administrative rules and technical regulations.

2) Questions related to Legal Documents (2/5)

Is there a list of **regulated measuring instruments**?
(If yes, which measuring instruments are covered?)

1. NAWI
 2. Weights
 3. Gas meter
 4. Water meter
 5. Hot water meter
 6. Oil meter
 7. Oil pump
 8. Nitrogen oxide (No_x) reduction agent dispenser (*newly included*)
 9. LPG meter
 10. Storage tanks
 11. Heat meter
 12. Electricity meter
- * Electric charger for EV(Electric Vehicle) to be included in 2017*

Also 6 measurement standard devices shall be calibrated and 1 standard device is to be voluntarily calibrated by user.*

** Reference balance weight, grain moisture measuring device etc.*

2) Questions related to Legal Documents (3/5)

Is there a list of **regulated measurements**?
(If yes, which measurements are covered?)

➤ More investigation needed

2) Questions related to Legal Documents (4/5)

Are **prepackages regulated?**

(If yes, which authorities are responsible for?)

- Yes, 27 products are regulated by law.

ENFORCEMENT DECREE OF THE MEASURES ACT

Article 36 (Tolerances of Prepackaged Products)

"Tolerances prescribed by Presidential Decree" in the latter part of Article 41 (1) of the Act means the tolerances specified in attached Table 20.

Article 37 (Labeling of Prepackaged Products and Criteria for Inspection)

- (1) *Labeling of prepackaged products under Article 41 (2) of the Act shall be as specified in attached Table 21.*
- (2) *Criteria for inspecting prepackaged products under Article 41 (2) of the Act shall include matters on:*
 1. *Inspection facilities and equipment;*
 2. *The method and procedure for inspection;*
 3. *Sampling;*
 4. *The calculation method of, and decision on, errors;*
 5. *The preparation of an inspection report.*
- (3) *Details of the criteria for inspecting prepackaged products under paragraph (2) shall be determined and publicly announced by the Minister of Trade, Industry and Energy*

2) Questions related to Legal Documents (5/5)

Is there any legal document related to **legal units**?

➤ Yes,

- ① The 7 base units by 'Article 10 of the FRAMEWORK ACT ON NATIONAL STANDARDS'
- ② The 43 derived units by 'Article 11 of the FRAMEWORK ACT ON NATIONAL STANDARDS'
- ③ The 53 special units by 'Article 3 of the ENFORCEMENT DECREE OF THE MEASURES ACT'

3) Questions related to a National Legal Metrology Policy

Is there a **written national legal metrology policy**?

(If yes, what is covered by this policy? Is it valid for a certain time period?)

- Yes, a master plan for metrology policy is established every 5 years with a view to;
 - ✓ Maintaining fair commercial trade and protecting consumers,
 - ✓ Contributing to the advancement of industries and the development of the national economy
- For the purpose of implementing master plan, detailed plans are prepared every year, which includes such topics as legal units, prepackaged product and managing MIs.

Who is responsible for the **development of the national legal metrology policy**?

- KATS

Which interested parties took part in the development?

- Government, testing lab., industrial associations, research institutes etc.

4) Questions related to National Metrology Institutes(NMIs)

Is there a **National Legal Metrology Institute(NLMI)**?

Or is the National Metrology Institute responsible for Legal Metrology, too?

Or is there another institution responsible for Legal Metrology?

- No NLMI, but we have one NMI(National Metrology Institute), which is KRISS(Korea Research Institute of Standards and Science)

What are the tasks of the responsible institute resp. institution in relation to legal metrology?

- KRISS, as NMI, has developed measurement standards to support technology and industry.

Are there any Designated Institutes dealing with Legal Metrology?

- No.

5) Questions related to All Kinds of Bodies (1/4)

Which kinds of **legal metrology bodies** do exist in your country?

➤ *Refer the table in the next slide*

What are there specific tasks?

➤ *Refer the table in the next slide*

How are they financed?

(Are they private enterprises?)

