OIML BULLETIN

VOLUME LI • NUMBER 1
JANUARY 2010

Quarterly Journal

Organisation Internationale de Métrologie Légale

CIML meets in Mombasa, Kenya

ISSN 0473-2812

BULLETIN

VOLUME LI • NUMBER 1
JANUARY 2010

THE OIML BULLETIN IS THE QUARTERLY JOURNAL OF THE ORGANISATION INTERNATIONALE DE MÉTROLOGIE LÉGALE

The Organisation Internationale de Métrologie Légale (OIML), established 12 October 1955, is an intergovernmental organization whose principal aim is to harmonize the regulations and metrological controls applied by the national metrology services of its Members.

EDITOR-IN-CHIEF: Jean-François Magaña
EDITOR: Chris Pulham

2010 SUBSCRIPTION RATE
60 €

ISSN 0473-2812

PRINTED IN FRANCE

GRANDE IMPRIMERIE DE TROYES
25, RUE LAMORICIÈRE
10300 SAINTE SAVINE

OIML SECRETARIAT

BUREAU INTERNATIONAL DE MÉTROLOGIE LÉGALE (BIML)

11 RUE TURGOT – 75009 PARIS – FRANCE

TEL: 33 (0)1 4878 1282
FAX: 33 (0)1 4282 1727
INTERNET: www.oiml.org or www.oiml.int
www.metrologyinfo.org

BIML STAFF

DIRECTOR
Jean-François Magaña (jfm@oiml.org)

ASSISTANT DIRECTORS
Ian Dunmill (id@oiml.org)
Willem Kool (wk@oiml.org)

STAFF MEMBERS (IN ALPHABETICAL ORDER)
Bourgeois, Jacques (jb@oiml.org)
↳ Archivist
Esmiol, Jean-Christophe (jce@oiml.org)
↳ Systems Engineer
Gaucher, Régine (rg@oiml.org)
↳ Engineer
Leclercq, Philippe (phl@oiml.org)
↳ Administrator
Martinie, Florence (fm@oiml.org)
↳ Accountant
Pulham, Chris (cp@oiml.org)
↳ Editor/Webmaster
Saint-Germain, Patricia (psg@oiml.org)
↳ Office Manager

OIML MEMBER STATES

ALBANIA
ALGERIA
AUSTRALIA
AUSTRIA
BELARUS
BELGIUM
BRAZIL
BULGARIA
CANADA
P. REP. OF CHINA
CROATIA
CUBA
CYPRUS
CZECH REPUBLIC
DENMARK
EGYPT
FINLAND
FRANCE
GERMANY
GREECE
HUNGARY
INDIA
INDONESIA
ISLAMIC REPUBLIC OF IRAN
IRELAND
ISRAEL
ITALY
JAPAN
KAZAKHSTAN
KENYA
REP. OF KOREA
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF
MONACO
MOROCCO
NETHERLANDS
NEW ZEALAND
NORWAY
PAKISTAN
POLAND
PORTUGAL
ROMANIA
RUSSIAN FEDERATION
SAUDI ARABIA
SERBIA
SLOVAKIA
SLOVENIA
SOUTH AFRICA
SPAIN
SRI LANKA
SWEDEN
SWITZERLAND
TANZANIA
TUNISIA
TURKEY
UNITED KINGDOM
UNITED STATES OF AMERICA
VIETNAM

OIML CORRESPONDING MEMBERS

ARGENTINA
BAHRAIN
BANGLADESH
BARBADOS
BENIN
BOSNIA AND HERZEGOVINA
BOTSWANA
BURKINA FASO
CAMBODIA
COMOROS, ISLAMIC FED. REP. OF
COSTA RICA
DOMINICAN REPUBLIC
ESTONIA
FIJI
GABON
GHANA
GUATEMALA
HONG KONG, CHINA
ICELAND
JORDAN
DEM. P. REP. OF KOREA
KUWAIT
KYRGYZSTAN
LATVIA
LIBYA
LITHUANIA
LUXEMBURG
MADAGASCAR
MALAYSIA
MALTA
MAURITIUS
MEXICO
MOLDOVA
MONGOLIA
MONTENEGRO
MOZAMBIQUE
NEPAL
NICARAGUA
OMAN
PANAMA
PAPUA NEW GUINEA
PARAGUAY
PERU
QATAR
RWANDA
SEYCHELLES
SINGAPORE
SUDAN
SYRIA
CHINESE TAIPEI
TAJIKISTAN
THAILAND
TRINIDAD AND TOBAGO
UEMOA
UKRAINE
UNITED ARAB EMIRATES
URUGUAY
UZBEKISTAN

Contents

OIML BULLETIN

VOLUME LI • NUMBER 1
JANUARY 2010

evolutions

mombasa 2009

update

44TH CIML MEETING AND ASSOCIATED EVENTS -
See feature, page 27

Sommaire

BULLETIN OIML

VOLUME LI • NUMÉRO 1
JANVIER 2010

évolutions

mombasa 2009

informations

Editorial

Alan Johnston

CIML President

Happy New Year to all our Members and Readers!
Bonne et heureuse année à tous nos Membres et à tous nos lecteurs!

As we celebrate the New Year and think about what we would like to see in the year ahead, we are also compelled to look back at the year that was.

2009 was another busy year for the OIML. We held the 44th CIML meeting in Mombasa, where we introduced a new Award to encourage developing countries to engage in the global promotion of legal metrology: the first *OIML Award for Excellent Contributions from Developing Countries to Legal Metrology* was given by Dr. Seiler to Mr. Osama Melhem of Jordan, and additionally a Letter of Appreciation was awarded to Mr. Nand Kishore Singhania (India).

An OIML medal and certificate were also presented to Dr. Arnold Leitner (Austria) for his outstanding contribution to legal metrology while Letters of Appreciation were awarded to Mr. Alexey B. Diatlev (Russian Federation), Mr. T.A. Momyshev (Kazakhstan), and Dr. Wilhelm Kolaczia (Austria).

In addition to discussions on administrative matters, we approved one new OIML publication, held a Round Table on metrological control, and conducted a Seminar covering metrology for trade and other topics. Progress in the revision of the *Directives for OIML Technical Work* also resulted in some good discussion and I am hopeful we will be able to approve the proposed revisions at our meeting in 2010.

The Committee welcomed the Dominican Republic and the Union Économique et Monétaire Ouest Africaine (UEMOA) as new Corresponding Members.

I would like to extend a special thank you to Mr. Salesio Paul Njiru, Director of Weights and Measures and the Government of Kenya for their wonderful hospitality and support in relation to the meeting.

Finally, I would like to thank all our Members for their continued efforts and contributions of ideas and knowledge as we untangle the many complex matters related to legal metrology. I am confident that 2010 will be another year of excellence in cooperation and joint accomplishments.

I look forward to seeing you in Orlando in September 2010 and wish you a truly good, healthy and peaceful New Year. ■

Alors que nous célébrons la nouvelle année et que nous envisageons déjà ce que nous aimerions voir se concrétiser durant cette nouvelle année, nous ne pouvons nous empêcher de faire tout de même le point sur l'année qui s'achève.

