



Asia-Pacific Legal Metrology Forum

APLMF Twentieth Meeting Minutes

November 5-8, 2013

Royal Ambarrukmo Hotel, Yogyakarta, Indonesia

20th Asia-Pacific Legal Metrology Forum Meeting

Nov. 5 – 8, 2013

Hosted by Directorate of Metrology (DOM), Ministry of Trade, the 20th APLMF working group meeting and forum meeting were held from Nov. 5 through Nov. 8 2013 at the Royal Ambarrukmo Hotel, Yogyakarta, Indonesia. The Meetings were attended by delegates from full member economies and representatives of the international and regional organizations.



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1. List of Participants

1.1. Table 1-1 Hosts

Indonesia	Mr. Hari Prawoko	Directorate of Metrology
	Mr. Eko Agus Irianto	Directorate of Metrology
	Mr. Rifan Ardianto	Directorate of Metrology
	Mr. Priyo Syamsul Nugraha	Directorate of Metrology
	Mr. Aris Kusnandar	Directorate of Metrology
	Mr. Yohanes Haryo Tejo	Directorate of Metrology
	Mr. M. Yudha Primadirani	Directorate of Metrology
	Mr. Sonny Sundana	Directorate of Metrology
	Mr. Syarifudin	Directorate of Metrology
	Ms. Diah Endriati	Directorate of Metrology
	Ms. Isabella Dewi Anjani	Directorate of Metrology
	Ms. Pentha Mayasari	Directorate of Metrology
	Mr. Unang Abdul Salam	Directorate of Metrology
	Mr. Syarif Aditya Budi P	Directorate of Metrology
	Mr. Sumartono	Directorate of Metrology
	Mr. Happy Kartika Windu	Directorate of Metrology
	Mr. Agung D.Y	Directorate of Metrology
	Mr. R. Dhimas	Directorate of Metrology
	Ms. Megawati	Directorate of Metrology
	Mr. Angga Wijaya	Directorate of Metrology
Mr. Riza Zakariya	Directorate of Metrology	
Mr. Andhang Windarto	Directorate of Metrology	



1.2. Table 1-2 President and Secretariat

President	Mr. PU Changcheng	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
Honorary President	Mr. John Birch	Former APLMF President
Secretary	Ms. ZHENG Huaxin	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
Secretary	Mr. GUO Su	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)

1.3. Table 1-3 Full Member Economies

Australia	Dr. Valerie Villiere	National Measurement Institute Australia (NMIA)
Australia	Mrs. Marian Haire	National Measurement Institute Australia (NMIA)
Canada	Mr. Alan Johnston	Measurement Canada / Organization Internationale de Metrologie Legale (OIML)
Cambodia	Ms. Somoline Sorn	National Metrology Center of Cambodia
People's Republic of China	Mr. HAN Yi	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
People's Republic of China	Mr. HAN Jianping	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
People's Republic of China	Mr. DU Yuejun	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
People's Republic of China	Mr. YANG Youtao	Beijing Institute of Metrology , China
Indonesia	Mr. Hari Prawoko	Directorate of Metrology



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Indonesia	Mr. Eko Agus Irianto	Directorate of Metrology
Indonesia	Mr. Rifan Ardianto	Directorate of Metrology
Indonesia	Mr. Bambang Sihono	Directorate of Metrology
Indonesia	Ms. Nona Martin C	Directorate of Metrology
Indonesia	Ms. Anggi Anggraeni	Directorate of Metrology
Indonesia	Mr. Denny Tresna Seswara	Directorate of Metrology
Indonesia	Mr. Eko Heri P	Directorate of Metrology
Indonesia	Mr. Rahmat Hidayat	Directorate of Metrology
Indonesia	Mr. Purwanto	Directorate of Metrology
Indonesia	Mr. Cecep Mufti Cahyana	Development Center of Metrological Human Resource
Indonesia	Mr. Permadi	Development Center of Metrological Human Resource
Indonesia	Mr. Deden Muhammad Fajar Shiddiqs	Development Center of Metrological Human Resource
Indonesia	Ms. Ria Rita Tobing	Ministry of Trade
Indonesia	Ms. Intan Fathimah	Ministry of Trade
Japan	Dr. Akira Ooiwa	National Metrology Institute of Japan (NMIJ), AIST
Japan	Dr. Tsuyoshi Matsumoto	National Metrology Institute of Japan (NMIJ), AIST
Japan	Dr. Toshiyuki Takatsuji	National Metrology Institute of Japan (NMIJ), AIST
Republic of Korea	Mr. WAN BIN Im	Korea Association of Standards and Testing Organizations (KATS)
Republic of Korea	Mr. Ki Hyoung Na	Korea Association of Standards and Testing Organizations (KATS)



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Republic of Korea	Mr. Byoung Huee Lee	Korea Association of Standards and Testing Organizations (KATS)
Republic of Korea	Mr. Young Mun, Kweon	Korea Association of Standards and Testing Organizations (KATS)
Republic of Korea	Mr. Seong Boo, Jeong	Korea Association of Standards and Testing Organizations (KATS)
Malaysia	Mr. Mohd Roslan Mahayudin	Ministry Of Domestic Trade, Co-Operatives And Consumerism Malaysia
Malaysia	Mr. Azman Adam	Ministry Of Domestic Trade, Co-Operatives And Consumerism Malaysia
Malaysia	Mr. Abdul Rashid Zainal Abidin	National Measurement Standard laboratory (SIRIM Berhad)
Malaysia	Dr. Wan Abd Malik Wan Mohamed	National Measurement Standard laboratory (SIRIM Berhad)
New Zealand	Mr. Stephen O'brien	Measurement and Product Safety Service, Ministry of Consumer Affair
New Zealand	Mr. Kevin Gudmundsson	Measurement and Product Safety Service, Ministry of Consumer Affair
Papua New Guinea	Mr. Joe Magur Panga	National Institute of Standards and Industrial Technology (NISIT)
Philippines	Mr. Sabino Paulo Jr. Leones	Industrial Technology Development Institute (ITDI)
Singapore	Ms. Lena Soh	SPRING Singapore
Singapore	Mr. Lim Yong Seng	SPRING Singapore
Chinese Taipei	Mr. Jin-Hai Yang	Bureau of Standards, Metrology and Inspection (BSMI)
Chinese Taipei	Mr. Pei-Lin Hou	Bureau of Standards, Metrology and Inspection (BSMI)



Thailand	Mr. Santichai Santawanpas	Central Bureau of Weights and Measures (CBWM)
Thailand	Mr. Jarin Suttanarak	Central Bureau of Weights and Measures (CBWM)
Thailand	Mr. Sakchai Hasamin	Central Bureau of Weights and Measures (CBWM)
Thailand	Ms. Pattaraporn Surasit	Central Bureau of Weights and Measures (CBWM)
United States of America	Mr. Ralph A. Richter	National Institute of Standards and Technology (NIST)
Viet Nam	Mr. NGUYEN HUNG DIEP	Directorate for Standards and Quality (STAMEQ)
Viet Nam	Mr. Luong Viet CUONG	Directorate for Standards and Quality (STAMEQ)
Viet Nam	Mr. Luu Ho QUANG	Directorate for Standards and Quality (STAMEQ)
Viet Nam	Mr. Nguyen Van THANG	Directorate for Standards and Quality (STAMEQ)

1.4. Table 1-4 Observers

OIML	Mr. Stephen PATORAY
PTB International Technical Cooperation	Dr. Anna Cypionka
APMP Developing Economies' Committee (DEC)	Dr. Mego Pinandito

2. Working Group meeting (9 am – 4 pm, Nov. 6, 2013)

The WG meeting was held on 6th Nov. 2013. Mr. Stephen O'Brien (WG on Goods Packed by Measure) as the chair and Dr. Tsuyoshi Matsumoto (WG on Quality Measurement of Agricultural Products) as co-chair were in charge of this meeting. The agenda of this meeting included reports from the 7 WGs of APLMF. Mr. Stephen O'Brien opened the meeting by emphasizing the contribution of legal metrology to trade and other aspects of life.

2.1. WG on Training Coordination

Mrs. Marian Haire, the chairperson of the WG on Training Coordination, reviewed training activities since the 19th APLMF forum meeting.

She first reviewed the training course on Smart Electricity and talked about the future training course on Rice Moisture Meters. This was followed by a review of the evaluations that she had collected. She also listed all the priorities and comments raised from member economies.

She suggested the distribution of an Australian test procedure for every one for review and discuss at the APLMF Meeting the next day.

After this part, she listed the collected results from APLMF survey on benefits. She provided a few suggestions on innovation of the APLMF website. Finally, she made a conclusion and work plan for the WG for next year.

During her report, she has asked if the APLMF secretary could make a video of every training course, could update the new article from the APLMF community, could upload reports of every training course, and could update the APLMF Directory.

Mr. GUO Su from APLMF Secretary said, once he could get videos from trainers, he will upload them to website. To answer the second question, he said there have been no submitted articles since 2012. Su said every report of every training course was already uploaded to the website in a zip file. Regarding the update to the APLMF Directory, he will send everyone a copy of the Directory for review during the meeting.

Mrs. Marian Haire informed everyone that they should send related resources to Mr. Guo Su to make APLMF website more dynamic. Then, she suggested that the APLMF Secretary should work together with the trainers to make video clips.

Dr. Tsuyoshi Matsumoto suggests using "Guide Document" instead of "Test Procedure."

Mrs. Marian Haire explained Test Procedure is the main focus of verification.

Mr. Stephen O'Brien suggests that New Zealand could be the trainer for a course on pre-packaged goods, and also could lead a team to draft the Guide Document on this issue. Singapore and Malaysia on behalf of ASEAN raised interests in a workshop on pre-packaged goods, especially on topic "mark".

2.2. WG on Goods Packed by Measure

Mr. Stephen O'Brien summarized the progress made on the work program of the WG in 2013.

Change of Working Group Chairperson

Mr Brian Waltham has left the Ministry of Business, Innovation and Employment in New Zealand and is replaced as chair of this Working Group by Mr Stephen O'Brien, Manager, Measurement and Product Safety Service, Ministry of Business, Innovation and Employment, New Zealand

Report on the work of OIML Technical Committee 6 (TC6) – Pre-packaged Products

A meeting of OIML Technical Committee (TC 6) *Pre-packaged products* took place in Bern, Switzerland on the 23 – 27 September 2013. The meeting was attended by 18 of the 28 Participating committee members and covered the on-going revision of International Recommendations OIML R79 *Labelling requirements for prepackaged products* edition 1997 and OIML R87 *Quantity of product in prepackages* edition 2004.

OIML R79 Revision

- Products in aerosol form may be marked by mass, volume or both - subject to acceptable density procedure being developed;
- Include a provision for marking total mass of a food product in liquid medium to enable consistency with CODEX Standard 1;
- A note included recognising national requirements that may prescribe exemptions from the quantity declaration provisions in R79;
- Identify and list products packed in accordance to unique national usage or customs.

OIML R87 Revision

- Remove reference to control of packages with random nominal quantities (catch weight);
- Include allowances for an inspector to define lot size when not on the premises of the packer;
- Inspection lot sizes starting from 100 are included;
- Requesting information from economies not satisfied with current tolerances to provide reasonable proposals for such an amendment to be considered;
- Validity of other proposed amendments are being confirmed by an advisory expert group on statistics.

Next OIML TC6 meeting

The delegation from the Republic of Korea offered to host the next OIML TC6 meeting in Korea and it was tentatively agreed to hold the meeting in September 2014 pending final confirmation from the hosts.

International Committee of Legal Metrology (CIML) Decision

48th International Committee of Legal Metrology (CIML) in Viet Nam, 8-10 October 2013 was asked by TC6 to consider and vote on two proposals:

1. To terminate TC6 project p1 OIML certificate system for pre-packages, and
2. To approve a new project within TC6 to produce a new publication *Guidance for defining the system requirements for a certification system for pre-packages*.

- both passed with a majority of CIML member votes
- a small number of CIML members voted against the 2nd proposal because of potential issues with European Union Legislation or a view that it was not needed
- Others considered it would be a potentially useful resource for developing economies and those considering the use of a certification system to reduce need for market surveillance
- BIML will be requesting expressions of interest from CIML Member economies that wish to participate on this new project

Dr. Tsuyoshi Matsumoto mentioned there was no conclusion during the OIML TC6 meeting.

Mr. Stephen O'Brien explained that after the draft documents are released from OIML, some of these issues will become clearer.



Mr. Stephen Patoray encouraged all APLMF member economies to participate in the OIML TC6 activities, and mentioned the relevant documents will be voted after the next CIML meeting.

Dr. Tsuyoshi Matsumoto said Japan will continue support TC6 regarding the sampling method in R87.

Mr. Sakchai Hasamin from Thailand and Mr. Nguyen Hung Diep from Viet Nam would like to join the small working group.

2.3. WG on Utility Meters

Mr. Alan Johnston, on behalf of the chair of this WG, Mr. Gilles Vinet, gave the summary report of activities since last forum meeting in 2013. He reported there was a Training Course on Smart Electricity Metering that was held 17-20 June, 2013 in Bandung, Indonesia delivered for utility meters. In terms of OIML activities, he gave an update on OIML technical committees that work on the development of recommendations and technical procedures for the type approval evaluation and/or verification of electricity, natural gas, and water meters.

For the work plan in the next year, he proposed to APLMF members as below:

- Training delivery in accordance with the outcome of the 2013 APLMF meeting.
- Follow and/or participate in OIML TC (Technical Committee) work related to utility meters and keep APLMF members informed of progress and issues.

2.4. WG on Mutual Recognition Arrangements

Mr. Ralph Richter on behalf of Dr. Charles Ehrlich, the chair, reported on work items of the WG for the period of 2012-2013.

1. To continue supporting the OIML work on implementation of Mutual Acceptance Arrangement (MAA) and not to develop a regional MAA.

There has been no direct request or inquiry from an APLMF Member Economy to look into a regional Mutual Recognition Arrangement.

The ongoing work in implementing the OIML MAA has been the focus of the APLMF WG activity, while keeping in mind ways that all interested APLMF Member Economies might participate.

An OIML MAA Seminar was held on 07 October 2013, in conjunction with 48th CIML Meeting in Ho Chi Minh City, Vietnam.