➤ *Refer the table in the next slide*

5) Questions related to All Kinds of Bodies (2/4)

Metrology Body	Details(Task)	Finance
36 bodies for Inspection	<ul style="list-style-type: none"> • 17 Regional(provincial) Governor • 19 designated bodies for self-inspection by users or manufacturers 	<ul style="list-style-type: none"> • Government funding • Private enterprises
2 testing bodies for type approval	<ul style="list-style-type: none"> • KTC(Korea Testing Certification), KERI(Korea Electro-technology Research Institute) 	<ul style="list-style-type: none"> • Service Fee
5 bodies for verification	<ul style="list-style-type: none"> • KTC • 4 designated bodies for self-verification by manufacturers 	<ul style="list-style-type: none"> • Service Fee • Private enterprises
1 accreditation body	<ul style="list-style-type: none"> • KOLAS(Korea Laboratory Accreditation Scheme) office 	<ul style="list-style-type: none"> • Service Fee
748 bodies for conformity assessment	<p>209 calibration, 464 testing, 50 inspection labs, 13 reference materials producers, 5 medical testing labs, 7 proficiency testing provider</p>	<ul style="list-style-type: none"> • Service Fee
1 Designated body for measurement standards	<ul style="list-style-type: none"> • KRISS(Measurement units) <p>* KATS is standardization body for regional and international organizations, including IEC and ISO</p>	<ul style="list-style-type: none"> • Government funding

5) Questions related to All Kinds of Bodies (3/4)

Is there an obligation to demonstrate competence?

- Yes, laws and by-laws prescribe requirements and administrative procedures for the bodies.

Is there any supervision resp. monitoring of such bodies?

- Yes, KATS directly or indirectly supervises these bodies.

5) Questions related to All Kinds of Bodies (4/4)

Are **standardization bodies** (or at least one) taking part in the legal metrology system of your country?

- KATS is the national standardization body for IEC and ISO as well as competent authority for legal metrology.
- And KRISS is responsible for National Measurement Standards.

Are **accreditation bodies** (or at least one) taking part in the legal metrology system of your country?

- Yes, KOLAS office is the only governmental accreditation body established in 1992 and administered by KATS.

6) Questions related to some General Topics (1/2)

How many **people are working for the legal metrology management system** in your country (CMA, LMA, NMI, NLMI, bodies, etc.)?
(To answer this question an estimate is also allowed!)

- Approximately 350 people are engaged in LM

Are **fees for legal metrology services fixed** by the state?

- Yes.

How does your Legal Metrology Management System deal with measuring **instruments coming from other countries?**

- MEASURES ACT regulates 'a person who intends to import measuring instruments as his/her business shall file a report with the regional(provincial) Governor on the matters to be reported, prescribed by Presidential Decree.
- Also 2 kinds of electric weights* shall be verified and approved by Korea Customs Service from 2017.

* *max. measurement scale below 30kg and 30 kg ~ 5000 kg*

6) Questions related to some General Topics (2/2)

Do you see any need for improvements of your Legal Metrology Management System?

- Yes, we want to encourage more stakeholders to actively participate in the legal metrology management.

Would like to have any support or further information exchange with colleagues concerning specific topics?

- Composition, operation of Advisory Board
- Organization of consumer watchdog
- Metrology capacity build-up ways including workshops, training program etc.

What would you like to discuss with other participants during the group discussions?

- Efficient way to control ten millions of measuring instruments
- Best practice of implementing metrology regulation

Raising awareness of metrology

How important do you think of raising awareness of metrology?

- Absolutely very important!

Which way do you think is most efficient to do so?

- Public Relation, Publicity(information) activities
- Education and Training
- Information management system dealing lots of metrology data
 - It is important to deal with data in the complex and dynamically innovated society. Thus KATS has developed and operated information system since 2013 and plan to renovate it.

What is your successful story?

- Poster and video UCC(user created contents) contest to promote public awareness of legal units.
- Awards to commend those who have contributed to developing metrology management systems and technologies.

What do you expect to learn from others?

- Dialog(communcation) channels among stakeholders(central and local government officials, operators, manufacturers, consumers and repairer etc.)

Training course or seminar topic mostly needed in near future

What subject do your urgent need for training?

- (1) Guideline to use OIML D 1 when drawing metrology law and by-law
- (2) Analysis way to social-economic impact of legal metrology

Which seminar topic do you care for the most?

Please list top 3

Speak of capacity building, what is the strongest needs of your organization?

- (1) How to complete administrative control framework reflecting cltural conditions and suitable to a country in order to efficently and effectively manage our metrology system

Other request?

Thank you for your attentions and interest!

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