L'année 2009 aura été très chargée pour l'OIML. Nous avons tenu la 44ème Réunion du CIML à Mombasa, au cours de laquelle nous avons présenté une nouvelle Récompense visant à encourager les pays en développement à s'engager résolument dans la promotion de la métrologie légale: ce premier *prix d'excellence en matière de métrologie légale* a été attribué à M. Osama Melhem, de la Jordanie; de plus, une Lettre d'Appréciation a été adressée à M. Nand Kishore Singhania (Inde).

Une médaille et un certificat de l'OIML ont aussi été présentés à M. Arnold Leitner, Ph.D. (Autriche), pour sa contribution remarquable à l'avancement de la métrologie légale. Enfin, des lettres d'appréciation ont été adressées à M. Alexey B. Diatlev (Fédération de Russie), à M. T.A. Momyshev (Kazakhstan), et à M. Wilhelm Kolaczia, Ph.D (Autriche).

Outre les discussions purement administratives, nous avons approuvé une nouvelle Recommandation OIML, tenu une Table Ronde sur le contrôle métrologique, et organisé un atelier de travail sur la métrologie appliquée au commerce parmi d'autres sujets. L'état d'avancement de la révision des *Directives sur le travail technique de l'OIML* a donné lieu à un échange très profitable, et j'ai bon espoir que nous pourrons approuver les révisions proposées dès notre réunion de 2010.

Le Comité a aussi accueilli la République Dominicaine et l'Union Économique et Monétaire Ouest Africaine (UEMOA), en tant que nouveaux Membres Correspondants.

Je tiens à remercier tout particulièrement M. Salesio Paul Njiru, Directeur du Département des Poids et Mesures du Gouvernement du Kenya, ainsi que le gouvernement du Kenya lui-même, pour l'hospitalité et le soutien remarquables qu'ils nous ont offerts lors de cette réunion.

Enfin, je tiens à remercier tous nos Membres pour leur travail assidu, pour leurs suggestions, et pour leur apport de compétences dans des dossiers souvent complexes en matière de métrologie légale. Je suis certain que 2010 sera une autre année d'excellente collaboration et de réalisations conjointes.

Dans l'attente de vous revoir tous à Orlando en septembre 2010, je souhaite à chacun et à chacune d'entre vous bonheur, santé et paix tout au long de la nouvelle année. ■

RLMO NEWS

AFRIMETS (Intra–Africa Metrology System)

STUART CARSTENS
Senior Manager Legal Metrology
National Regulator for Compulsory Specifications
Legal Metrology Department (NRCS)
South Africa

Background

At the Seminar in Saint Jean de Luz in 2002 a presentation was made on "Legal metrology in Africa in the year 2020". One of the areas addressed was the need to form at least four regional bodies in Africa to deal with the harmonisation process of legal metrology technical regulations. After seeing the presentation on the OIML web site Mr. Martin Kaiser, PTB, suggested that there was indeed a need for an over arching body on which regional bodies would be represented. In conjunction with the National Measurement Institute of South Africa (NMISA), through Dr. Musarurwa (who at the time was responsible for Regional affairs and who had established a contact with the NEPAD secretariat) Mr. Kaiser presented his idea to the secretariat and the project was given the green light.

Rationale

There is an increased understanding of the importance of metrology to the economy and to society as a whole. Accurate measurement forms the backbone of technical regulations, written standards and legal metrology, thus the pre-requisite for free and fair trade between nations and citizens inside the country. In every institute, company or other commercial organization, concepts such as safety, security, efficiency, reliability and precision are of paramount importance in designing systems, which provide guarantees of product quality. Accurate and widely accepted measurements are important in ensuring that market transactions can take place and that consumers can feel confident that the goods they buy are of the quantity and quality they require. Importantly for Africa, accurate and internationally accepted measurements allow market access for food and commodity exports.

Technological innovation depends on accurate measurements. New ideas and products can often only be implemented if accurate measurement systems are in place. At a social level, protection of the environment requires that pollutants are accurately monitored. Patients receiving medical treatment need confidence in their test results and the dosage of treatment, even that the ingredients of the drugs they take have been measured properly. Similarly, industrial and commercial standards such as those regulated by the International Standards Organization (ISO) create a demand for measurement. Case studies have shown that there is a strong relationship between the adoption of international standards and the extent of trade in measurement and testing equipment, and these studies prove that a good metrology system ultimately contributes to the GDP of a country.

Unfortunately, the measurement systems in Africa at present do not fulfil the requirements of an effective measurement system. Measurement systems in most African states are mostly based on colonial measurement systems, and were severely weakened when formal colonial powers withdrew without proper skills transfer. In the main, these structures currently operate in an isolated manner, they are fragmented, and they are not always recognised internationally.

As a response, the sub-regions and nations of Africa came together to establish an intra-Africa Metrology System, AFRIMETS, with as main goal to harmonise accurate measurement in Africa, establish new measurement facilities and gain international acceptance for all measurements critical to export, environmental monitoring and sanitary and phyto-sanitary issues.

Initial meeting

To harmonize metrology activities in Africa, an intra-Africa metrology system (AFRIMETS) was established, based on the Inter American Metrology System (SIM). The initiative is supported by the New Partnership for Africa's Development (NEPAD), the Physikalish Technische Bundesanstalt (PTB), the national metrology institute of Germany, the National Metrology Institute of

AFRIMETS
Intra-Africa Metrology System
Système Intra-Africain de Métrologie

South Africa (NMISA) and the Legal Metrology Department of South Africa.

The first AFRIMETS workshop, held in March 2006, was attended by delegates from more than 25 African countries. A draft MoU was prepared and a second workshop was held in September 2006.

The first General Assembly was held in July 2007 at the NEPAD premises in Midrand, South Africa. The MoU was finalised and signed by five sub regional metrology organisations/sub regional legal metrology organisations (RMOs/ RLMOs), namely SADCMET/ SADCMEL, EAMET, CAMET, SOAMET and MAGMET, representing 39 countries in Southern, Eastern, Central Western and Northern Africa. In addition, Nigeria has signed as an individual member. Egypt is currently instrumental in the establishment of a sixth sub-regional metrology organisation in North Africa, and it is expected that the new sub region will also join AFRIMETS immediately once the said body is established.

It was decided that AFRIMETS was to represent metrology with the two branches (namely scientific and legal) as equal partners.

Overall objective

The overall aim of AFRIMETS is to promote metrology and related activities in Africa with the view of facilitating intra-African and international trade (especially to overcome technical, sanitary and phyto-sanitary barriers to trade) and to ensure safety, health, consumer and environmental protection.

The objective will be achieved by (but not limited to) the following:

- the facilitation and harmonisation of legal metrology practice and legislation through the sub regional metrology groupings;
- undertaking the role of spokes organ for African Metrology;
- the development of a united front on measurement issues;
- the provision of a platform for African representation on international metrology forums;
- the Coordination of metrology activities on the African continent.

With the above in mind and to support the said interventions the organisation has identified some strategic as well as specific objectives to give effect to the overall objective.

The following strategic objectives were identified at the first GA meeting, classified into four groups:

Customer objectives:

- satisfy and sensitize customers and stakeholders, which include the recipients of services, the International Bureau of Weights and Measures (BIPM), the OIML, African countries, NMIs, Legal Metrology Departments, RMOs/RLMOs, Governments, industry and consumers;
- facilitate trade;
- deliver value for money for measurements;
- increase the number of services;
- facilitate consumer protection, health, safety and the protection of the environment;
- integrate the needs of members / stakeholders;
- sensitize customers and stakeholders about international requirements.