Mr. Alan Johnston provided a summary report of this MAA Seminar.

The Seminar included sessions on the History and Initial Implementation of the MAA, Current Operations and Impact of the MAA, Options for Further Development of the MAA, Conclusions of the Seminar, and Draft Resolutions.

Some Conclusions of the Seminar: (a) confidence in the existing MAA system appears to be high; (b) there is a need to raise awareness about the MAA system, especially concerning the benefits of the MAA (e.g. through RLMO's), (c) there is a need to rethink the role of Utilizing Participants, with the aim that all Members are able to accept MAA Certificates; (d) additional discussions are needed on the structure of the CPR; and (e) consideration should be given to possibly phasing out the Basic Certificate system.

Resolution: Instructs the BIML in its capacity as secretariat of the MAA Committees on Participation Review (CPR) to set up an ad hoc working group consisting of interested CIML and/or CPR members and representatives of manufacturers' associations to consider how this awareness can be raised, and to provide secretarial support to this working group;



Requests its first Vice-President (Dr. Roman Schwartz of Germany) to chair to this ad hoc working group and to report on its activities to the 49th CIML Meeting (in 2014);

Urges the ad hoc group created by Resolution no.2013/15 to review with the CPRs their structure, rules and procedures governing the operation of the MAA, and the role of Utilizing Participants with a view to increasing the efficiency of the operations of the MAA, and to suggest to TC 3/SC 5 appropriate amendments to OIML Publication B 10;

Resolves that steps should be taken to ensure that, in the future, there will be only one single certification system for OIML type evaluations, based on the principles of the MAA, and that as a first step, the options for how such a single system may be organized, how the transition could take place and by what time schedule, should be investigated, taking into account the experiences of similar, well established certification systems;

Resource

http://workgroups.oiml.org/maa-seminar/ho-chi-minhcity/2013_MAA_Seminar_presentations.zip/view

In the period of 2013-2014, the Working Group on Mutual Recognition Arrangements seeks to:

1. Continue supporting the OIML work on implementation of the MAA (Mutual Acceptance Arrangement) and not develop a regional MAA;
2. Closely follow the work of the newly-formed OIML ad-hoc working group that is reviewing the structure of the OIML Committees on Participation Review (CPRs), the rules and procedures governing the operation of the OIML MAA, and the role of MAA Utilizing Participants -- with a view to increasing the efficiency of the operation of the MAA, and, if necessary, amending the OIML MAA documents.
3. The WG Chair, with assistance of the BIML, plans to provide an OIML MAA implementation update report for APLMF Circular.

2.5. WG on Medical Measurement

Mr. Jin-Hai Yang on behalf of Mr. Brian Shu, the Chair, has given a comprehensive presentation on Medical Devices Control. It included:

1. Application for APEC TILF Special Account fund
2. Proposed workshop on duplicate control on medical devices with measuring function. In this topic, he has indicated responsible authorities, focus, measures, goal and plan.
3. OIML TC18/SC1 "blood pressure instruments" meeting

The 2013 action plan of this WG is as follows:

1. Hold a workshop regarding on duplicate control on measurement device in medicine
 2. Update the Survey on the Metrological Control for the Medical measurement Instruments
- Mr. Pei-Lin Hou reported items in Guild to the Complementary Controls of Medical Devices on Metrological and Medical Supervision (draft). He mainly focuses on: overview, purposes, definition, conformity assessment, quality management, risk analyze, difference from medical control, technical requirements, responsibilities and suggestions.

Dr. Tsuyoshi Matsumoto asked if Chinese Taipei consider applying fund from APEC for the project of guidance.

Mr. Guo Su answered last year the proposal of this project didn't have positive answer from APEC secretariat, but APLMF Secretary will try again in early 2014.

Mr. Stephen Patoray suggests cooperating with other international organizations like ISO, ILAC when developing OIML recommendations.

2.6. WG on Quality Measurement of Agricultural Products

Dr. Tsuyoshi Matsumoto, the chair, reported the activities since last forum meeting.

1. Calling for host economy of a training program on grain moisture measurement in the 'self-funded' scheme

In reply to the survey from our WG, Indonesia and Thailand kindly proposed to host training courses with a 'self-funded' scheme. The WG accepts any kind of proposals or requests at the 20th APLMF Forum Meeting, or later.

2. Conduct a training course on Grain Moisture Measurement in Thailand in 2013

With strong support of CBWM (Central Bureau of Weights and Measures) in Thailand, next training course is scheduled in Chiang Mai (Thailand) soon after this WG Meeting on 25-29 November (see separate document). NMIJ (National Metrology Institute of Japan) and Kett Electric Laboratory Co. Ltd. proposed to provide trainers for this program. At present, the WG received many requests or interests of participation from Thailand and other economies.

3. Drafting of a new APLMF Guide Document on Grain Moisture Measurement

The WG has provided an outline of a new "APLMF Guide Document on Grain Moisture Measurement". This guide document is under development in order to provide practical procedures to calibrate, verify and test grain moisture meters, which are not covered by the OIML recommendations or ISO documents. Materials used in the previous training courses on rice moisture measurement will be used as the base material of this guide document.

4. Contribution to OIML TC 17

The WG continuously monitored the activities of OIML TC 17/SC 1 (Humidity) and TC 17/SC 8 (Instruments for quality analysis of agricultural products) in regard to the two documents shown below. I

(1) TC 17/SC 1 R 59 "Moisture Meters for Cereal Grains and Oilseeds (1984)":

(2) TC 17/SC 8 on "Protein Measuring Instruments for Cereal Grains and Oilseeds (New)":

5. Monitor activity on BIPM and APMP on rice moisture measurement, and others

In cooperation with BIPM and APMP, the WG informed NMIJ delegates attending their meetings the activities of the WG including training courses. The WG continuously exchanged information between the researchers in NMIJ about a new measurement method for grain moisture content using electromagnetic wave. In Japan, the WG chair attended a domestic mirror committee to OIML TC17 and exchanged information between the manufacturers of moisture meters and protein measuring instruments.

WG on Quality Measurement of Agricultural Products would continue to carry out the activities mentioned above in 2013.

Mrs. Marian Haire thanked Dr. Tsuyoshi Matsumoto for his wonderful job.

2.7. WG on Metrological control systems

Mr. Yang Youtao, the chair, reported the progress of WG in 2013. His report included following three aspects:

1. Guide lines of "Ionizing radiation metrology for human health and security in medicine on legal metrology system" Questionnaire for Ionizing Radiation Metrology
2. Guide lines of "The complementary controls of medical devices on metrological and medical supervision"
3. Associated with the WG on Medical Measurements
4. OIML recommendations for the universal apparatus of Metrology
5. Carry out the OIML recommendations unquestionably



6. Focus on Some apparatus of Metrology that involved the safe and Health of people

The proposed action plan in 2014 included:

1. Associate with WG on Medical Measurements to finish the draft of the guide lines of “Guide to the application of ionizing radiation metrology in medicine under legal metrological system”
2. Plan to hold a Symposium 2014 Symposium for guide to the application of ionizing radiation metrology in medicine under legal metrological system Develop possible guidelines for APLMF.
3. Plan to hold a Workshop On Software Controlled Measuring Instrument.
4. Think about some guidelines for APLMF in the Metrological Control System.

Dr. Tsuyoshi Matsumoto confirmed all the WG will cooperate with WG 7 to develop Guide document.

Mrs. Marian Haire suggests two draft documents shall be adopted in next meeting.

2.8. PTB-APLMF-APMP Joint Project Session

Dr. Anna Cypionka from International Cooperation Department of PTB reported information on:

1. Objectives and Key Facts of PTB
2. Introduction of the PTB International Cooperation Department, including structure, mission, portfolio, cooperation in Asia, fields of cooperation, and its multi-level approach.
3. Project of “Strengthening Regional Networks for Quality Infrastructure in the Asia-Pacific Region“
4. PTB and SRB Cooperation
5. Plan, policy, and framework of the project.

Dr. Anna Cypionka explained the budget approval process, and the covered area of which part could be paid.

Dr. Tsuyoshi Matsumoto mentioned human resource support should also cover in the project.

Dr. Anna Cypionka answered that the steering committee will decide together how to develop the cooperation project and the way to fund it. She mentioned that a total of 6 people from APLMF and APMP could join the steering committee, so for APLMF that will be Mrs. Marian Haire, Dr. Tsuyoshi Matsumoto and Mr. Guo Su – a total of 3 people from different member economies to join the committee.

3. Forum meeting (Nov. 7 - Nov. 8, 2013)

3.1. Welcome Address by Dr. Bayu Krisnamurthi, Vice Minister of Ministry of Trade.

Assalamualaikum Wr. Wb and Good Morning,

Today, I would like to express my appreciation to all delegations that represent the legal metrology authorities of the Asia Pacific Legal Metrology Forum (APLMF) Member Economies and the APLMF Secretariat for your contribution by attending the 20th Asia Pacific Legal Metrology Forum Meeting.

Distinguished Ladies and Gentlemen

Nowaday, the scope of metrological activities has grown widely because of the increasing of the needs of the accurate measurement in various sectors. Measurement has become a fundamental factor in determining quality at production processes based on market needs. Accurate measurement fundamentally supports health and safety, environment monitoring, and food processing. Proper measurement is also needed to establish fair trade and to protect consumers.

Therefore, to ensure the sustainability of metrological activities in providing accurate measurements both at national level and international level, Governments have an important role to establish necessary infrastructures and to perform such efforts in promoting public trust. The comprehensive and harmonised regulations and policies in legal metrology are needed to develop the legal metrology system of which give beneficials both nationally and internationally.

Distinguished Ladies and Gentlemen

The Asia Pacific rim is the greatest region throughout the World of which also has many potential challenges especially in the development of legal metrology to increase intra-regional trade in the region particularly intra-APEC trade, and the functioning of multilateral trading system which is one of seven highlighted points that have been agreed by the APEC Leaders upon during the entire series of meetings held for the Asia-Pacific Economic Cooperation (APEC) in 2013, by the 21th APEC Economic Leaders' Meeting on 5-7 October 2013 in Nusa Dua, Bali. The most challenging issue is the harmonization of legal metrology system in aiming to facilitate the removal of technical barriers to trade in the field of legal metrology.

There are two essential issues regarding to harmonization of legal metrology system within Asia Pacific region. The first issue is the national metrology legislation. As the aim of legal metrology is to support community confidence in measurement by ensuring that both regulatory and measurements are fit-for purpose, the metrology legislation is central to the development of measurement system comprising prescription of units of measurements, traceability of measurement standards, verification procedures and market surveillance. At international level, the national metrology legislation can demonstrate the commitment of the governments in facilitating trade through removal technical and administration barriers and in embracing mutual acceptance principle in field of legal metrology.

Distinguished Ladies and Gentlemen

The second issue is the development of metrological human resources. Human Resources as a part of metrological infrastructures have an important role in maintaining the development of national measurement system. So, improving competence of metrological human resources is needed. Each economy should develop such training courses independently of take advantage of APLMF or other international/regional organizations training course to ensure the competence. International Documents or Recommendations or Standards can be used as references in developing training moduls, thus, the understanding and knowledge in metrological procedures are uniformly and harmonised within region.

In harmonizing legal metrology system within Asia Pacific region, it is necessary to consider that all activities would not create new matters and can be implemented by all APLMF Member Economies. Capacity building and technical assistance activities in legal metrology need the cooperation both among APLMF Member Economies and between APLMF and other region legal metrology organizations in aiming to accelerate harmonization of legal metrology system in Asia Pacific region.

Therefore, the APLMF Meeting is expected to discuss strategic issues in the harmonization and the development of legal metrology system, and also to produce concrete activities for APLMF Member Economies. The results of the Meeting could be referred by all APLMF Member Economies in achieving the goal.



In the end, with the bless of Allah SWT, the 20th Asia Pacific Legal Metrology Forum Meeting is opened officially.

Thank you.

Wassalamualaikum Wr. Wb.

3.2. Opening Address by Mr. PU Changcheng, the APLMF President

Distinguished Dr. Bayu Krisnamurthi

Distinguished Mr. John Birch, Dr. Akira Ooiwa

Ladies and Gentlemen,

Good Morning!

It gives us great pleasure to come to this beautiful and historical city, Yogyakarta, Indonesia to attend the 20th APLMF forum meeting, and to celebrate 20th APLMF anniversary.

Let me begin by thanking Dr. Bayu Krisnamurthi, Vice Minister of Ministry of Trade and his colleagues for their excellent preparation and arrangement for hosting this meeting.

I also wish to take this opportunity to express my warm welcome and my thanks to all of you for your participation and contribution to the forum meeting.

Since last forum meeting held in Cebu, Philippines, member economies, working groups, together with APLMF Secretariat have made great efforts to carry out the approved work program.

We continually use our own “one on one” system to organize the training courses based on economies’ needs and APLMF resources.

We developed survey on benefit from 2005 to 2012 to review our efforts made for member economies.

We developed survey on Testing Procedures and 2 new Guidelines in the terms of harmonizing technical regulation requirements among member economies, enhancing member economies’ capacity.

Our activities have contributed to the further development of legal metrology and play an important role in legal metrology world.

Moreover, APLMF and its WGs made active participation and communications with APEC, OIML and other Organizations.

In the following one and a half days, I will work together with Mr. Harry Prawoko, Director of DOM, to co-chair the forum meeting.

I also expect all colleagues here to contribute and comment on the topics. I believe we will have effective work program which can meet the members’ needs by our efforts.

Thank you.

3.3. Roll Call

Mr. Guo Su took a roll call of the participants. 76 delegates from 16 member economies and relevant organizations attended the meeting. They were Australia, Canada, Cambodia, P.R. China, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, Philippines, Singapore, Chinese Taipei, Thailand, USA and Viet Nam. In addition, the representatives from OIML, ASEAN ACCSQ and PTB also participated the meeting.

3.4. Confirmation of the report of the 19th APLMF Meetings

The report of the 19th APLMF Meeting was approved without modification.