Financial objectives:

- reduce the cost of metrology development by use of internal institutions in Africa;
- sustain regional resources;
- ensure financially strong sub-regional metrology bodies;
- transfer traceability to end users in a cost-effective way;
- make sure AFRIMETS will be self-sufficient;
- maximise scarce financial resources.

Internal process objectives:

- regional interactions and exchange of members;
- harmonisation of regulations and policies;
- put quality systems in place and comply with ISO 17020, 17025 and ISO 9001;
- facilitate the removal of TBTs;
- put in place continuous improvement strategies;
- improve the capacity of members;
- improve the standard of metrology.

Employee learning and growth objectives:

- training people at lower cost;
- establishment of databases for use by members;
- use of African experts for training;
- become a forum for exchange between metrology organisations;

- facilitate the technical competence of personnel;
- share expertise and awareness;
- develop world-class metrologists;
- establish a culture of continued learning.

In this regard, the Members intend to collaborate to promote the coordination of metrological activities and services in order to achieve greater harmony of measurement and testing within Africa and build mutual confidence in measurement between members and trading partners. To achieve the strategic objectives of the organization a comprehensive list of specific objectives was written into the MOU and are listed below.

Specific objectives

The specific objectives of AFRIMETS identified at the meeting are to:

- assist in the development and/or strengthening of the metrology infrastructure in each country/sub-region on the continent;
- contribute to the development of a conformity assessment and regulatory infrastructure as required to promote equity in trade;
- foster competitiveness and quality in the manufacturing sector in order to promote trade and commerce;
- contribute to the development of the metrological infrastructure required to protect the environment and to promote the general well-being of the population, including its health, safety and the protection of consumers from fraudulent dealings where measurements are used as the basis for the transaction;
- develop a closer collaboration between Members in work on measurement standards within Africa;
- improve the level of metrology, and to assist members in gaining international recognition;
- improve the traceability of measurement standards within Africa to international standards as defined in the international system of units (SI), and to generally promote the International Committee of Weights and Measure's Mutual Recognition Arrangement (CIPM MRA) and the objectives of the Metre Convention;
- encourage measurement traceability in Africa through recognized calibration services;
- promote the adoption of OIML Recommendations or other relevant international standards as technical regulations wherever possible in order to minimise technical barriers to trade.

Activities

To achieve its objectives it is envisaged that AFRIMETS will undertake the following activities which are divided into three categories:

Capacity building:

- facilitate projects on measurement standards and legal metrology and foster cooperation in research between Members;
- link sub-regional databases of services and capabilities not yet accepted in the CIPM MRA database;
- transfer expertise in the field of measurement standards and legal metrology between Members through seminars, conferences, workshops, training programs, consultancies and technical publications.

Coordination and networking:

- coordinate inter-laboratory comparisons of measurement standards in sub-regions in order to gain international recognition of measurement capabilities of National Metrology Institutes (NMIs);
- collaborate with other bodies within Africa that are active in standards, testing and conformance;
- encourage and support harmonization of approaches to achieve measurement traceability through the adoption of CIPM recommendations where available or through the development of African recommendations;
- encourage and support harmonization of technical regulations through the adoption of OIML Recommendations where available or through the development of African recommendations.

Advocacy:

- encourage participation in comparisons and other proficiency testing activities organized by the CIPM through its Bureau, the BIPM, and their equivalents in legal metrology;
- fulfill the RMO duties within the Joint Committee for Regional Metrology Organizations and the BIPM (JCRB);
- establish and maintain effective links with other international and regional metrology bodies, e.g.

BIPM, OIML, the European Collaboration in Measurement Standards (EUROMET), European Cooperation in Legal Metrology (WELMEC); Inter-American Metrology System (SIM); Euro-Asian Cooperation of National Metrological Institutions (COOMET); Asia Pacific Metrology Programme (APMP) and Asia Pacific Legal Metrology Forum (APLMF);

- encourage participation in the global MRA in measurement standards established by the CIPM;
- encourage participation in the OIML Mutual Acceptance Arrangement(s).

Membership:

Due to the current situation in Africa it was important that the membership be structured so that it accommodated all possibilities. In the light of the above it was decided that there would be four different categories of membership in AFRIMETS, namely:

- Principal members - Sub-regional Metrology Organisations/Sub-regional Legal Metrology organisations (SRMOs/SRLMO's) in Africa;
- Ordinary members - African NMIs and Legal Metrology Organisations (LMOs) who are not full members of a sub-regional metrology organisation or sub-regional legal metrology organisation;
- Associate members - Other NMIs/LMOs outside Africa;
- Observer members - Other Organisations.

One should note that only one category of membership is allowed.

If a member wishes to withdraw, or is suspended or there is a cessation of membership it shall be in accordance with the Rules of Procedure which shall be agreed upon by all stakeholders.

Rights and responsibilities of members

As indicated above there are different types of membership, however it is the wish to have all members as Principal members. To achieve this, each level of membership has certain rights and responsibilities. The Principal members have the most rights and responsibility with the others having pro rata reduced rights and responsibilities. For example, Principal members may attend the GA, have two votes, and may be elected to office whereas Ordinary members may attend the GA but only have one vote and may not be elected to office but may serve on AFRIMETS committees. Associate members may only attend the GA but have no vote and may participate in AFRIMETS committees; Observer members may attend the GA, have no vote, and cannot serve on committee structures. The above is an example of the differences and all rights and responsibilities are included in the MoU.

In the case where a member state has membership of more than one SRMO/SRLMO, the member state will declare on which grouping their vote is to be cast.

Structure of AFRIMETS

The MoU also addresses the authority and structure of the organisation. The structure shall consist of:

- the General Assembly (GA);
- the Executive Committee (EXCOM);
- a secretariat hosted by one of the NMIs/LMOs of the principal members;
- such other bodies and committees as may be established by the General Assembly and/or the Executive Committee.

General Assembly:

The GA, which is the supreme organ of AFRIMETS, shall be constituted by a meeting of the members and meets once per year to review and discuss the aims and specific tasks of AFRIMETS as well as accepting the financial statements, approving new projects, electing office bearers and passing resolutions.

The GA will also decide upon its rules of procedure, and elect its chairperson from the Principal members for a period of two years.

The GA may, in the execution of its work, elect from the Principal members an EXCOM of a total of not more than six members including the Chairman. The Chairperson will also chair the EXCOM.

Executive Committee

The operations of AFRIMETS shall be administered by an EXCOM consisting of the Chairperson, the two Vice Chairpersons, a representative of the NEPAD Secretariat, the head of the AFRIMETS Secretariat, and up to three elected delegates.

The members of the EXCOM are elected for a period of two years. The EXCOM shall report on the activities of the Organization to the Members each year at the GA at each of its sessions, and for its effective functioning

the EXCOM may create sub-Committees, which shall report to it each year on the matters referred to them.

To enable it to function effectively the EXCOM shall determine its own Rules of Procedure, and these shall not contradict those of the GA.

Chairperson:

The Chairperson of AFRIMETS shall be elected by the GA from the Principal Members.

The Chairperson shall preside over the GA and over the EXCOM and shall submit to the GA the proposals made and the decisions taken by the EXCOM for ratification or noting.

In case of death or resignation of the Chairperson, the EXCOM shall elect an interim Chair to take over the duties of the Chairperson from the two Vice chairs until a new Chair has been elected at the next GA

The Chairperson's term of office shall be two years and maximum two consecutive terms.

Vice Chairpersons:

The Vice-Chairpersons of AFRIMETS shall be elected by the GA from the Principal Members and shall represent respectively the fields of Legal and Industrial Metrology.

The Chairperson shall designate one of the Vice Chairs to deputise whenever (s)he is absent or unable to perform his or her duties.

The Vice-Chairpersons' term of office shall be two years and maximum two consecutive terms.

Secretariat:

The Secretariat for AFRIMETS is provided by a member state of a SRMO/SRLMO volunteering to host it at its own cost. In case of member states from two or more SRMOs /SRLMOs volunteering to host, the issue will go for election in the GA.

The Secretariat will assist the Chair and the EXCOM in the administration of AFRIMETS.

The Secretariat will ensure that details of collaborations are circulated to all Representatives.

The Secretariat will maintain a complete set of AFRIMETS publications and AFRIMETS Member details.

Each retiring Secretariat will use its best endeavors to ensure the efficient transfer of AFRIMETS material to the succeeding Secretariat.

The term of Secretariat shall be three years and renewable.

The NMI/LMO hosting the Secretariat should not provide the Chair of AFRIMETS and vice-versa.

Working language:

The working languages of AFRIMETS shall be English and French.

Key recommendations necessary for the success of AFRIMETS:

To attain the goals set for AFRIMETS, the organisation needs financial and political support and hence the support of the ministers of African countries.

The EXCOM has requested NEPAD to lobby the Ministers with the view to having AFRIMETS recognised as a body of the African Union (AU). The Ministers will be asked to endorse the following:

- political support for the National Metrology Institutes or bodies responsible for metrology (including legal metrology) in each country;
- sufficient financial resources to attain the goals mentioned;
- assistance at government level with harmonisation of standards;
- the transfer of measurement standards over borders.

Progress to date

An Executive Committee was elected at the meeting in 2007, representing all the sub-regions in Africa, with members as follows:

Chairman	Dr. Wynand Louw (SADCMET)
Vice-Chair (Legal)	Mr. Geraldo Albasini (SADCMEL)
Vice-Chair (Ind/Sci)	Dr. Mohamed Berrada (MAGMET)

Members

Ms Noura Laroussi.....(MAGMET)
Mr. Joel Kioko.....(EAMET)
Mr. Njiru.....(SOAMET)
Mr. Lionel Ngwessy-Malaga.....(CEMACMET)
Mr. Stuart Carstens.....(Head: Secretariat)
Mr. Karim Khalil .....(NEPAD)

AFRIMETS has to date held a second GA held in Tunis, Tunisia in July 2008 and the EXCOM has met in South Africa, Morocco and Tunisia.

There are project plans in place for both the metrology legs.

A TC's structure has been accepted as indicated below:

TC1 A:.....Metre Convention issues
TC1 B:.....OIML issues
TC2 A:.....Metrology Education and Training – Industrial Metrology
TC2 B: ....Metrology Education and Training – Legal Metrology
TC3: .....Metrology Infrastructure Development
TC4: .....Metrology Legislation
TC5: .....Metrology Awareness

In the legal metrology field an environmental scan is currently underway to establish the status of legal metrology in all counties in Africa. This will enable us to put together a project clearly aimed at meeting the needs of members.

An SC structure mirroring the OIML TC structure will be formed under TC 4. We have prioritized the areas which should be addressed to put a basic Legal Metrology infrastructure in place. Once the environmental scan has been completed we will revisit our priorities and amend if necessary.

The third GA meeting was held in July 2009 in South Africa.

Conclusion

With the experience gathered in the SADC SQAM structures we are aware that this is a daunting task but are also aware that it is imperative that this project succeeds.

We think that the MoU is a very comprehensive document and lays a stable platform for us to work on. The current situation in Africa as regards legal metrology is not effective as the understanding of the importance of a sound metrology infrastructure is not appreciated by the political masters and thus very minimal resources are allocated.

Creating political and industry awareness will be one of the main thrusts with the clear aim of improving the resource allocation to metrology and in most cases an emphasis on a legal metrology infrastructure. In most cases the legal metrology organisation will act as the de facto NMI.

Another concern is the sustainability of the AFRIMETS thus the importance of getting recognition by the AU which would assure sustainability.

One of the operational problems is the fact that we have indicated in the MoU that English is the official language but not all SRMOs/SRLMOs are fluent in English, as French and Portuguese are the other European languages spoken.

As the AFIMETS Secretariat we intend to supply a report for publication in the OIML Bulletin after each GA. ■

List of abbreviations

AFRIMETS ...Inter-Africa Metrology System
BIPM .....International Bureau of Weights and Measures
EXCOM.....Executive Committee
GA.....General Assembly
LMO .....Legal Metrology Organisations
MOU.....Memorandum of Understanding
NEPAD .....New Partnership for Africa's Development
NMI .....Metrology Institute
OIML.....International Organization of Legal Metrology
RMO.....Regional Metrology Organisation
RLMO.....Regional Legal Metrology Organisation
SI .....International System of Units
SIM.....Inter-American Metrology System
SRMO.....Sub-regional Metrology Organisation
SRLMO .....Sub-regional Legal Metrology Organisation

SMART METERS

Electricity smart metering in Canada

MICHAEL ABRAHAM
Senior Program Officer
Measurement Canada

The Canadian electricity marketplace is presently undergoing a relatively rapid deployment of "smart" electricity metering. To provide some background as to the environment that is facilitating this rapid deployment it is important to understand the regulatory structure that exists in Canada.

Regulatory structure

The regulation of the sale of electricity in Canada is overseen by multiple jurisdictions and authorities. The federal government is responsible for establishing national marketplace measurement/accuracy standards and for ensuring a fair, efficient and competitive marketplace for producers, distributors and consumers. The Institute for National Measurement Standards maintains national primary reference standards for Canada. Measurement Canada is the administrative body which oversees the accuracy of trade measurement (legal metrology) pursuant to the *Electricity and Gas Inspection Act* and *Regulations*. Measurement Canada regulates only the measurement aspect of a trade transaction and establishes policies and technical specifications pursuant to the Act and Regulations.