3.5. Report of the APLMF President

Mr. Pu Changcheng, the APLMF President, gave the President’s report. In his presentation, after he report the brief introduction of APLMF and APLMF activities in 2012, he suggests all

members to recognize:

1. The large scope of the APLMF work, we may be required to limit some of our work due to limited resources;
2. We need to strengthen the coordination of legal metrology work with each other;
3. We need to enhancing the exchange of expertise between member economies to increase the awareness of legal metrology and its contribution to an efficient and competitive marketplace, as well as the benefits to society;
4. We need to promote the use of advanced technology in the areas of the environment, energy, health and other emerging sectors of legal metrology, and develop guidelines on the use of this technology within these sectors;
5. We need to promote the training of personnel;
6. We need to put into place the necessary mechanisms to meet this demand.

Finally, Mr. Pu expressed his sincere appreciation to all member economies, WG Chairs and the APEC Secretariat for their long term supports and contributions to APLMF activities.

3.6. Report of the APLMF Secretariat

3.6.1 Activity of the APLMF Secretariat

APLMF Secretary, Mr. Guo Su reported the APLMF activities conducted since the 19th APLMF Meetings.

3.6.1.1 APLMF Project

1. A Training Course on Smart Electricity Meters was held 17 June - 20 June, 2013 in the Savoy Homann Hotel & DoM, Bandung, Indonesia. Trainer: **China**, Over **41** participants from **6** economies
2. Planed Training Course on Traceability in Rice Moisture Measurement will be held at 25-29 November, 2013, at The Imperial Mae Ping Hotel, in Chiang Mai, Thailand.

Trainer: **Japan**

3. SWG Seminar on Guide: The Application of Ionizing Radiation Metrology in Medicine under Legal Metrological System was held at 14 May, 2013, at The Golf Hotel, in Huangshan, China.

Over **30** participants from **2** economies

3.6.1.2 Fund Application

- ❖ APEC Fund
 - Proposing Economy: Chinese Taipei, Title: Workshop on duplicate control on medical devices with measuring function
 - Proposing Economy: China, Title: Symposium for guide to the application of ionizing radiation metrology in medicine under legal metrological system
- ❖ Asia Bank or UNIDO Fund:
 - Proposing Economy: China, Title: Study on Metrology Promoting Energy Efficient
- ❖ China Foreign Experts Project:
 - Title: Training Course on Weighing Bridges

3.6.1.3 Survey

- Survey on Testing Procedures
- Survey on APLMF Project Benefit 2005-2012 OIML Questionnaire

3.6.1.4 Guide

- The Application of Ionizing Radiation Metrology in Medicine under Legal Metrological System



- The Complementary Controls of Medical Devices on Metrological and Medical Supervision

3.6.1.5 20th APLMF Meeting

Cooperation with Host, DOM; Program and Agenda; Financial Issue; APLMF 20th Website; Invitations; EC Topics; Registration and Report Collected.

3.6.1.6 Cooperation with PTB

- .APLMF welcome cooperation with PTB
- APLMF will cooperate with PTB's project based on APLMF Working Plan
- APLMF will formulate a steering group with no more than 10 people, and suggest the steering committee for this project will have 3 each from APLMF and APMP
- APLMF will listen ASEAN inputs to proposing activities
- APLMF will need more information on rules, funding criteria, etc of PTB project.

3.6.1.7 Liaison

- ❖ APEC SCSC/SRBs Meeting
 - January, Jakarta, Indonesia MoU
- ❖ OIML RLMO
 - October, Ho Chi Ming City, Viet Nam

3.6.2 Contact points update on APLMF member economies

Ms. Christina Lin, Department of Metrology, Bureau of Standards,
Metrology and Inspection.....Chiese Taipei

3.6.3 Membership Fee

Most of member economies make the contributions in the timely manner.

3.7. Presentation nominated by the host economy

The host nominated presentation was given by Mr. Deden Muhammad Fajar Shiddiqs, from Development Center of Metrological Human Resource, Ministry of Trade. The title of his presentation was **Metrological Human Resources Development in Indonesia**. In this presentation, the contents covered the following aspects:

1. Legal metrology human resources role in Indonesia
2. Metrology human resources in Indonesia
3. Legal metrology activities and institution in Indonesia
4. Metrology human resources development program
5. Strategic development for metrological human resources
6. Formal education
7. Non formal education including technical upgrading program, training program cooperation, competence certification, certificate process.
8. DCMHR international standard facilities

3.8. Working Groups Reports

7 WG chairs reported the outcomes and 2013 work plans from the WG meeting the day before. (Please refer to the part 2. WG meetings mentioned above)

3.9. Report of the Asia Pacific Metrology Programme (APMP)

Dr. Toshiyuki Takatsuji from International Metrology Cooperation Office, National Metrology Institute of Japan (NMIJ), AIST reported APMP activities highlighted below:

1. Condolence of Dr. Laurie Besley
2. Updates of APMP Chair and TC chairs
3. APMP Mid-year meeting
4. Contribution in relevant to SRB



5. APMP GA

3.10. Report of the Bureau of International de Metrologie Legale (BIML)

Mr. Stephen PATORAY as the director of BIML gave update BIML activities in following aspects:

1. Completion of management audit
2. Renovation of Bureau
3. Development of new website
4. looking for articles for the OIML Bulletin
5. Items from CIML
 - Election of Dr. Yukinobu Miki as Second VicePresident
 - Reappointment of Ian Dunmill as Assistant Director
 - Recalling its Resolution no. 7 of its 47th meeting(2012);
 - Welcomes the proposal from its Member from China to reinstate a leadership mechanism to provide guidance to the OIML on its developing countries activities;
 - Decides to set up an advisory group for the time being, to carry out wide consultation, to seek additional suggestions and to build up links with other bodies which have a contribution to make;
 - Welcomes Colombia as a new Member State and Zambia as a re-instated Member State;
 - Welcomes Iraq, Uganda and Yemen as new Corresponding Members and
 - Guinea, DPR Korea and Rwanda as re-instated Corresponding Members.
6. Approves at 48th CIML:
 - OIML V 1
 - OIML R 46-3
 - OIML R 49-1, 2, 3
 - New OIML R for continuous measuring CO and NOx
 - OIML D 11
 - OIML B 14
 - OIML B 7
 - OIML R 100
7. Conclusion
 - The OIML is no better than the sum of all its members
 - The BIML can only do the work they are instructed to do by the CIML or Conference
 - If you believe there is work that the OIML should be doing, you must champion that idea and convince other members that it is important to complete

3.11. Report of the ASEAN Consultative Committee for Standards and Quality on Legal Metrology (ACCSQ – WG 3)

Dr. Wan Abd Malik Wan MohamedI, National Measurement Standard laboratory (SIRIM Berhad), the Chair of ACCSQ-WG3, updated activities in following aspects.

1. Introduction
2. Objectives
3. Working Group 3 Activities
 - 18th Meeting held in Phuket, Thailand. 12 – 13 December 2012
 - 19th Meeting held in Bandung, Indonesia. 01 – 02 May 2013
 - 20th Meeting will be held in Langkawi, Malaysia



4. Harmonization of Verification Procedure of the Non-automatic Weighing Instruments (NAWI). The NAWI Guidelines has been completed
5. ASEAN Common Requirements for Pre-packaged Products
6. ASEAN Quantity Marking Scheme for the prepackaged products
7. Inter-Lab Comparison of Volume Standard among Legal Metrology authorities

3.12. Report of PTB

Dr. Anna Cypionka, International Technical Cooperation, PTB, highlighted the new regional metrology project work as following.

1. Title, Term, Budget, Partner
 2. Objectives
 3. Step forward
- Await formal approval of ministry (November 2013)

Formalize APMP-APLMF-PTB Steering Committee (after APMP meetings November 2013)

- Establish working groups in APLMF and APMP
- Conduct thorough needs assessment and establish baseline for monitoring system (to be decided in steering group)
- Kick-off/ Planning workshop first half 2014 (proposed APMP Mid Year Meetings May 2014)
- Consensus building for program

3.13. APLMF Video for 20th Anniversary

Mr. Guo Su on behalf of APLMF Secretary has showed a video includes comprehensive work since establish of APLMF.

Full Member Session

3.14. Secretariat Report

The report of full member session was available only to the APLMF full members. Please visit the APLMF website for this information.

3.15. Economies' Reports

Australia

Dr. Valerie Villiere from NMIA, Australia highlighted some major points in the economy report.

National Measurement Legislation

Experience with the new national trade measurement system has resulted in the need to make some further minor amendments to the National Measurement Act. These are now in effect and relate to:

- provisions for inspectors to request a driver to stop and move vehicles;
- provisions for inspectors to undertake trial purchases;
- providing discretion for inspectors to allow the continued use of measuring instruments for trade or the continued sale of packaged goods where there is a minor technical infringement, but no material detriment to any affected person; and
- clarifying the definition of a utility meter so that it is not linked to the enforcement part of the Act. This was necessary so that exempt utility meters could still be verified if necessary.

In addition, the National Measurement Regulations 1999 (Cth), have now been amended to provide for organisations that have an authorisation from the Chief Metrologist to maintain Australian primary and secondary standards of measurement (ANSTO and ARPANSA) to verify secondary standards of measurement for ionising radiation.

The NMI has developed drafting instructions for some minor amendments to the National Trade Measurement Regulations 2009 (Cth) that include:



- requirements for approaches to weighbridges;
- competency requirements for servicing licensees and weighbridge operators; and
- further lifting the exemption on urban cold water meters for higher capacity meters.

Utility Metering

TC12 has now finalised the revision of OIML R46 part 3 for electricity meters and it was approved by CIML 2013 in Vietnam. TC12 is now considering its next projects including:

- transformers (voltage and current);
- energy measures other than Active Energy;
- peak demand, maximum power;
- charging of road vehicles; and
- direct current systems

Within Australia the exemption for domestic electricity meters has been lifted. Now that OIML R46 will be published, NMI will be moving to adopt it for pattern approval.

Australia is in the process of adopting of OIML R137 and publishing an Australian national standard for domestic gas meters.

Conformity to Type

Within Australia, NMI is promoting the introduction of CTT in sectors where few companies buy large number of measuring instruments. Considerable progress has been made in the water utility area where a joint industry code of practice has been developed with the Water Services Association of Australia. It is anticipated that CTT will flow on to other classes of utility meters in due course.

Quality Measurements

Consecutive meetings of TC 17/SC 1 and TC 17/SC 8 were hosted by the National Institute of Standards and Technology (NIST) on 23–25 July 2013 in Gaithersburg. OIML TC 17/SC 1 is responsible for the revision of OIML R 59 Moisture meters for cereal grains and oilseeds and TC 17/SC 8 is responsible for the development of a new OIML Recommendation on protein measuring instruments. Fourteen delegates from Australia, China, Germany, Japan and the USA attended.

Following the meeting, Australia as the convener of TC17/SC8 will prepare a 5CD revision for circulation in late 2013. It is anticipated that TC 17/SC 8 will allow it to progress to CIML preliminary online ballot, enabling the project to be completed in the coming year.

Medical measurements

At the last forum meeting it was reported that NMI is collaborating with Dr Martin Turner (Macquarie University) on medical devices. The aim of the collaboration is to investigate the post-market quality control of medical measuring instruments, in particular sphygmomanometers, tonometers and pachymeters. The collaborations comprise pilot studies on general practitioners, optometrists and ophthalmologists, which will be used to conduct physical checks of sphygmomanometers as well as contribute to the grant applications. The grant application seeks funding for the design, development and construction of traceable references for the calibration of tonometers and pachymeters. It will also include a study on the cost effectiveness of post-market quality control system of medical measuring instruments. NMI is currently liaising with Dr Martin Turner to submit an application for grants.

At a recent conference of the Metrology Society of Australia, two of the five plenary speakers spoke about measurements for health. Dr John Magnussen, Professor of Radiology, Macquarie University gave an interesting talk with the title Don't talk to me about confidence intervals, this is Medicine!

Training

NMI continues to work through the process of assessing more than 2000 verifiers as competent to



verify measuring instruments. In the past 12 months we have issued 1309 certificates, referred to as Statements of Attainment, covering a range of instruments classes. We have 8-10 inspectors working full time on this project. Our Licensing section is in the process of imposing a condition on licensees that requires all their verifiers to have a Statement of Attainment for every class of instrument they verify issued by NMI. 25% of our Licensees are fully compliant. We expect by early 2014 all Licensees will be compliant. Once the condition is imposed any verifier who does not have a Statement of Attainment cannot verify and may be in breach if they do so.

Licensing is also imposing a condition on Public Weighbridge Operators that they have at least 1 weighbridge operator who has a Statement of Attainment.

The requirement to demonstrate you are competent has continued to increase attendance at NMI training courses. Very few people are being returned as 'not yet competent' because they are making a real effort to ensure they understand the requirements. Those that are deemed to be 'not yet competent' are being advised they cannot verify until they obtain the statement of attainment.

NMI has increased its number of inspectors since transition in an effort to return the workforce to pre-transition levels. 17 new inspectors have completed 2 qualifications and have been appointed as inspectors. A further 16 new people were employed as assistant trade measurement inspectors in 2013 and are working through their qualifications.

Cambodia

Ms. Somoline Sorn from National Metrology Center of Cambodia highlighted some major points in the economy report.

Development and revision of regulation

The metrology law was entered into effect in 2009. Under this law, the National Metrology Center was established to authorize and manage metrology sector including scientific, industrial and legal metrology. The department of legal metrology is authorized to promote and enforce the metrology law system of Cambodia. After the establishment, there are 13 regulations has been endorsed for implementing legal metrology system including the regulation of verification fee.

1.1 Establishment and revision of technical regulation

The technical regulation related to verification of metrological instrument and pre-packaged products have been revised and prepared. The technical regulations were prepared complying with OIML recommendation and ASEAN Guideline and common requirement. At present these regulation were sent to the cabinet of the minister:

- Technical regulation for Verification of Pre-packaged Products.
- Technical regulation for verification of Fuel Dispenser,
- Technical regulation on verification of Road Tank,
- Technical regulation on verification of Water Meter,
- Technical regulation for verification of Non-Automatic Weighing Instrument (NAWI),
- Technical regulation for verification of Electricity Meter,
- Revised declaration of verification fee.

1.2 Installation of equipment standards

In 2013, National Metrology Center received the budget from government to purchase 15 metrology standards which included mass and volume. In additional, NMC have received the fund from UNIDO to install the standard for electricity meter and water meter. These standards will be delivered to legal metrology lab by 2014.

Verification and Inspection Activities

Department of Legal Metrology (DLM) implements the initial verification for the imported instrument



and subsequent (in-service) for the items usually use in the trade such as non-automatic weighing instrument, Fuel dispenser, road tanker, truck scale and pre-packaged products.

In 2013 about 15,000 non-automatic weighing instrument and 1,400 of digital weight were inspected, 60 truck scale and 105 road tankers were conducted initial verification and 2,700 fuel dispensers were conducted sub-sequence verification.

DLM enforces the inspection of 457 pre-packaged products. Among those 457 products, 49 fell within maximum permission error and therefore were advised to correct the quantities stated on product labels.

Capacity building

In 2013, Department of Legal Metrology has conducted three workshop related to law dissemination. To promote the capacity of the staffs, DLM also organized the internal training on:

- Training on the field of verification of pre-packaged product 2 times. About 120 participants were attended in the training courses.
- Training on the field of verification of non-automatic weighing Instruments 1 times. About 60 participants were attended in the training course including verification officers and private companies.
- Training on the field of verification of Fuel Dispenser 2 times. About 120 participants were attended in the training courses.
- Training on the field of verification of volumetric one time with the participants around 50 persons.

In additional, technical staffs also participated in the international training course such as:

- Training course on Smart Electricity Meter, Organized by APLMF (1 person)
- Training course on Verification of Truck Scale, organized by ASEAN-PTB (2 persons)

Challenges

Department of Legal Metrology faces some challenges such as poor infrastructure system including lack of equipment standards, lack of means for conducting the inspection activities, limited skill of the staffs and limited budget from the government.

DLM also plans to cooperate with other local and international institutions to develop and improve legal metrology infrastructure in Cambodia in order to promote fair and free trade and advancing in the global market.

Canada

Mr. Alan Johnston from Measurement Canada updated major issues in the economy report.

Authorized Service Providers for device inspections

As of September 30, 2013, there were 173 organizations authorized to perform inspections of mass, volume, electricity and natural gas measuring devices on behalf of Measurement Canada (MC). The vast majority of these organizations are located across Canada but 9 are located in the United States and Mexico due to the North American Free Trade Agreement. All authorized organizations were closely monitored and subject to audits and follow up inspections.

Timber Dimensional Measuring Devices (TDMD)

Stakeholders in the forestry industry approached Measurement Canada (MC) regarding developing approval and inspection requirements for technology used for measuring (scanning) logs.

A timber measurement workgroup has completed preliminary consultations and work is now well underway on development of requirements for these devices. TDMD will be restricted to measuring roundwood in the forest industry - these devices will not be considered suitable for the measurement of other forest products such as posts, beams or cants. The devices are similar in operation to many



MDMD devices except on a larger scale. Operation involves scanning the log with a series of cameras which have been optimized to detect a laser line projected onto the log. The resulting data allows for the generation of a three dimensional representation of the log and subsequently for determination of measurements of the log. The devices are already in use in many modern mills as optimizers. In this capacity, they are programmed to determine cutting solutions in order to maximize recovery and/or profit from a given log.

The devices are designed to measure logs from 10cm in diameter up to 150cm or larger and lengths up to tree length. Typically a TDMD would be fitted with from 4 to 6, or possibly more, scan heads in order to completely scan the log as it passes through the machine. TDMD scanners can operate reliably with logs moving at upwards of 150m/min. Canadian requirements will be based upon the measurement of stem diameters (cm) and length (m). Resolution is expected to be to at least 1cm on diameter and 10cm on length in order to approximate current practices. The devices appear to be capable of much finer resolution. Many diameter measurements may be taken along the length of the stem, but typically at least a top and butt (bottom) diameter will be taken. Diameters will be defined as the circumference of the log divided by the mathematical constant Pi. These measurements will subsequently be used to determine timber volumes, however as the method of determining volume varies from Province to Province, MC will not get involved in this aspect of usage and the devices will initially only be approved for linear measurements and not for direct measurement of volume.

National Technical Training Program

Through its National Technical Training Program, Measurement Canada continued to create videos on best inspection practices. Presently, ten (10) such videos have been produced as follows:

- Fair Measure for All (2012), video DVD, 15 minutes in length, presents Measurement Canada's history, mission, and mandate.
- Signed, Sealed, Delivered, interactive CD, 12 minutes in length, training module on the sealing of devices inspected under the Weights and Measures Act.
- The Device Inspection Certificate, interactive CD, 60 minutes in length, training module on how to fill out a Device Inspection Certificate in an accurate and concise manner under the Weights and Measures Act.
- Retail Computing Scales: Standard Test Procedures (STPs) Demonstrated, interactive CD, 40 minutes in length, training module on the application of standard test procedures for the certification of retail computing scales inspected under the Non-Automatic Weighing Device Specifications (NAWDS) pursuant to the Weights and Measures Act.
- Retail Petroleum Dispensers with ATC: Standard Test Procedures (STPs) Demonstrated, interactive CD, 40 minutes in length, training module on the application of standard test procedures for the certification of retail petroleum dispensers with automatic temperature compensation (ATC).
- Vehicle Scales: Standard Test Procedures (STPs) Demonstrated, interactive CD, 40 minutes in length, training module on the application of standard test procedures for the certification of vehicle scales pursuant to the Weights and Measures Act.
- Truck-Mounted Petroleum Metering Assembly: Standard Test Procedures (STPs) Demonstrated, interactive CD, 40 minutes in length, training module on the application of the Standard Test Procedures to be accomplished before certifying a Truck-Mounted Petroleum Metering Assembly pursuant to the Weights and Measures Act.
- Electricity Metering Installation Inspections: Recommended best practices demonstrated, interactive CD, 45 minutes in length, training module on the application of the best practices to adopt while inspecting a complex electricity metering installation pursuant to the Electricity and Gas Inspection

Act.

- Gas Measuring Apparatus Certification, interactive CD, 43 minutes in length, training module on the application of the best practices to adopt while undertaking the certification of gas measuring apparatus pursuant to the Electricity and Gas Inspection Act.

- Practical Evaluations: A "how-to" guide, interactive CD, 45 minutes in length, a guide for evaluators and those being evaluated on the application of Standard Test Procedures (STPs) for devices inspected pursuant to the Weights and Measures Act.

The target audience for all of the videos are Measurement Canada inspectors and technicians employed by Authorized Service Providers recognized by Measurement Canada. All the materials are delivered in both official languages and pertain exclusively to Canadian legislation .

Terms and Conditions for the Approval of Liquid Meters Used to Measure Liquefied Natural Gas (LNG)

MC, in consultation with industry stakeholders, has developed Terms and Conditions for the Approval of liquid meters/dispensers used to measure LNG. These establish a tolerance of 1.5% for the devices and include provisions to account for the extreme cold temperature of the product. Specifically there are provisions for pre-cooling the systems before a delivery, venting the receiving tank to relieve pressure and draining the delivery hose between deliveries. Dispensers are restricted to selling in terms of mass and vapour return lines can not be used during deliveries. MC is currently processing an application for approval of a dispenser, with several other companies showing interest. Work is currently under way with industry to revise the Terms and Conditions document to include provisions for large measuring systems. Such systems would be allowed to employ vapour return lines under the condition that vapour (boil off gas) returned to storage is measured and subtracted from the delivered quantity. The tolerance on the measured liquid remains at 1.5% while the tolerance on the returned vapour would be 5% as it has much less effect on the delivered quantity. This revision is expected to be completed early in the New Year.

People's Republic of China

Mr. Yang Youtao from on behalf of Chinese delegation give the economy report covered the following aspects:

“Metrology Development Plan (2013-2020)” was issued by the State Council, P. R. China

On March 2, 2013, the State Council issued the “Metrology Development Plan (2013-2020)”. This is the first time that State Council issued Metrology Development Plan since state founding, which reflects the high attaches to the metrology work from the government.

● Development Objectives:

More solid basis of metrology science and technology, more perfect traceability system, more sound metrology legal system, mainly adapted needs of economic and social development by 2020.

Main Content of the “plan”:

- a. To strengthen basic research on science and technology of metrology
 - Strengthen national technology base and research of metrology primary standards
 - Strengthen research and development of reference materials
 - Strengthen of practical, novel and research on proprietary metrological testing technology
 - Strengthen technology and method of system
 - To promoting scientific and technological innovation of metrology
 - Accelerate the transformation of scientific and technological achievements



- Actively participate in international comparison of metrology
- Revision technical regulation of metrology
- b. To strengthen services and security capacity building of metrology
 - To promote service and support capabilities of traceability system
 - To improve the national technology infrastructure services platform (base) of metrology
 - To build national service system for industrial measurement and testing
 - To build regional development support system of metrology
 - To build national energy resource service system of metrology
 - To promote testing and management system of metrology for Enterprise
 - To enhance service and guarantee capacity of national defense
 - Strengthen international exchanges and cooperation of metrology
- c. To strengthen supervision and management of metrology
 - Strengthen the legal system of metrology
 - Strengthen the metrological supervision system
 - To promote integrity measurement system
 - Strengthen supervision livelihood metrology
 - Strengthen the metrology supervision on energy resources
 - Strengthen the metrology supervision on safety
 - To crack down illegal metrology activities

Improvement of the technical infrastructure with aim of traceability development

- a) Coordinate international comparison on national (primary) standards and domestic metrology comparison;
- b) Continue to promote the Certified Metrology Engineer system, and organize the qualification examination for Certified Metrology Engineers in whole country;
- c) Strengthen the management on metrology technical regulations
 - Issuing 90 national metrological technical regulations
 - Register 20 metrological verification regulations issued by other departments or local governments.

Reinforce energy metrology, focusing on energy conservation

- Improve the implementation programme on energy conservation for the thousands enterprises.
- Co-organization of Energy Metrology Symposium with US Energy Department.
- Improve the inspection system on energy metrology.
- Continue to assist to improving the metrology system in enterprises
- Carry out the demonstration campaign on energy metrology services as to promote the metrological management capacity and measurement testing standard.

Focus on metrology supervision and inspections in priority areas

- Inspection in trade measuring instrument such as electronic price scale, fuel dispensers and heat meters;

- Inspection of prepackages goods

International cooperation

- Actively participate in relevant OIML TCs' activities (such as OIML TC7/SC4, OIML TC18/SC1, OIML TC6).
- Organize the 2nd China-Russia workshop on energy metrology in Hangzhou, China.



- Organize the China-Germany seminar on D1 in Shanghai.
- Organize the 10th Sino-Japan legal meteorology meeting in Qingdao, China.
- Sign the MoU on cooperation in the field of metrology with NMI Certin B.V..
- Sign the MoU on cooperation in the field of legal metrology with measurement Canada.
- Sign the MRA with METAS, Switzerland on NAWI and load cell.
- Sign the MoU on cooperation in the field of metrology with METAS, Switzerland.

The activities on World Metrology Day in China

- In 2013, China determine "5.20 World Metrology Day" propaganda theme: Measurement in Daily life. Designed and made posters (set of two, issued a total of 10,000 units), conducted a nationwide post, publicity.
- Dept. of metrology, AQSIQ issued a nationwide 《Notification on organize campaign of 2013“5.20 World Metrology Day”》 which requires all local branch to carry out promotional activities on the topics “Measurement and Life”, “Metrology Development Plan”. According to this request, all local branch have launched “5.20 World Metrology Day” activities on open-laboratory, metrology benefits people, on-site consultation, free testing and other forms.
- Events on theme of "5.20 World Metrology Day" and the implementation of "Metrology Development Plan" was held on May 20 at the Changping Campus of National Institute of Metrology (NIM), China. Activities include book donation ceremony of “Metrology Development Planning”, flag-giving ceremony of publicizing and implementing expedition team of “Metrology Development Plan”, Award ceremony of national industrial metrology and Testing Center. In this ceremony, congratulatory message from BIPM Director to Han Yi, Director General of Dept. of Metrology was read out, representative from expedition team has read "cooperative implementation on metrology development plan • Look forward to vista of quality powerful country - metrology action statement of national quality supervision & Inspection and quarantine system. Metrology experts, Metrology workers, news reporters, student volunteers, business and consumer representatives composed of six expedition team will enter the community, streets, schools, laboratories, into the people, and go to the public, to launch the “Metrology in daily life”, “Metrology in energy measurement”, “Metrology in campus”, “Metrology in Science and Technology”, “Metrology in safeguarding rights” and “Metrology in propaganda”. They will vigorously promote the “Metrology Development Plan”, introduce the development status of metrology of China, strengthen social supervision on violations, improve the social awareness and influence of metrology
- May 16, China Academy of Engineering, NIM China chief researcher Li Tianchu has given a special report on “Metrology Development Plan leads Chinese metrology science and technology basic research” in the third phase of AQSIQ forum.

Hong Kong China

There is no representative attending the Forum meeting.

Indonesia

Mr. Rifan Ardianto from DOM, Ministry of Trade of Indonesia has covered following aspects in the economy report.

Introduction

Legal metrology activities in Indonesia are governed by the Act on Legal Metrology, aimed at protecting public interest by ensuring the truthfulness of measurement processes and legal confidence in the use of units, standards, methods of measurement, and measuring instruments. As a part of trade development, one element noted in the national policy on long-term and



mid-term national development is that economic growth must be accompanied by strong domestic trade in order to maintain the stability of prices and domestic logistics, the competitiveness of domestic products, market trust, and fair trade.

It was considered that legal metrology is an effective tool for market surveillance, and should be used as a focus for strategies aimed at establishing fair trade, both for consumers and suppliers as market players, with the objective of boosting the growth of the domestic economy.

This target cannot be met unless both consumers and suppliers have the necessary level of awareness in creating trust through legal metrological control.

National Activities

National Regulation

As a part of ASEAN Economy Community and in order to support free of flow goods especially pre-packaged products within ASEAN, Indonesia had amended national technical regulation on pre-packaged products, therefore, it is in line with ASEAN Common Requirement for Pre-packaged Products on which it is based on OIML Recommendation R79 and R87.