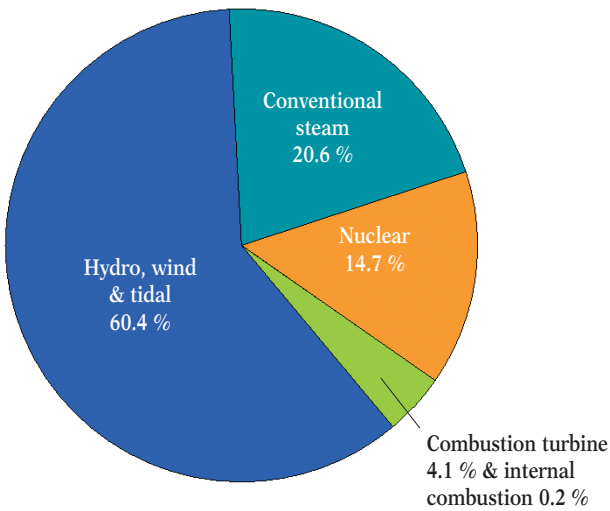
Provincial and territorial governments are typically responsible for the regulation of electricity generation and distribution and the general regulatory oversight of electricity utilities, contract legislation, and consumer legislation. This responsibility includes regulating rates and rate structures for utilities operating in their jurisdictions. Provincial and territorial statutes cover such matters as the conditions of sale, warranties and licensing. Generally speaking, most consumer services are regulated by the Provinces and Territories.

Measurement Canada is an agency of the federal Department of Industry and is the sole regulatory authority with responsibility for electricity trade measurement in Canada.

On the provincial side, most provincial governments have an energy ministry which establishes overall energy policy and regulates the market and electricity utilities broadly through provincial energy boards and commissions. Rates and tariff structures are typically regulated more specifically through public utilities boards and commissions.

Population and generation

Canada has a population of over 33 million people served by over 10 million electricity meters, according to the Canadian Electricity Association. Approximately one million of those meters are connected to commercial or industrial customers. In 2008, over 600 TeraWatt-hours of electric energy were generated in Canada.



Total electricity generation in Canada, 2007 = 602.4 TWh
Source: Statistics Canada, Survey 2151, 2008

History

Historically in Canada, most electricity utilities have been provincial crown corporations with a few municipally-owned smaller local utilities in some provinces. Currently many provincial utilities still exist as crown corporations, but some have been fully or partially privatized and there is an increasing number of smaller investor-owned utilities emerging. The province of Alberta has been particularly active in deregulating the electricity sale and distribution markets, resulting in a high percentage of that population being serviced by investor-owned utilities.

In the past the Canadian marketplace was serviced by fully or almost fully integrated utilities. Generation, transmission, distribution, sale, metering and customer

service were all performed by one organization, the utility. There was effectively no competition and, for the most part, the mandate of utilities was primarily to provide service rather than generate profit, hence the term "public utility". The customer's main concern was being supplied power at a reasonable cost.

Nowadays the electricity market is deregulated; most large provincial utilities have been un-bundled along business lines (generation, transmission, distribution), and employ a variety of structural models. Unbundling and privatization were intended to accommodate the wholesale competitive market, and now facilitate a growing competitive retail market as well.

The provinces of Ontario and Alberta have had full retail competition for some years now. Alberta has been very active and at the forefront of deregulating the sale of electricity which created many "energy sale" brokers which own no real utility infrastructure but simply trade the commodity itself using existing utility infrastructure.

In both Ontario and Alberta (two provinces which account for half of Canadian electricity consumption) there now exists a growing number of independent power producers, micro-generation and customer generation. It is possible that many organizations can be involved in the electricity trade transaction between seller and customer: (1) seller, (2) meter owner, (3) distributor, (4) settlement organization, (5) purchaser. The first four of these typically would have their own independent customer service departments for their respective areas. This provides competition, and perhaps savings, but can be much more complex for the customer. In this environment, the use of Advanced Metering Infrastructure (AMI) and smart meters may help to mitigate some of that complexity.

Advanced Metering Infrastructure regulatory structure

The Canadian provinces of Ontario, Alberta and British Columbia are the three most advanced in AMI implementation and/or regulation.

In Ontario, broad energy policy is established by the Ministry of Energy and regulatory functions are administered by the Ontario Energy Board (OEB). The OEB has mandated that all Ontario electricity utilities implement smart metering by 2010. The Independent Electricity System Operator (IESO) is a not-for-profit corporation which has full legislative authority for establishing, monitoring and enforcing reliability standards in the province. All companies that make up the power system in Ontario must meet the IESO's standards. The IESO manages the power system and connects all participants (generators, transmitters, retailers, large power consuming industries and businesses, and local distribution companies). Every five minutes, the IESO forecasts consumption throughout the province and collects bids from generators to provide the required amount of electricity.

In Alberta, broad energy policy is established by the Department of Energy and energy sales are regulated by the Alberta Utilities Commission. All electric energy bought and sold in Alberta must be exchanged through the Power Pool of Alberta. The Power Pool does not buy or sell electric energy. It is an independent, central, open-access pool that functions as a spot market, matching demand with the lowest supply to establish an hourly pool price. The Alberta Electric System Operator (AESO), a not-for-profit entity which owns no transmission or market assets, is responsible for safe, reliable and economic planning and operation of the Alberta Interconnected Electric System (AIES). The AESO provides open access to Alberta's interconnected power grid for generation and distribution companies and large industrial consumers of electricity. They are responsible for developing and administering transmission tariffs, and manage settlement of the hourly wholesale market and transmission system services. Additionally, they administer and regulate the provincial load settlement function - similar to the IESO in Ontario.

In British Columbia, broad energy policy is established by the Department of Energy and energy sales are regulated by the British Columbia Utilities Commission. The Department of Energy has mandated smart metering implementation by 2012. As British Columbia has not yet implemented an open market to the extent of Ontario and Alberta, there is currently no organization with similar functions to the IESO and AESO.

Ontario was the first province in Canada to mandate the implementation of smart meters. In Ontario there are over 80 (mostly municipal) electricity utilities that must comply with the smart metering legislation. As an additional complexity, all meter consumption data must be sent to a central database which is administered by the IESO. The IESO has established a functional specification for the Ontario AMI system which outlines criteria for utilities in communicating meter data to the meter data management and meter data repository (MDM/R).

In the Ontario wholesale market, registration and maintenance of a metering installation must be performed by a "metering service provider" registered with the IESO. The IESO manages and stores the meter data; however, it is the "metered market participant" which owns the data. A "metered market participant" may be a generator, transmitter, distributor, large customer, wholesaler or retailer.

British Columbia was the second provincial government to mandate smart metering. The situation in

British Columbia is a little less complex as there are only a small handful of electricity utilities in British Columbia with the vast majority of service provided by British Columbia Hydro. Additionally, the market there is not fully open to the extent of Ontario and Alberta so there is not yet any independent "settlement organization".

Smart meter definition and additional functionalities

As "smart metering" has been mandated by the Government of Ontario, they have established a general definition of a "smart meter" which applies to all utilities under their jurisdiction. In general for Ontario, "smart metering" is about obtaining interval data in order to better approximate "real-time" billing at the wholesale market and more generally, time-of-use (TOU) billing at the retail market.

Ontario's prescribed definition of a smart meter is as follows: "Allows for measurement in hourly (minimum) intervals, stores data, and transmits meter readings to a central billing system on a daily basis for customer access and billing purposes".

Utilities in Ontario do expect to benefit from additional functionalities of AMI. These include outage management, remote connect/disconnect, power quality, load control, outage notification/restoration, tamper detection and the performance of firmware upgrades. Some utilities indicated that they will use AMI to perform additional system studies as well as asset management and support for home area networks.

In British Columbia, the government has not yet decided on a definition for a "smart meter". However, British Columbia Hydro anticipates that a smart meter will be capable of two-way communication, record hourly (minimum) load profile data to support TOU rates, provide "near real-time" energy usage to customers through in-home display devices, and support automated outage/restoration detection and energy diversion (theft).