In 13 October 2013, it took into a force at national level for all pre-packaged products that are manufactured domestically, imported, and packed.

Capacity Building

In order to increase the competency of human resources in field of legal metrology, there were many training activities organized by Indonesia in collaborated with related organization, as follows:

a. Regional level

- APLMF Training Course on Smart Electricity Meter on 17 – 20 June 2013 in Bandung (37 participants)
- ASEAN-PTB Training Course on Verification on Truckscales/Weighbridges on 26 – 29 August 2013 in Bandung(20 participants)

b. National level

- Ultrasonic Gas Meter Calibration Training Course on 13 – 17 March 2013 in Bogor (25 participants)
- Automatic Tank Gauging Calibration Training Course on 8 – 12 April 2013 in Lembang (25 participants)

Other training courses at national level had been also held regularly by the Development Center for Metrological Human Resources. The Development Center was improved as well as it was moved the suitable venue and equipped with adequate practical equipment in such laboratories for mass, length, static energy, static volume, dynamic flow, moisture meter, pressure, and temperature. And to support organization of training courses, the Center had been also complemented with excellent dormitory.

As an outcome of train the trainer program organized by regional legal metrology organization, there is an impact in increasing capability of local trainers to conduct self training courses at national level. Currently, the Center is in progress in improving its training modules so it would be a training center for regional level.

Public awareness in legal metrology activities Program

In 2013, Indonesia organised a national seminar in aiming to promote and to boost public awareness in legal metrology. The seminar was held on 20 May 2013 in Jakarta and it also invited Mr. Peter Mason, Mr. John Birch, and Mr. Manfred Kocksiek as guest speakers. The objective of the seminar were to improve understanding of legal metrology at national level and



to celebrate the World Metrology Day.

Japan

Mr. Satoshi Miura from Ministry of Economy, Trade and Industry, Japan give the economy report focused on the following five aspects:

Recent situation of the economy

Two and half years have passed since the Great East Japan Earthquake in 2011. Japanese economy is gradually recovering and it has reverted from negative to positive growth as shown by a 4 % growth of GDP in the period of April-June, 2013.

However, the recovery seems to be limited to some major exporting industries in some regions, and the entire industry has not started to recover yet. Therefore the government aims to encourage the small-and-medium-sized enterprises to lead themselves for a continuous economic growth through new policies such as, credit relaxation and sustainable financial strategy for private sectors. The government is also disseminating a new policy called 'growth strategy' aiming to reduce over-regulations and underinvestment that might hindered economic growth in the past.

The government has already provided a large and urgent economic support which is targeting to boost the domestic equipment investment. In order to realize a deregulation, they plan a new free investment area for the private sectors. To support such activities, the government is submitting the Industry Competitiveness Enhancement Bill for an approval at an extra ordinate Diet session in this autumn.

Another important target area of the government is 'Asia-Pacific'. Recently, one of the popular items for the younger generations is 'iPhone'. It is designed in the United States, then the parts are produced in Japan, R. Korea and Chinese Taipei, and the final assembly takes place in PR China. Thus, an effective division of a production line is realized in this area, and such system has significantly improved efficiency of the entire production. It also means that the effective center of global economy is gradually shifting to this area. There is no need to say that this area overwraps the APLMF region.

Participation in the OIML Activities

A topic in 2013 in international legal metrology was the election of the second CIML Vice President. At the 48th CIML Meeting in October in Ho Chi Minh City, Dr. Yukinobu Miki as the Director of National Metrology Institute of Japan (NMIJ) has been elected as the Vice President. It means the two consecutive Vice Presidents have been elected from the APLMF region. In addition, Mr. Hiroshi Yamamoto (Aichi Tokei Co. Ltd.) received an award in this meeting.

Regarding the activities of OIML TCs/SCs in recent one year, Japan sent delegates to: a TC 8/SC 5 (water meter) meeting and a TC 18/ SC1 (sphygmomanometer) meeting in October 2012, two TC 8/SC 3 (liquids other than water) meetings in November 2012 and October 2013, a joint meeting of TC 17/ SC1 (moisture) and TC 17/SC 8 (protein) in July, and a TC 6 (prepackages) meeting in September.

Regarding OIML MAA, NMIJ signed DoMC (Declaration of Mutual Confidence) as the Issuing Participant for OIML R60 (Load Cell) and R76 (Nonautomatic Weighing Instruments) in 2006. Japan recognizes the significance of MAA in order to facilitate the international harmonization in legal metrology, and NMIJ is engaged in practical implementation of the two categories of MAA on R60 and R76 with respect to benefits of the domestic manufacturers in this field.

As a domestic activity, there are many mirror committees corresponding to OIML TCs/SCs which are composed of the members of Ministry of Economy, Trade and Industry (METI), NMIJ and



manufacturers belong to the Japan Measuring Instruments Federation (JMIF). These committees actively support OIML through discussing approximately thirty issues of revisions (or new drafts) of OIML documents in one year. They usually submit our comments and votes to most of these issues.

Incorporating Technical Requirements of Measuring Instruments into JIS

We have been reported the situation of revisions of technical requirements to be incorporated into JIS (Japan Industrial Standard) in every forum meeting. This activity is still in progress in order to incorporate more requirements into JIS.

Training activities

We have supported the APLMF WG on Quality Measurement of Agricultural Products since 2002. This WG is planning to organize the next course on rice moisture measurement in Chiang Mai in this November. On the other hand, the training program of JICA (Japan International Cooperation Agency) in legal metrology has been suspended since 2011. We will keep proposing JICA the next project in 2015.

Democratic People's Republic of Korea

No representative from DPRK attended forum meeting.

Republic of Korea

Mr. Seong Boo, Jeong from KATS (Korean Agency for Technology and Standard), Republic of Korea reported the legal metrology activities since the last meeting in the following aspects.

Legal Metrology System

Under the Measures Act, the Korean Agency for Technology and Standards (KATS) is authorized to legislate and manage the legal metrology system of Korea.

At present, the Measures Act is under revision to improve metrology management and promote related industries. For prevention of illegal profits through manufacturing measuring instruments such as fuel dispensers and other utility meters, a few articles will be added. With a view to enforce the management of prepackaged products, its scope will be extended from volume or mass based products to dimension based products including industrial products and household items.

Web-based management system for measuring instruments data was developed on June 2013, which helps to manage effectively measuring instruments through sharing information. Currently, it is under testing operation and will be operated from January 2014.

Establishment and revision of technical regulation

In 2013, KATS hasn't revised any technical regulation related to the Measures Act. But, KATS is reviewing technical regulations for Watt hour meter and Gas meter in accordance with establishment and revision of OIML recommendations.

This year, KATS commissioned a research on the development of lifetime testing method for the Gas meter and Water hour meter. This research will extend to the Thermo meter, Fuel dispenser and other measuring instruments.

Surveillance

KATS also implements frequent inspection for the items which are closely related to the customers such as Fuel dispensers and Non-automatic weighing instruments.

For inspecting error tolerance of fuel dispensers, about 5,000 fuel dispensers were inspected, and about 36,000 non-automatic weighing instruments (NAWI) were inspected.

KATS put policy priorities to enforce the use of SI units for 26 prepackaged products, and to verify that quantities stated on product labels fall within certain allowable tolerance limits.



In 2013, KATS has conducted an inspection on 532 marketplace samples of the 24 items. The results are that none of the product samples fell outside the allowable tolerance limits stipulated in the Measures Act.

To raise awareness of voluntary management of prepackaged products, KATS operates supplier's declaration of conformity (SDoC) system called as "k-Mark" certification system operated by the Korea Association of Standards & Testing Organizations (KASTO). Until present, 757 products from 20 companies are participated in.

Training

To build up the capabilities of local government officials and personnel responsible for verifications and inspections, KATS organized a workshop and technical seminars four times in 2013. KATS plans to organize technical seminars eight times a year for manufacturers, importers and repairers of legal metrology instruments from 2014.

Regarding international cooperation activities, KATS plans to strengthen the relationships with foreign national metrology institutes and to take active part in international conferences, workshops and training programs.

Malaysia

Mr. AZMAN ADAM from Ministry Of Domestic Trade, Co-Operatives And Consumerism, Malaysia and Dr. Wan Abd Malik Wan Mohamed NML-SIRIM, Malaysia Updated on the Current Development/Activities in Legal Metrology.

INTRODUCTION

There are currently two major Acts in Malaysia that regulates the national measurement system and the application of metrology in trade. They are the National Measurement System Act 2007 (NMSA 2007) and the Weights and Measures Act 1972 (WMA 1972).

1.1 NATIONAL MEASUREMENT SYSTEM ACT 2007 (NMSA 2007)

1.1.1 Overview

The national measurement system is the totality of administrative and technical infrastructure within a country which enables an individual or organization to have the means to make accurate and traceable measurements. It consists of measurement standards; knowledge of measurement methods and how they can be used to obtain valid results; and the necessary organization to ensure there are practitioners competent to provide accurate and traceable measurements.

The principal intention of the NMSA 2007 is to provide the basis for the national measurement legislative infrastructure in Malaysia. The Act provides for a uniform system of measurement, streamlines requirements of traceability of measurements and coordinates the National Measurement System. The scope of the Act applies to all measurements within Malaysia made for any legal purpose, including trade, health, and safety, forensic and environmental measurements.

The NMSA 2007 came into force on 15 February 2008 and is administered under the Ministry of Science, Technology and Innovation (MOSTI).

1.1.2 Provisions of the NMSA 2007

The NMSA 2007 provides for the establishment of a National Measurement Standards Laboratory (NMSL) to realize, maintain or caused to be maintained national measurement standards (which include certified reference materials) for the purpose of providing national reference and traceability of units of measurements.

Upon the coming into force of the NMSA 2007 every measurement of a measurable quantity

shall be expressed in units of measurements prescribed under the Act, and such measurement made for any written law shall be traceable to the national measurement standards, and if not so made the measurement shall be considered void. Nevertheless, the NMSA does provide for traceability of measurement outside Malaysia if the establishment of traceability to national measurement standards is not possible or relevant. The source of traceability may be a measurement standards laboratory or a calibration laboratory in another country which is recognized by the NMSL.

On the same day of the coming into effect of the NMSA 2007, the National Metrology Laboratory of SIRIM Berhad (NML-SIRIM) was appointed by the Minister of MOSTI as the NMSL by notification in the Gazette. With this appointment, NML-SIRIM has now been given the responsibility to realize, establish and maintain or cause to be maintained national measurement standards and the coordinated universal time. It shall approve patterns of measuring instruments where such responsibility has been delegated by legal enforcement authorities.

In carrying out its functions the NML-SIRIM is conferred powers of the NMSL such as to undertake international comparison of measurement standards, collaborate with other measurement laboratories and institutes of higher learning and represent Malaysia in international measurement activities. Such powers allow the NMSL to demonstrate the equivalence of Malaysia's national measurement standards and NMSL's measurement capability. To date Malaysia is a signatory of the Metre Convention and CIPM MRA, a corresponding member of the International Legal Metrology Organization (OIML), and a full member of the Asia-Pacific Metrology Programme (APMP) and Asia-Pacific Legal Metrology Forum (APLMF). At the ASEAN level, it is the current Chair (since 2009) of the ASEAN Consultative Committee for Standards and Quality (ACCSQ) Working Group on Legal Metrology (WG 3).

1.2 WEIGHTS AND MEASURES ACT 1972 (WMA 1972)

1.2.1 Overview

The Weights and Measures Act 1972 (WMA 1972) is an Act to regulate weights and measures and instruments for weighing and measuring, and to make to make provisions for matters connected therewith. This Act shall apply to the whole of Malaysia and is enforced by the Ministry of Domestic Trade, Cooperatives and Consumerism (MDTCC).

The Minister has granted a license to a company, known as Metrology Cooperation Malaysia (MCM) to perform any of the functions of the Inspector of Weights and Measures such as verification, stamping etc. (except enforcement authorities) since 2005. Staffs of MCM who are conducting such work are known as Verification Officers (VOs).

1.2.2 Custodian of Weights and Measures Act 1972

NMSL has been appointed as the Custodian of Weights and Measure for the purpose of carrying into effect the provisions of this Act. As the Custodian, NML-SIRIM is responsible for the realization, establishment, maintenance and custody of the Malaysian national standards of measurements. It is also entrusted with the responsibility to conduct pattern approval of new instruments for trade purposes and acts as the advisor to the government and all its agencies on all aspects of measurements.

1.2.3 Pattern Approval of Measuring Instruments

All new measuring instruments for use for trade are subject to pattern evaluation and testing by the Custodian. Instruments which have been approved by the Custodian are further subject to verification and stamping by the VOs before they can be allowed to be used for trade purposes. Pattern approval criteria adopted by the Custodian are generally in accordance with the

recommendations of the International Organization of Legal Metrology (OIML). The types of instruments which are subject to pattern approval include:

- weighing scales ranging from supermarket counter scales to industrial weighbridges,
- volume measures, petroleum fuel (liquid and gas) dispensers and petroleum depot flow meters,
- parking meters and parking time recorders for measuring vehicle parking time and,
- utility meters such as water meters, electricity meters and household gas meters.

1.2.4 Technical Support to the Ministry of Domestic Trade, Cooperatives and Consumerism

The effective enforcement of legal metrology requires the establishment of a good legislative and administrative infrastructure which provides for technical regulations and requirements for measuring instruments. NML-SIRIM Bhd. works closely with the MDTCC and MCM in enforcing metrological control on measuring instruments used for trade purposes. It provides technical advice and assistance to MDTCC and MCM in the preparation of technical legislation and regulations relating to the verification of measuring instruments. It also conducts training courses on the request of the MDTCC and MCM.

Working standards of weights and measures belonging to the MDTCC and MCM are submitted to NML-SIRIM for verification on a yearly basis to ensure traceability and accuracy of the standards. Such working standards are used by the Inspectors of Weights and Measures and VOs for the verification of measuring instruments used by retailers and traders in the market place.

To date MDTCC (together with its Custodian) is actively participates in activities/meetings conducted Asia-Pacific Legal Metrology Forum (APLMF), ACCSQ and ACCSQ-WG 3.

2 UPDATES ON CURRENT DEVELOPMENT OF LEGAL METROLOGY IN MALAYSIA

2.1 Automated Enforcement System (AES)

NML-SIRIM has been given a mandate to undertake the local pattern approval of the Automated Enforcement System (AES) devices, as specified in the NMSA 2007. AES system consists of stationary and mobile cameras which are able to automatically measure and record the speed of vehicles and also to capture any red-light violations. The system is enforced by the Road Transport Department under the Road Transport Act (Camera-Recorded Offences Rules 2012). NML-SIRIM is thus responsible to establish the traceability for speed and time measurement of the AES.

At present, AES is in the process of being operated jointly by Royal Malaysian Police and Road and Transport Department. The legal issues related to technical aspects of AES operation are already established, awaiting the agreement on other issues such as summonses, payments and courts proceedings.

2.2 Pattern and Specification Order for Weighing and Measuring Instruments 1981

The final draft of the reviewed “Pattern or Specifications for Weights or Measures or Instruments for Weighing or Measuring Order 1981” has been submitted to the Legal Division, MDTCC in July 2012 for comments. It is expected that the approval could be obtained by early next year.

2.3 Current Status on Traceability of Rice Moisture Meter

Malaysia is currently in the progress of gazetting the rice moisture measurement under the legal metrology frame work. NML-SIRIM is responsible to establish the traceability of the

rice moisture measurement in Malaysia. Procurement of the laboratory facilities is still in progress. Discussions with MTDCC and MCM are carried out on regular basis in ensuring that the future implementation is successful.

2.4 Pre-packaged Products Regulations

The setting up of a mini Pre-Packaged Products Laboratory at MDTCC is already at its final stage. Almost 95% of the equipment purchased has been received; commissioned and they are working as required. Internal training programs are being conducted at regular basis to ensure that all staffs involved are competent based on the harmonised requirements across the ASEAN region. The laboratory is expected to be fully operational by 2014.

2.5 Amendment of the Weights and Measures Act 1972 (WMA 1972)

Amendment work is in progress, where the Legal Division of MDTCC is still working to complete it before presenting to the working committee to finalize the Act.

Mongolia

No representative from Mongolia attended forum meeting.

New Zealand

Mr. Stephen O'Brien from Measurement and Product Safety Service, Ministry of Consumer Affairs, New Zealand highlighted main issues in the economy report.

Renaming of Measurement and Product Safety Service as Trading Standards

Following a recent restructure within the Ministry of Business Innovation and Employment the Measurement and Product Safety Service has been renamed **Trading Standards**.

This name change will be officially launched on the 18 November 2013.

The name Trading Standards better describes our role as New Zealand's leading regulator responsible for consumer protection and making sure the business trading environment is free from unsafe and non-compliant products.

Trading Standards is an easily recognised brand and will help align us with international colleagues and stakeholders. The change to a more meaningful name also supports our long term goal of increasing our profile with consumers and businesses throughout New Zealand.

Although we're now called Trading Standards, our mission continues to be: to grow New Zealand for all by ensuring we have safe products, accurate measurement and quality fuel. Our functions and people remain the same, although some of us have new titles. We remain an operational unit within the Consumer Protection and Standards branch of Ministry of Business, Innovation and Employment.

Amendments to the Weights and Measures Act 1987

The Consumer Law Reform bill has slowly progressed and is awaiting its final reading in Parliament and enactment. The intent of the bill is to help consumers transact with confidence and support honest business practices. Ten consumer acts will be amended including the Weights and Measures Act (the Act). The amendments to the Act are minor and are summarised as follows:

- Increasing the application of Infringement Offence Notices to cover offences related:
 - Using non-metric weights, measures or weighing and measuring instruments, and
 - Weighing or measuring instruments that have not been issued a Certificate of Accuracy where required



- 'District Standards' (reference standards currently held in Ministry custody) will be renamed 'Reference Standards' to allow for the potential future release of their custody to approved suitable private laboratories.
- Additional requirement for the seller to provide an invoice with prescribed information to the purchaser where the goods are delivered to a place other than the premises of the seller.
- The Act will now cover the relatively new practice of 'self-service weighing and measuring'; where the purchaser performs these actions away from the point of sale.
- A new provision that allows Certificates of Accuracy to be made mandatory if required. This can be limited to certain types of weighing or measuring instruments prescribed in regulations.
- Penalties have been increased for body corporate (companies). An individual can receive a fine up to a maximum \$10,000 and a body corporate or company a fine up to a maximum of \$30,000 for an offence.
- New provisions to allow for regulations to be made to prescribe the form and content of Infringement Offence Notices and Reminder Notices. These notices are increased to a maximum of a \$2000 fine.

Overview of 2012-2013 outputs

For the year ending June 2013, MAPSS Officers responded to 155 complaints and enquiries from consumers and traders that related to measurement. Officers also carried proactive testing of 850 weighing instruments and 382 measuring instruments. Analysis has shown that Officers found only 4% of instruments tested were outside legal tolerances. It has also been found that 6% of measuring instruments and 10% of weighing instruments had minor technical issues, such as missing legends. This has prompted MAPSS to undertake refresher training and development workshops for Accredited Persons (private sector verifiers of weighing and measuring equipment Accredited under the provisions of the Weights and Measures Act 1987).

Following significant restructuring and relocation of our metrology laboratories there has been a significant increase in the number of physical standards tested and verified across all three laboratories. A total of 5685 standards were tested and 281 verification reports issued in the previous year as outlined below:

Accredited Persons Development Workshops

Trading Standards has been conducting a series of refresher training and development workshops for Accredited Persons. It is the intent of Trading Standards to provide development training to all Accredited Persons within the year. Areas of training will include, labelling and identification of weighing and measuring instruments, identifying when an instrument is in use for trade, Accredited Person's duties and responsibilities and the issuing of *Notices of Non-compliance*.

It is the expectation that this blanket refresher training will reduce a significant proportion of the above mentioned minor technical non-compliances made by Accredited Persons.

A bi-monthly newsletter has also been introduced as a vehicle to improve communication with and information provision to Accredited Persons. This newsletter can be viewed at: www.consumeraffairs.govt.nz by searching for [The Measure](#) .

Type Approvals of Weighing and Measuring Instruments

A total of 54 National Type Approval applications were processed and completed in the year from 1 July 2012 to 30 June 2103:



- **Overseas Based Approvals** – this involves assessment and approval of equipment produced overseas in terms of legal compliance and suitability for use in New Zealand
- **Variation Approvals** – this arises when a supplier of equipment has made some significant modifications to a piece of equipment
- **In-Situ Approvals** - these are approvals of equipment which are in fixed locations and need to be assessed and approved in the location where they will be used.

Investigation into the sale of prepackaged Compost

Trading standards has completed a significant investigation into the sale of compost and other organic growing media. Sample assessments at retail outlets found significant volume deficiencies of up to 15% in prepackaged bags of growing media products. Extensive consultation and testing took place with the industry association (that supplied 90% of the New Zealand marketplace) to achieve an agreed test procedure that would provide consistent and repeatable results.

This project has proven to be a good example of government and business working together for a common goal. An industry guideline has been produced and can be viewed at: www.consumeraffairs.govt.nz by searching for (Guidelines for determining the volume of packaged growing media products with a stated quantity of 50 litres or less)

Expressions of interests from the Pacific Islands to run a training workshop

Trading Standards has received a number of enquiries from Pacific Island economies to develop and deliver training for their officers to undertake verification, market surveillance and inspection activities in preparation for the introduction of new legislation in their jurisdictions. Planning of how to most effectively respond to these requests is underway and New Zealand is intending to run a short training course tailored to their specific needs in early 2014.

New Zealand Hosting APLMF and OIML CIML meetings in 2014

New Zealand will host the 49th OIML International Committee of Legal Metrology (CIML) meeting in Auckland on the 3 -7 November 2014.

New Zealand has indicated it is also willing to host the 21st APLMF meeting in Wellington with the suggested dates of 11-14 November 2014.

These dates have been chosen to allow delegates to attend both meetings and avoid clashing with the International Bureau of Weights and Measures (BIPM) General Conference on Weights and Measures (18-21 of November in Paris).

Papua New Guinea

Mr. Joe Magur Panga from National Institute of Standards and Industrial Technology, Papua New Guinea (PNG) highlighted legal metrology issues since last year.

Introduction

The purpose of this report is to briefly highlight NISIT's status with regards to Legal Metrology (LM) services and activities in the past 12 months through the Metrology division. The report provides an overview of the Institute's status and the impact it has had on LM in PNG this year.

Purpose

This report is purposely to enlighten the APLMF Secretariat on the Metrology division's progress and some of the limitations in implementing its LM programs.

Background

Since the current government took office in 2012, there has been shift in focus and direction set for statutory authorities like NISIT to move towards corporatizing. More self-reliant, self-sustaining and profit orientated, generating enough money for its whole operations.



During this time, NISIT also had its Council appointed and an acting Director General appointed by the new Council. In a move towards corporatizing and cautious spending, the management embarked on the use of quarterly works programs and its associated cash flow that gets approved by the NISIT Council on the turn of every quarter. The approach to have quarterly designed and approved budgets is to enhance the culture of program based activities and expenditure and to improve the institute's ability to be able to manage its delivery well over the 12 month period by reducing the unwanted variations in expense and revenue forecast.

The responsibilities and functions of LM in Papua New Guinea are covered under two separate government departments and statutory authorities; they are the Independent Consumer and Competition Commission (ICCC) and NISIT. The Trade Measurement Act (Weights and Measures), its functions and responsibilities are with ICCC whilst Measurement Standards (Metrology) is under NISIT.

NISIT is under the Ministry of Commerce and Industry (Trade). ICCC on the other hand is under the Ministry of Treasury. The roles and functions of these two key organizations continue to be misunderstood and executed. This is also an impediment to strengthening and correctly effecting LM services in PNG. It will be a priority area to address, building on a MOU signed between the two organizations in 2012.

Activities

● Capacity and Capability Building

Projects and trainings aimed at the expansion of our services scope and capability buildings were put on hold. NISIT's priority was to ensure that all its financial books were in order whilst spending was focused on getting the institute's daily operation running to the management's expectations before new initiatives and projects including trainings and capacity building could be looked at.

Correspondingly this new direction set by the government for the corporatization of statutory authorities has placed the delivery of LM services and activities in an awkward position. Given the differences in responsibilities, functions and different institutions administering LM programs in Papua New Guinea, NISIT has not delivered according to its liking.

The institute will be seeking support and assistance from other NMIs for technical advice on Metrology Law and also on capacity building in the area of gas measurement and verification services. NISIT will need advice on how to best implement Weights and Measures and if a Metrology Law will be pursued then we will need support as well for guiding us through this process.

Effectively, three officers in the Metrology Division of NISIT are responsible for LM whilst three others for the Physical Metrology section. However, given the high number of service requests, all six metrology staff works alongside each other to complete new and outstanding jobs.

No trainings were done this year but the division will be scheduling training on Bulk Flow Meters for 2014.

● Service Delivery

Timely delivery of verification and calibration services has been a setback given the lengthy processes involved in getting approval before engagement.

Our services in LM are only in the area of custody transfer meters and weighing devices (NAWIs). New services will be looked at after this meeting.

■ Calibrations and Verification on Custody transfer Meters



For Meter calibration activities, NISIT has two service contracts with two major suppliers of fuel within PNG.

The demand for these services is growing but the same cannot be said of the institute's capability to meet that demand. Man power and capability is not able to meet the expectations of the industry.

■ **Calibrations and Verification on Weighing Instruments**

These services are also growing with new clients coming in as a result of economic activities associated to the PNG LNG Project.

■ **Summary**

The technical incompetence and lack of capacity for adequately administering LM by ICCC is an issue and their effectiveness in carrying out their mandated responsibilities has been a case of concern in recent times. An effort by NISIT through the APLMF and NIM China in carrying out a NAWI Training in 2012 was not attended by ICCC.

NISIT will be running training programs with their inspectors in December 2013 to carry out their in-service inspections and verifications correctly.

Finally, it is obvious that LM is not being administered throughout Papua New Guinea as expected. It is time for change, refocusing priorities, strategizing, collaborating efforts and pool resources with partner government agencies in administering LM for the right reasons, as intended.

● **Quality Systems**

■ **NATA Accreditation**

Our NATA accreditation continues this year as we completed all the Corrective action requests. Our Scope of Accreditation can be found on the NATA website.

■ **Maintenance and Repair of Equipment**

Master Meters will be undergoing recalibrations this quarter whilst mass standards are calibrated in our lab.

● **Financial Implications**

Monies for LM activities for 2014 will be for

1. Expansion in scope of services,
2. Metrology Law establishment,
3. Industrial survey on LM services and
4. Training on bulk flow meters.

Staffing Implications

With limited number of personnel, delivering services and maintaining measurement capabilities at the same time is a challenge.

International And Regional Participation

● **APLMF General Assembly and future Technical Workshops**

Attendance to this conference is vital to driving LM in PNG to acceptable standards and expectations. There are three important items that are of great importance for the growth effectiveness of LM in PNG.

1. Structure of LM in an economy, the big picture
2. Metrology Law and its significance
3. What is it that is lacking or non-existent that needs to be established to support and deliver the expected level of LM services throughout PNG? Answering this question will be important.



Attendance to technical workshops will be pursued based on the prioritized areas set following this GA.

Recommendations

On the three items mentioned in the beginning, a careful analysis will be under taken to ascertain the best direction and appropriate targets for achievement in the next year.

Conclusion

The efforts of Metrology services this year were such that we made revenue below our targets. Bearing in mind that logistics and freight are a key part of our services, and sometimes work can flow whilst other times there are setbacks in which scheduled work can be delayed.

Finally, it is with these challenges we are faced with that we now look forward to bringing LM in PNG a clear direction and set goals that are achievable in addressing outstanding issues to trade measurements in our economy. That these goals can bring about solutions for the industry, the government and the people of PNG.

Philippines

Mr. Sabino Paulo Jr. Leones from Industrial Technology Development Institute (ITDI), Philippines highlighted economy report below:

19th Asia-Pacific Legal Metrology Forum Meeting

The Industrial Technology Development Institute (ITDI) of the Department of Science and Technology (DOST) of the Philippines hosted the 19th APLMF Working Group and Forum Meeting at the Shangri-La's Mactan Resort & Spa, Cebu last November 6 to 9, 2012. The event was attended by about 70 delegates from full member economies and representatives from the international and regional organizations.