The provincial Government of Manitoba has not yet mandated implementation of smart metering at this time; however, Manitoba Hydro did decide to implement a smart meter project in order to assess the potential benefits of new technology and prepare for future use of new and emerging technologies.

In its initial stages, Manitoba Hydro expects the two-way communication to provide operational efficiencies concerning remote connect/disconnect, load limiting/ firmware upgrades, as well as theft detection and other event reporting. Manitoba Hydro recognizes the potential for providing customers with a gateway for home area networks and devices. Manitoba Hydro is also the natural gas provider for most of the province of Manitoba and is looking at what additional functionalities of AMI might be gained specific to natural gas meters such as leak detection and communication.

Hydro-Québec is required by the provincial utility regulator in the province of Quebec to perform a study every 5 years on how to better manage the energy system; however, there is no mandate at this time to implement smart metering or AMI.

Hydro-Québec initiated a pilot project, the purpose of which initially was to implement time of use metering and rates. Hydro-Québec indicated that with this objective they could have simply used Automatic Meter Reading (AMR) instead of AMI.

An additional pilot project was initiated to implement critical peak period rates using load profile metering. They decided to use full AMI technology as while TOU is simple, critical peak period is more complex.

Hydro-Québec anticipates AMI will also allow for greater "at the meter" functionalities which may provide additional information for customers and benefits for the utility. Such functionalities may include bi-directional communication, remote connect/disconnect, load control, energy theft detection and real-time information retrieval. At this time however Hydro-Québec has not yet determined whether the additional functionalities will provide benefits which offset the costs of AMI infrastructure.

The provincial Government of Alberta has not yet mandated implementation of smart metering at this time; however, they have established a provincial energy strategy.

FortisAlberta initiated a project to implement smart metering in order to increase meter reading frequency while decreasing costs of manual reads. Another goal of the project was to improve data accuracy and reduce estimated reads.

In light of the provincial energy strategy, FortisAlberta implemented AMI with the expectation that it would provide consumers with information that will allow them to reduce their energy consumption. Additional functionalities that are expected to benefit the utility are related to monitoring of voltage, power quality and outages, and remote disconnect/reconnect or load limiting. Eventually AMI meters are expected to support home area network customer devices.

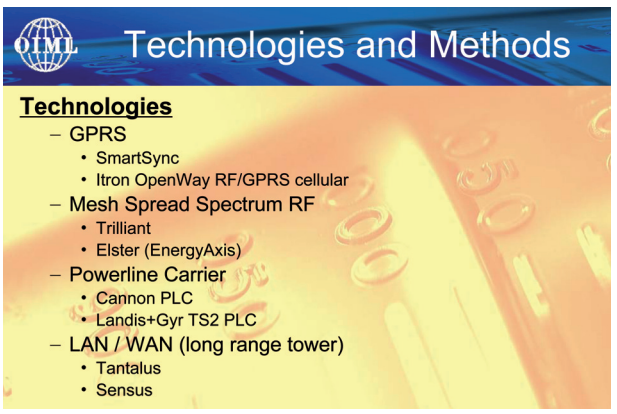
Technologies used

Due to the large number and diversity of utilities in Ontario, a wide range of smart metering and AMI

technologies were employed. The common factor in Ontario is that all utilities had to comply with the IESO rules for AMI and settlement procedures.

The variety of technologies employed reflects the geographical diversity that many utilities (especially large ones) in Canada face. Some technologies have greater functionality but perhaps are best utilized in dense urban areas while others may provide less functionality but are more suited to vast rural areas. Still others may be more appropriate for a semi-dense community which is remotely located and relatively isolated from the urban centers of Canada.

Methods used include: General Packet Radio Service (GPRS), Mesh Radio Frequency (MESH RF), Powerline Carrier (PLC), Local and Wide Area Networks (LAN/WAN).



Benefits

Clearly, there is a common theme as to the types of additional functionalities that smart meters will provide for utilities. The benefits range from improved meter reading quality using reduced resources, real-time system monitoring, load control and optimization, theft detection and reduction, and (important in the unbundled and competitive market) multi-utility metering and innovative applications such as plug-in electric vehicles and customer generation. Utilities expect to minimize incorrect meter reads, reduce the number of customer billing inquiries, and reduce the need to validate "exceptional" meter reads.

Utilities generally see AMI and smart metering as having a number of significant customer service benefits. The main one is empowerment, providing the customer with access to quality real-time information and the ability to manage their energy use and save money - as well as the environment. It is expected the elimination of estimated readings and provision of much greater information will result in better overall customer service and satisfaction, as well as improved responsiveness to, and faster resolution of, remaining customer service issues.

Additional benefits that some customers may want to take advantage of are: customized energy pricing / conservation packages and connectivity to home area network devices. Also, it is expected utilities will be able to respond more quickly and effectively in restoring power outages.

Obstacles

One of the greatest challenges is simply the efficient management of large-scale and rapid deployments involving a variety of resources, labor, and data. Also, as the smart metering implementation process was new, some utilities indicated an increase in complaints from customers. This is understandable as the volume of work was substantially higher during roll-out than normal; it was anticipated the number of occasional mistakes would increase. This resulted in the utilities having to perform greater public relations efforts.

At the time when some of the surveyed utilities were starting initial or pilot projects in AMI implementation, there were only a limited number of approved technologies available. In some cases the "smart meters" used by the utility had slightly different physical dimensions (such as depth) from existing meters. This necessitated the modification of some installations where meters were located close to gates/doorways or installed in cabinets.

In many cases, multiple AMI and metering technologies were utilized by a utility due to the diversity of their service territory and customer demographics - an added complexity to get all systems "working together". Many utilities service a large, often vastly diverse, geographical territory with a variety of demographics ranging from dense urban areas to rural, to remote isolated communities. This makes the meter change-out process more onerous and adds to the complexity of the AMI communications systems required.

Bringing new systems and technologies online required upgrades to existing systems and the need to manage the integration of all the inter-related systems as seamlessly as possible, which is often a challenge. In some cases there was a need to upgrade customer information systems, integrate billing systems with the MDM/R (in Ontario), and integrate head-end computers with billing systems. Finally, in terms of utilizing communications infrastructure, utilities often had to develop solutions that would be effective in areas where there are limited or no existing communications infrastructure.

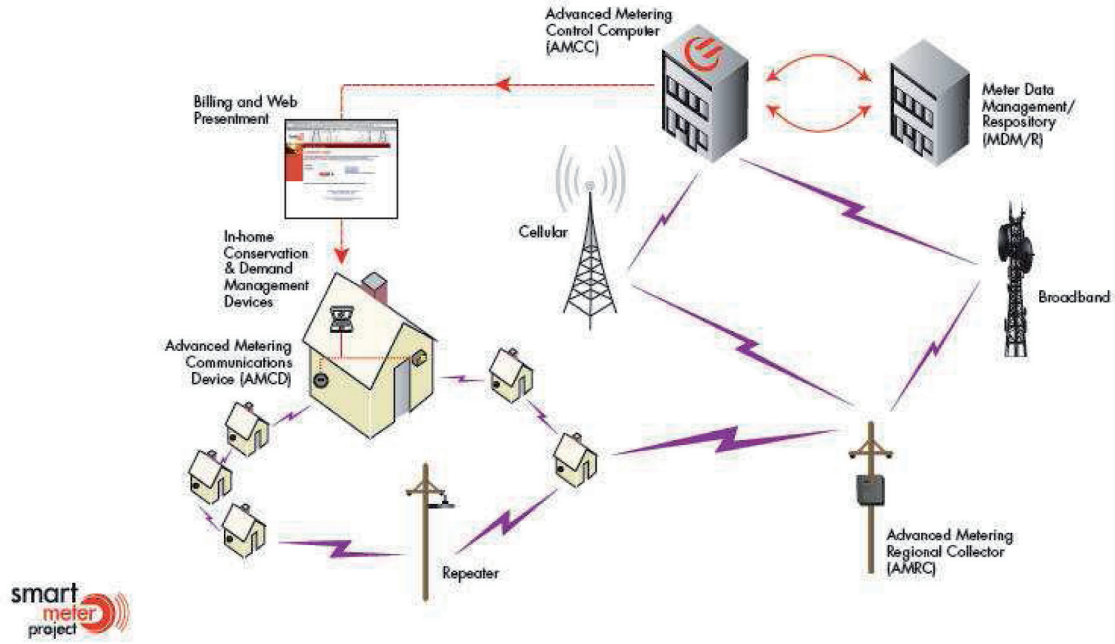


Figure 1 Smart metering system

Illustration provided by Hydro One

Experiences

The Canadian experience with smart meter implementation, which is driven mostly by utilities in Ontario at this point in time, has been generally positive for utilities identified in this article. As with any new technology and mass deployment there have been minor unexpected issues with supplier production, programming and functionality, and resource and customer service issues that utilities have had to deal with. Utilities have reported positive experiences with "ease of use" and "adaptability" of most technologies to their particular needs.

Some of the more specific adversities which had to be overcome were:

- moving at the same speed as technology while still respecting regulatory requirements;
- adapting to the changing marketplace required continual evaluation and sometimes changes to deployment strategies or use of multiple technologies which added complexity to the implementation of smart metering; and
- one specific technical issue observed was that, due to the increase in sheer size and volume of information being communicated (particularly "load profile data" as opposed to simply downloading "register data"), the communication success rate decreased resulting in the need for additional interrogations.

Illustration of the Hydro One AMI system

Figure 1 identifies the links between the home Advanced Metering Communication Device (AMCD) to the other homes, to a repeater, to a regional collector - [Advanced Metering Regional Collector (AMRC)] - with communication through cellular or broadband to the head-end computer - [Advanced Metering Control Computer (AMCC)] - which transmits the customer billing presentment and sends information back to the AMCD and in-home Conservation and Demand Management Devices (CDMD). The AMCC also communicates bi-directionally with the MDM/R - the data repository and settlement system in Ontario.

Figure 2 (see next page) depicts Hydro One's vision of the change from today's distribution infrastructure to tomorrow's "Smart Network".

Considerations from the perspective of the "Measurement Regulator"

- Measurement Canada does not currently recognize nor assess load profile data; however, based on stakeholder consultations, is considering regulatory changes to the *Electricity and Gas Inspection Regulations* which would establish technical and

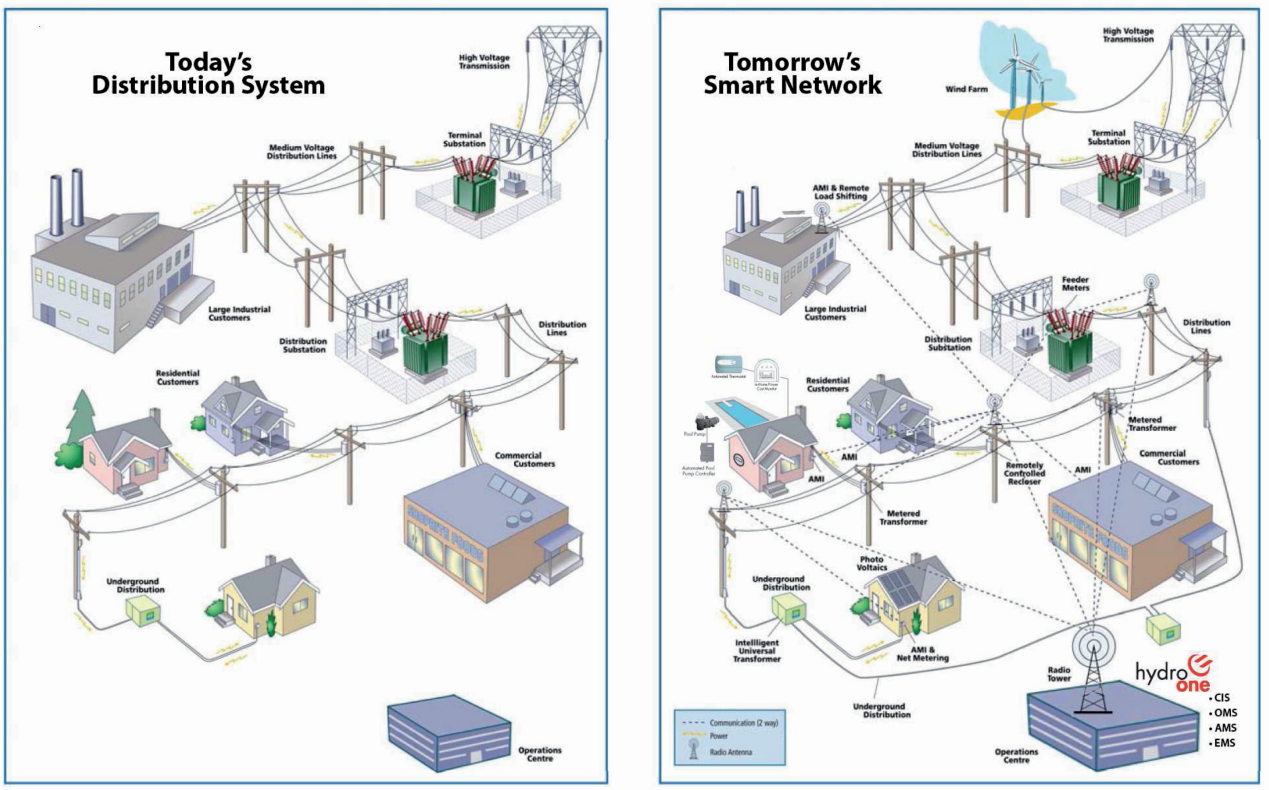


Figure 2 The future

Illustration provided by Hydro One

administrative specifications to address industry's growing desire for use of load profile data in trade measurement. Any proposed regulatory changes will be subject to the normal consultation process.

- Measurement Canada does not differentiate "smart meters" from any other meter and has therefore not established any specific smart meter assessment criteria.
- Time of use switching for purposes of rate application is deemed to be a rates/tariffs issue and is therefore, in Canada, outside the scope of federal jurisdiction.