Technical Working Group activities

The Technical Working Group (TWG) on "NAWI" was already organized by ITDI. Procedures based on ASEAN guidelines on NAWI were discussed during the TWG meeting last August 2013. A draft resolution was already prepared for final review. The final resolution will be then presented to the DOST Secretary before the final approval by the National Metrology Board. Next meeting will be conducted around November 2013.

The Technical Working Group on "Pre-Packaged Products" is now being created. The following activities are now being implemented:

- Search for stakeholders (Regulatory Agencies, organizations, manufacturers, supermarket associations, equipment suppliers, consumer groups, etc.) is on-going.
- Search for Reference Materials.
- Encode Draft Inspection Procedures provided by the appointed Technical Officers (Resource persons who have enough experience and trainings)
- Preparation of letter of invitation to stakeholders.
- Create Yahoo group for Pre-package products.
- TWG Meeting for Prepackage Products will commence around December 2013,
- Conduct trainings on "Inspection of Pre-package Products".

Fuel Dispensers

Mr. Michael Solis and Mr. Marco Latosa attended training on the verification of fuel dispensers last June 2013 in Thailand. Mr. Sakchai Hasamin of Thailand's Central Bureau of Weights and Measures conducted the training.

In August 2013, a consultation workshop in the verification of Fuel Dispensers was conducted by Mr. Michael Solis and Mr. Marco Latosa Department Of Energy (DOE). Discussed in the



workshop are issues resulting in the possible revisions of some Department circulars/regulations issued by DOE and the role of local government units in the verification fuel dispensers. NML-ITDI will provide training in the verification of fuel dispensers to the DOST Regional Offices. The DOST Regional Offices will then train the different local government units in the verification of fuel dispensers. An evaluation of these activities will then be done to assess and identify the needs of the different stakeholders to efficiently implement the verification of fuel dispensers.

Type Approval

Activities on the creation of type approval procedures for spring scales, price computing scales, test weights and volumetric test measures is now being started. These procedures will be evaluated by the TWG on "NAWI" based on OIML guidelines.

APLMF activities

For the last ten (10) years, the Philippines attended the following APLMF activities.

- Seminar on Clinical Electrical Thermometers from 20 to 23 December 2005 in Taipei, Chinese Taipei
- Electricity Meters from 28 February to 6 March 2006 in Ho Chi Min City, Vietnam.
- OIML R87 on Prepackaged Goods from 3 to 7 April 2006 in Shah Alam, Malaysia.
- Pre-packaged Goods from 6 to 10 June 2009 in Singapore
- Training Course on CNG Fuel Dispensers from 27 to 30 June 2006 in Shah Alam, Malaysia
- Seminar on Automated Sphygmomanometers from 17 to 21 July 2006 in Taipei, Chinese Taipei
- Second Seminar on Automated Sphygmomanometers from 23 to 27 June 2008 in Taipei, Chinese Taipei
- Training Course on Verification of LPG Fuel Dispensers from 28 August to 1 September 2006 in Shanghai, PR China
- Second Workshop on Metrology of Agricultural Products and Foods from 4 to 6 June 2008 Hangzhou, PR China
- Third Workshop on Metrology of Agricultural Products and Foods from 23 to 25 September 2009 Ho Chi Minh City, Vietnam
- Train the Trainer Course on the Verification of Mechanical Weighing Scales from 25 to 28 September 2007 in Ho Chi Minh City, Vietnam.
- Fuel Dispensers for CNG (Compressed Natural Gas) from 13 to 16 November 2007 in Shah Alam, Malaysia.
- Seminar on Water Meters from 23 to 26 September 2008 in Hanoi, Vietnam.
- Workshop on Legal Metrology in Speedometers from 22 to 25 June 2009 in Hanoi, Chinese Taipei.
- Gas Meter Training from 13 to 16 April 2010 in Chongqing, PR China
- Verification of NAWI Weighbridges from 7 to 10 June 2010 in Bandung, Indonesia.
- Mass Flowmeters from 6 to 9 July 2010 in Singapore
- Software of controlled measuring instruments from 3 to 6 August 2010 in Bangkok, Thailand
- APLMF-APMP Joint Symposium on Metrology for Economic and Social Sustainability from 13 to 15 December 2011 in Beijing PR China
- Improving the Custody Transfer of Liquid Fuel in the Asia-Pacific Region from 6 to 8 June 2012 in Singapore
- Verification of bulk fuel using volumetric methods from 28 to 31 August 2012 in Chon Buri, Thailand



Russian Federation

Delegates from Russia Federation were absent.

Singapore

Ms. Lena Soh Mei Lin from SPRING Singapore focused on the key activities in Singapore including the following key initiatives:

1. Under the Authorised Verifier (AV) Scheme, private sector bodies can apply to be designated by WMO to handle the verification of weighing and measuring instruments for trade use. To date, WMO has designated 25 AVs who are appointed to verify weighing and measuring instruments for trade use.
2. To ensure manufacturers, importers and packers of pre-packaged products comply with the requirements of the Average Quantity System or AQS, WMO collaborated with AVA on the following:
 - (a) Presentation on the AQS in AVA's Industry technical seminars
 - (b) Manning the CW exhibition booth on AQS in AVA's Food Safety RoadshowsAVA is the food safety, animal and plant health authority in Singapore.
3. A cartoon strip educating consumers on safety information and tips related to SPRING's consumer protection programmes was recently created. It revolved around the daily lives of the Kiang Family. The comic strip campaign was officially launched on 7 July 2013 with the introduction of the Kiang Family to the public. Some of the topics covered thus far included: *'Tips for Smart Shopping and Consumer Safety'*, *'Hot Over Irons'*, *'Get What You Pay For'* and *'Dress Safe and Look Smart'*.

Chinese Taipei

Mr. Jin-Hai Yang from Bureau of Standards, Metrology and Inspection, Chinese Taipei summarized activities and development in legal metrology field since last forum meeting.

Weights and Measures Legislation

Several metrology-related regulations, technical specifications and standards have been amended and enacted since last forum meeting. These revisions were made to ensure that the legal metrology structure in Chinese Taipei fits the needs of all sectors and to harmonize with the international trends.

The key points of legislation are as follows:

1.Regulations Governing Management of Metrological Technical Personnel

It has been revised three times since the regulation was promulgated and enacted on Spt. 3, 2003. The latest revision was made on Apr. 25, 2013, and was enacted on the same day. The revision ensured that the metrological technical personnel structure of Chinese Taipei met the social developing, industry requirements and, harmonizes with the international trends.

2.Regulations Governing Commissioned Metrological Activities

Due to the number of weighing instruments needing to be verified is more than the capacity of BSMI's laboratory. BSMI has to seek for outsource to meet the needs. Therefore, BSMI revised the regulations and allowed more non-profit organizations and institutes to involve the commissioned verification on weighing instruments.

3.Procedures for Commission and Supervision and Audit of Metrological Activities and Directions Governing Commission and Supervision and Audit of Metrological Activities

There are two new applicants having applied for being commissioned to do implement verification since 2011. Meanwhile, due to the shortage of budget and human resources, BSMI needs more third parties involve in verification business to meet the needs of verification. More

and more potential third parties are likely submitting their applications to BSMI in the future as BSMI revised the Regulations Governing Commissioned Metrological Activities. Therefore, BSMI drafted and proclaimed the guidelines and procedure to handle the new applications. Both will be entered force on proclaimed.

4.Regulations Governing Type Approval of Measuring Instruments

Due to no more combination waters having been needed in Taiwan for more than 10 years while there are also no vortex water meters with diameter less than 50mm needed, BSMI decided to exclusive both types of water meters from type approval required on proclaimed. Moreover, non-price-computing weighing instruments with a maximum capacity of not more than 3kg are exclusive from type approval required on proclaimed, in viewing of reducing the controlling on weighing instruments not being used for trade.

5.Technical Specification for Verification and Inspection of Taximeters

It hasn't been revised since promulgated in 2010. The revision focused on the definition of error and sets the formula of the calculation of error while the validity of verification has been prolonged from one to two years. The revision entered into force on July 1, 2013.

6.Technical Specification for Verification and Inspection of Electricity Meters

Since more and more type of electricity meters have emerged, BSMI listed the types of electricity meters subject to verification clearly, in order to minimize the deputy between the staff of BSMI and users. The revision entered into force on July 1, 2013.

7.Regulations governing verification and inspection for measuring instruments of Measuring Instruments

It has been revised ten times since the regulation was promulgated and enacted on August 28, 1987. The latest revision was made on October 31, 2012, and was enacted on the same day. The current regulation of weighing instrument marked "Not for Transaction Use", certification or official inspection that may be exempted from verification will no longer be applicable after 1 January 2014.

Legal metrology Affairs

1.Examinations for metrological technical personnel were held in May and June 2013. The examination has been held since 2010. Up to now, there have been 2089 examinees passing the examinations.

2.Self-verification Affairs

One laboratory was cancelled the authorization of self-verification due to violating the *Regulations Governing Self-verification Conducted by Measuring Instrument Enterprises*. Enterprises that are authorized to do verification on their own products are allowed to do verification on only the products granted type approval. The fore-mentioned laboratory had done verification on products that having not been granted type approval. The penalty will last for three years.

Other Activities

1.An e-learning website (<http://metrology.bsmi.gov.tw/>), set up by BSMI to provide relating metrological knowledge, was updated in Sep. 2013 for adding lifelong learning sections and new interface.

2.Five sessions of training were scheduled to hold in 2013. These training programs, focusing on the metrology and verification skills, compulsory execution and administrative enforcement of metrology management, had been completed.

3.Volunteer Self-management measures on gas stations and traditional markets.



To ensure the accuracy of weighing instruments used at traditional markets and dispensers installed at gas stations, BSMI encourages gas station and traditional markets, based on volunteer, to adopt necessary procedures periodically, such as testing the dispensers or weighing instruments regularly by calibrated standards with traceability, keeping the error of instruments less than MPEs, holding all maintenance record. By implementing those procedures, dispensers and weighing instruments would be stayed at good condition and precise. Meanwhile, BSMI will overview those gas stations and traditional markets and issue a remark if they meet some certain requirements. Up to date, there are 711 gas stations and 53 traditional markets having received the remark.

4. World Metrology Day activities

To celebrate the 2013 World Metrology Day, Chinese Taipei organized a series of activities on the importance of metrology to human health and environmental safety during May 11-23. Among them, there was a main seminar on May 20 on International Metrology Development Trend Seminar, including three sessions: "Metrology in Daily Life - Its Contribution to Economic Growth and Prosperity", "The Maintenance and Daily Application of Standard Time", and "Ionizing Radiation and Related Measurement Standards in Daily Life", respectively. Moreover, there was also a forum, "Metrology Day Forum" to be held on May 20. Besides, another eight more technical seminars on various fields were given in May 11-23.

Future Plan

Prepackaged products with liquid contents will be subjected to legal metrology control in the near future. Meanwhile, the corn moisture meters will be subjected to verification in the future, due to the request from the Council of Agriculture.

Thailand

Mr. Sakchai Hasamin from Central Bureau of Weights and Measures, Thailand highlighted the co-operation with APLMF as below.

In 2013, Thailand will co-operation with APLMF organized the Training Course Traceability in Rice Moisture Measurement. The course will be held on 25-29 November, 2013 at Northern Weights and Measures Center in Chiang Mai, Thailand.

He has showed us the pictures of the venue, facilities and equipment.

United States of America

Mr. Ralph A. Richter from NIST, Department of Commerce, USA highlighted items of the economy report.

Legal Metrology Issues related to Alternative-Fuel Vehicles

a. Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) Vehicles

With the current situation of an abundant and inexpensive U.S. domestic natural gas supply, the U.S. is significantly increasing its use of natural gas as a vehicle fuel. A natural gas vehicle (NGV) uses compressed natural gas (CNG) or liquefied natural gas (LNG) as a cleaner alternative to other fossil fuels.

There are about 135,000 NGVs and about 1,300 NGV fueling stations in the U.S in 2013. For the same energy content, natural gas costs about half as much as gasoline or diesel fuel. For the past several years, the most prevalent NGVs in the US are fleets of mass-transit local busses which are fueled with CNG at a (non-retail) central location for the fleet.

Because of the inexpensive natural gas fuel costs, the owners/operators of many heavy-use engines that traditionally have used diesel fuel (including long-haul trucks and boats) have been buying or converting their engines to run on natural gas, especially LNG. NIST and NCWM are



working to establish new requirements and test procedures for the new retail LNG fuel dispensers that will be installed to service these industries.

b. Electrical Vehicles

Electric vehicles run on battery power, replenished through electrical connections. In the U.S., the primary charging locations are residences, businesses, and storage locations for fleet vehicles. There are minimal legal metrology issues in these locations because the electricity has already been metered and billed by the electrical utility. In these locations, with a standard charger, recharging a typical electric vehicle battery from near-total discharge to full charge usually takes 4-8 hours, with most vehicles charging overnight.

The number of public charging sites for electric vehicles has increased dramatically in the U.S. over the past three years. These sites are usually located in city or store parking lots, and at hotels, airports, and various businesses. The installation of “DC Fast-Charging Stations” with high-speed charging capability can allow consumers to recharge a battery on their electric vehicle from 20% to 80% in about 10 minutes.

The legal metrology issues arise on how the public site is attempting to “sell” the electricity to consumers. Many sites favored a “time-of-connection” charge, but that was found to be not very equitable because of the wide range of charging capabilities of the different types of stations/connections. The key for the weights and measures officials was that the transactions involve a measurable finite quantity of energy so that nationally-standardized requirements for the method of sale could be developed.

A U.S. National Working Group was established to develop new legal metrology standards related to electrical vehicle charging. This USNWG held meetings in January and March 2013. In July 2013, the NCWM approved the recommendation of the USNWG and adopted the following method of sale (to be implemented starting in January 2014):

NCWM Handbook 130, Section 2.34.2. Method of Sale. – All electrical energy offered for sale and/or sold at retail as a vehicle fuel shall be in units in terms of the megajoule (MJ) or kilowatt-hour (kWh). In addition to the fee assessed for the quantity of electrical energy sold, fees may be assessed for other services; such fees may be based on time measurement and/or a fixed fee.

The USNWG is now developing new testing procedures for sites that sell electricity at retail as a vehicle fuel.

c. Development of Hydrogen Fuel Measurement Standards

As part of a national effort to promote alternative fuels for vehicles, NIST established a U.S. National Work Group (USNWG) for the Development of Commercial Hydrogen Measurement Standards in to develop a comprehensive set of legal metrology standards for commercial measurement of hydrogen for vehicle and other refueling applications.

The tentative equipment code applies to hydrogen gas deliveries sold typically through service station dispensers for use as fuel in fuel cell and internal combustion engine vehicles. The approved method of sale stipulates that hydrogen fuel only be sold by the kilogram and that street sign pricing be shown in terms of whole cents (e.g., \$3.49 per kg, not \$3.499 per kg). The tentative code includes device design, accuracy, installation and use requirements, and test procedures. NIST published the tentative code in its 2011 edition of NIST Handbook 44 “Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices.”

Hydrogen fuel quality requirements were approved in July 2012 and are found in NIST



Handbook 130. These requirements recognize the most recent version of the US Society of Automotive Engineers (SAE) Standard J2719 “Hydrogen Fuel Quality for Fuel Cell Vehicles” that requires greater than 99.97% hydrogen purity.

This USNWG is currently continuing its work to refine and finalize the test procedures for retail hydrogen fuel dispensers and related equipment.

Development of a new ANSI standard for Gas Meters / Harmonization with OIML

Recommendations

The American National Standards Institute (ANSI) technical committee B109, responsible for gas metering standards has developed a draft new performance-based standard for gas meters that will cover all metering technologies. This new standard is based on the final draft of OIML R137 “Gas Meters,” and is being tentatively called “ANSI B109-point-zero.” The organization responsible for this technical committee is the American Gas Association (AGA), and a NIST engineer is leading this effort.

Manufacturers of gas meters are especially enthusiastic about improved harmonization because their products already must meet the requirements of international standards (mostly OIML) to be sold in overseas markets – and most manufacturers of these systems have significant overseas sales. Many members of the ANSI B109 committee are also very enthusiastic about creating an over-arching performance-based standard for gas meters that is performance-based and much less prescriptive. This should help create a much more “level playing-field” between competing metering technologies in the marketplace (diaphragm, rotary, turbine, mass-flow, ultrasonic, etc.). Some of these “newer” technologies are not currently covered by a domestic US standard – creating a significant problem for the purchasers of these systems. A single performance-based standard that covers all metering technologies will serve to alleviate this issue.

The United States is also continuing the effort to harmonize its requirements in other areas of legal metrology with those of the International Organization of Legal Metrology (OIML). Because our system splits responsibility between the national government and the state governments, the National Conference on Weights and Measures (NCWM) and National Institute of Standards and Technology (NIST) are working as a team to focus attention on the need to harmonize national and international legal metrology standards.

Revision of the U.S. Taximeters Code to Allow Use of GPS Systems

A new USNWG on Taximeters was formed to develop proposals to revise the current Taximeters Code in NIST Handbook 44 (HB 44), “*Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*.” The purpose of this USNWG is to adequately address emerging technologies used to assess charges based on time and/or distance measurements in taxi applications and to ensure that the prescribed methodologies and standards facilitate measurements that are traceable to the International System of Units (SI).

The main body of the work group will target the completion of updating the existing Taximeters Code so that it will encompass current devices and technologies in use. In addition to this work, a subcommittee was formed to work towards the development of standards and requirements that specifically address the use of Global Positioning System (GPS) applications when they are used commercially to compute fares based upon distance and/or time measurements.

Some specific issues this work group is addressing include: defining a point-of-sale system (as it relates to taximeters), the definition of allowable “extra” charges, recording elements and recorded representations, and the provision for security seals on taximeters.



Unit Pricing Information

NIST has formed a new workgroup that is developing guidelines to improve the accuracy and usability of unit pricing information offered on retail store shelves in the United States. The workgroup includes representatives from industry and trade associations (such as the Food Marketing Institute), weights and measures officials, consumers and consumer groups (such as the National Consumer League and Consumers Reports), and other key stakeholders.

There is not a Federal Government mandate in the U.S. that requires unit pricing. Voluntary use of unit pricing by retailers is highly recommended because of its value to consumers and businesses. Providing clear and unambiguous information about the prices of products offered for sale not only helps to guarantee transparency in the marketplace, but also serves to protect consumers by permitting them to make value and price comparisons and educated purchasing decisions.

In the U.S., there is currently a significant lack of uniformity in the use of unit pricing in the marketplace (from retailer to retailer). There many examples of possible improvements in the design of unit price labels, including:

- Increased Font size and readability (i.e. require a minimum font size and a requirement of the correlation between the size and proportion of retail price and unit price);
- Larger unit price labels on the bottom shelves. This will make information more clear and conspicuous;
- Greater consistency from retailer to retailer on the placement of information on the label to ensure standardization and uniformity;
- A requirement for unit pricing on sale items – considering the requirement for unit pricing on internet, sales ads and other forms of advertising media;
- Extend unit pricing to more product categories, not just food products;
- Greater adoption of the Uniform Unit Pricing Regulation by individual states to ensure retailers meet the minimum recommended national uniform requirements; and
- Recommend greater use of metric unit pricing.

The goal of this new workgroup is to develop an industry “Best Practices Guide” for unit pricing that will be made available online for use by anyone interested in improving the presentation and accuracy of unit pricing information. University researchers from Michigan State University and the University of South Australia are providing the results of their research concerning the best formats for unit pricing.

The guide will build upon the existing Uniform Unit Pricing Regulation (UUPR) in NIST Handbook 130, and will take into account current mandatory unit pricing regulations in 11 States in an effort to achieve and promote a more comprehensive, consumer friendly and uniform approach to unit pricing. The workgroup may also develop recommendations to revise the UUPR which would be submitted to the National Conference on Weights and Measures for consideration.

Labeling Requirements for Printer Ink and Toner Cartridges:

Proposed new Method of Sale and Labeling Requirements:

- Method of Sale, printer ink cartridges. – All printer ink cartridges kept, offered, or exposed for sale or sold shall be sold in terms of the count of such cartridges and the fluid volume of ink in each cartridge stated in terms of milliliters or fluid ounces.
- Method of Sale, toner cartridges. – All toner cartridges kept, offered, or exposed for sale or sold shall be sold in terms of the count of such cartridges and the net weight of toner substance.



Over the past several years, there has been a change in the net content statements on inkjet and toner cartridges. Currently, there is little uniformity in the marketplace on this item, and many new labels have only a page yield count (e.g., prints 1000 pages). The NIST Weights and Measures Division believes that according to guidelines from the US Weights and Measures Law, “information required on packages,” these products are required to have the net contents of the ink (and toner) labeled. These are expensive items and the need exists to clarify the labeling requirements for industry, consumers, and weights and measures officials.

Many industry representatives do not believe that a net content statement should be required, and that a having a page yield statement is sufficient. Their main arguments are that 1) the ink associated with a cartridge is a small fraction of the total cost of the print cartridge mechanism; and 2) a page yield can provide a meaningful comparison to a consumer if all manufacturers employ the same estimating assumptions and techniques. According to manufacturers, the International Organization for Standardization (ISO) studied this issue for years and has rejected reliance on ink volume or quantity; instead ISO has developed a yield estimating and claiming methodology that permits cartridges to be compared using a consistent yardstick.

One large issue in the U.S. is that allowing the “contents” declaration only by yield will possibly open the door for other commodities to request to change their labeling (e.g., loads of laundry). One resolution being considered is for inkjet/toner cartridges to be sold by volume and weight – and adding page yield as a supplementary statement. This will allow for weights and measures inspectors to verify the net contents, and also provide information for consumers to make value comparisons.

Moisture Allowance – Pasta & Noodle Products

A controversial item was adopted by the NCWM concerning a 3% “moisture allowance” for pasta and noodle products. These products are packaged in paper bags, paperboard cartons, and/or flexible plastic bags with a moisture content of 13 % or less at the time of pack. This new requirement will go into effect in January 2014.

Studies indicate that moisture loss for pasta products is reasonably predictable over time. Pasta exhibits consistent moisture loss when handled in a uniform manner. However, moisture loss can vary more than 4 % due to environmental and geographic conditions. Although it eventually reaches equilibrium with the surrounding atmosphere because it is hygroscopic, this balance does not occur until long after packaging and shipping. One potential problem is that manufacturers may possibly attempt to under-fill on purpose to take advantage of the allowance; correct net weight would need to be verified at time of packaging.

Aerosols and Similar Pressurized Containers

There are a number of products in the marketplace bearing quantity statements in terms of fluid measure that utilize the Bag on Valve (BOV) technology. Packages using BOV technology are generally pressurized containers but propellant is not dispensed with the product. Consumers are not able to do price and quantity comparisons between products packaged using BOV technology (which is being typically labeled by volume in the marketplace) and similar product in traditional aerosol packaging (required to be labeled by net weight) – because the aerosol packaged product includes the propellant in the net weight and the propellant is dispensed with the product. The NCWM is in the initial stages of working with industry and consumer groups to address this issue.

New IACET Accreditation for NIST’s Office of Weights and Measures

The International Association for Continuing Education and Training (IACET) has awarded the



National Institute of Standards and Technology (NIST) Office of Weights and Measures (OWM) an "Authorized Provider" accreditation. IACET Authorized Providers are the only organizations approved to offer IACET Continuing Education Units (CEUs). In order to achieve Authorized Provider accreditation, NIST OWM completed a rigorous application process, including a review by an IACET site visitor, and successfully demonstrated adherence to the ANSI/IACET 1-2007 Standard addressing the design, development, administration and evaluation of its training program. The accreditation period extends for five years and includes courses offered or created that follow OWM procedures during that time.

Many US states require that their weights and measures officials receive training throughout their careers. Using an accredited training organization gives those officials confidence that the training they will receive is of high quality.

The NIST OWM analyzes weights and measures training needs, obtains input from the weights and measures community, designs and delivers training for laboratory metrologists and weights and measures officials, measures the impact and effectiveness of training to ensure ongoing continual improvement, and consults with the weights and measures community to ensure ongoing professional development.

Viet Nam

Mr. Luu Ho QUANG from Directorate for Standards, Metrology and Quality (STAMEQ), Viet Nam updated current status, development of legal metrology and action plan in 2013.

Current status and development of legal metrology

1. Legal documents

- a) The Decree for implementing Vietnam Metrology Law was issued by the Government and in October 2012.
- b) The Decree for administrative fine on violations of standardization, metrology and quality control was issued by the Government in November 2012.
- c) 04 Circulars for implementing the Law on Metrology were issued by Minister of Ministry of Science and Technology (MOST) included:
 - Circulars on approval of National measurement standards;
 - Circulars on Group 2 measuring instruments;
 - Circulars on management of Verification, Calibration, Testing;
 - Circulars on measurement management on trade of gold & quality management on trade of jewel;
- d) 01 Circulars on metrological supervision was submit to Minister of MOST to issued on November 2013.
- e) 15 binding technical specifications on metrology (based on OIML recommendations) were issued by STAMEQ.

2. Twenty new verification bodies were notified by STAMEQ.

3. The Host of the 48th CIML Meeting in Ho Chi Minh City.

4. The Celebration of the International Metrology Day (20/5/2013) was organized in Vietnam

In the year of 2013

- Submit to the Minister of MOST to Circulars for quantity of prepackage;
- Revise and submit to the Minister of MOST to issue Circular on metrological requirements for petroleum trade.
- Issue ~ 30 binding technical specifications on metrology (based on OIML recommendations).
- Organize the Celebrations of the Vietnam Metrology Day (20/01/2014) and International



Metrology Day (20/05/2014) in Vietnam.

3.16. APLMF 20 Years Continuous Contribution Award

This award has given to Dr. Grahame Harvey, Mr. Alan Johnston and Mr. Sakchai Hasamin for their dedication to APLMF work for continuous 20 years.

3.17. Future Meetings

Mr. Stephen O'brien New Zealand currently couldn't confirm to hold APLMF and OIML meeting in 2014 because of their management team is during transitional time.

3.18. Closing Address from Mr. Hari Prawoko, Director of Directorate of Metrology

Your Excellency,

- APLMF President, Mr. Pu Chang Cheng
- APLMF Secretariat, Ms. Zheng Huaxin and Mr. Guo Su
- Honorary Members of APLMF, Mr. John Birch and Dr. Akira Ooiwa
- Director of BIML, Mr. Stephen Patoray
- PTB Representative, Dr. Anna Cycpionka
- Delegation of APLMF Member Economies,

Assalamu'alaikum Wr. Wb, Good Morning and best wishes for all of us

Today, we have finished our meeting and produced some following work program for the next one year. First of all, I would like to thank and give appreciation to all delegations for your contribution to make our discussion productively. I would also like to thank to APLMF Secretariat for their efforts in holding the meeting successful and in schedule.

Furthermore, I hope we would continue our work in field of legal metrology in the frame work of harmonizing legal metrology system within Asia Pacific region. We could strengthen cooperation among APLMF Member Economies and with other region legal metrology organizations in aiming to accelarate the harmonization and our development as our goal.

Finally, I hope you all enjoy your stay in Yogyakarta. For your information, we still have outside program this afternoon to visit batik manufacture and Keraton Palace.

Thank you.

Wassalamu'alaikum Wr. Wb.

3.19. Closing Address from Mr. Pu Changcheng, the APLMF President,

Ladies and Gentleman, Good Morning!

In the past few days, we've discussed all issues listed in the agenda. It is a great pleasure to see that we've achieved expected results. As the APLMF President, I would like to make efforts to continue to work with colleagues from member economies towards the healthy development of APLMF. I also want to thank you for your active participation, contribution and support.

Here, I would like to extend my thanks again to colleagues from DOM, Ministry of Trade, APLMF Secretariat and who involving in preparation of this meeting for their great efforts and hard work to bring a successful meeting.

Finally, I wish you a pleasant journey back after this meeting and hope to see you again at next APLMF meeting.