In Canada, current legal metrology legislation is based on the traditional electricity distribution environment, where a meter is simply a meter, where utilities are typically integrated in terms of generation, transmission, distribution, and where the electricity market is highly regulated and monopolized with minimal or no competition. Under the existing federal legislation, essentially all meters are treated equally, and Measurement Canada can assess metering for accuracy and conformity to established specifications. However, the determination of who is the "contractor" (i.e. the regulated party that supplies electricity or natural gas, and/or who owns electricity or natural gas meters) in a deregulated and unbundled market can be more complicated as many separate parties may play a role in an electricity trade transaction.

The application of TOU and critical peak pricing (CPP) tariffs has added an additional element of complexity as utilities are increasingly relying on the use of metering functions such as load profile. Such functions, which were previously used for load monitoring by utilities, are now being used in a manner that could be deemed subject to legal metrology regulation. Additionally, smart meter technologies provide utilities with the capability of performing modifications to meters which may or may not be permitted under federal legislation. Such modifications may include firmware upgrades, cumulative register resets, modification of measurement algorithms or demand intervals, and determination of legal-units-of-measure outside of an approved, verified and sealed meter.

Many non-metrological functions have been either integrated with metrological functions (i.e. same firmware) or have been integrated in a platform which would necessitate "breaking" a meter seal in order to

modify the functionality. In Canada, if a meter seal is broken, for whatever reason, the meter is no longer legally valid to be used and must be re-verified by an inspector or accredited meter verifier before being placed into service.

Clearly, "smart meters" are much more than just traditional measurement devices. Utilities now see the meter as a tool to do many things and, with its two-way communication capabilities, also see it as their "connection" to the customer.

Potential solutions

The challenge for the metering industry is to develop the technology while still respecting federal measurement rules which must be equitable throughout Canada.

Technology is rapidly advancing and it is often difficult for the regulatory authority to modify regulations and standards in a timely manner to adapt effectively. It may be most effective to take a step back and distinguish the metrological aspects of a smart meter (traditional metering), from those additional functionalities of a smart meter (communication tools, load monitoring/control, etc.), so that one side or the other can be adapted and/or modified without impacting on the other.

Perhaps isolating the measurement functions (regulated) from the additional functionalities (non-regulated) so that one does not impact on the other is a simple and pragmatic first step. Such a step is recognized and allowed for in OIML D 31: *General requirements for software controlled measuring instruments*. ■

Abbreviations used

AESO	Alberta Electric System Operator
AIES	Alberta Interconnected Electric System
AMCC	Advanced Metering Control Computer
AMCD	Advanced Metering Communication Device
AMI	Advanced Metering Infrastructure
AMR	Automatic Meter Reading
AMRC	Advanced Metering Regional Collector
CDMD	Conservation and Demand Management Devices
CPP	Critical Peak Pricing
GPRS	General Packet Radio Service
IESO	Independent Electricity System Operator
LAN / WAN	Local and Wide Area Networks
MDM	Meter Data Management
MDR	Meter Data Repository
MESH RF	Mesh Radio Frequency
OEB	Ontario Energy Board
PLC	Power Line Carrier
TOU	Time Of Use

This paper was presented as a slide lecture at the OIML Seminar on Smart Meters, held in Croatia in June 2009. The Editors of the OIML Bulletin are grateful to the author for transforming it into an article and for his permission to publish it.

INFRASTRUCTURES

Strategy used in implementing the new Federal Law on the assurance of measurement uniformity

DR. SC. S.A. KONONOGOV
Director, VNIIMS, Russian Federation

Background

The new Law on the *Assurance of measurement uniformity* was adopted on 26 June 2008. A large amount of preparatory work first had to be carried out before it could be implemented, focusing on three strategic directions:

1- First direction: Preparation of proposals concerning the introduction of changes in the legal and normative legal acts of the Government of the Russian Federation. Based on the provisions of the Law, a series of draft Government regulations are to be elaborated.

2- Second direction: Elaboration of normative legal documents, which will supersede some of the earlier documents, as well as the elaboration of some completely new ones.

3- Third direction: Making changes, in accordance with the provisions of the Law, concerning organizational and informational principles of work, for the purpose of assuring measurement uniformity.

This new Law [1] provides the basis for legal metrology in the country, and since it differs considerably from the previous Law (adopted in 1993) [2] much work still has to be done to bring the normative and legal bases for assurance of measurement uniformity into conformity with the provisions of the new Law.

First direction: Preparation of proposals

In the **first direction**, all those laws containing references to the issues of assurance of measurement uniformity will be examined and proposals made concerning the introduction of appropriate changes.

The same work should be carried out for the current government regulations.

The Law specifies that certain rules and regulations shall be established by the Government of the Russian Federation. Article 6 (item 1) stipulates, in particular, that *"the names of the quantity units, admitted for application in the Russian Federation, their symbols, rules of writing and rules of application shall be established by the Government of the Russian Federation."*

Thus, the Government shall sanction by decree an appropriate document defining the order of actions. Nine documents of this kind are also to be drafted.

Second direction: Elaboration of normative legal documents

It is intended to carry out more work in **the second direction**. All the metrology rules are to be reviewed and new documents elaborated, aimed at realizing the new provisions of the Law. A total of 38 documents are to be drafted; some will be superseded, others worked out anew.

Third direction: Making changes

In the third direction, a new system of accreditation is to be developed in the field of assurance of measurement uniformity, which will be based on the recognized principles of the international system of accreditation and advanced national accreditation systems. And also, a Federal Information Fund on assurance of measurement uniformity is to be built.

Federal executive power bodies

The new economic realities in this country now call for the development of a concept enabling them to be adapted to the metrological services of the Federal executive power bodies and legal entities. Proceeding from article 11, a whole set of normative legal documents regulating the execution of the various forms of State regulation shall be elaborated, namely:

"Article 11. ***Forms of state regulation in the field of assurance of measurement uniformity***

State regulation in the field of assurance of measurement uniformity is executed in the following forms:

- *Type approval testing of reference materials or type of measuring instruments;*
- *Verification of measuring instruments;*
- *Metrological expertise;*
- *State metrological supervision;*
- *Attestation of measurement procedures (methods);*
- *Accreditation of legal entities and self-employed entrepreneurs to perform work and (or) render services in the field of assurance of measurement uniformity."*

Accreditation system

It should be pointed out that the first five forms of State regulation can be executed only provided that the sixth one is realized, that is, when the agents doing this work are accredited.

From this it follows that above all it is necessary to build a system of accreditation in the field of assurance of measurement uniformity (article 19).

The specificity of this accreditation system is that, pursuant to the Law, it is needed to be built for the purpose of the formal recognition of the competence of a legal entity or self-employed entrepreneur, allowing work to be performed and (or) services rendered in accordance with the forms of State regulation on assurance of measurement uniformity.

Besides those activities that are regulated by the State, there is another voluntary activity, with its own systems of accreditation, which has for many years proved quite effective. The problem is that the work of merging these systems should be done competently, without destroying what has already been accomplished. And at the same time, prerequisites should be created in the new system of accreditation for its recognition by European (and indeed worldwide) accreditation systems.

State metrological supervision

One of the most challenging problems that has to be solved within a two-year period, assigned by the Law (article 27, item 1), is the organization of State metrological supervision.

Under the new Law, some new items of supervision are included but others, which were subject to supervision under the Law of 1993, are left out. Thus, metrological supervision is introduced for quantity units, reference materials, and measuring instruments when they are either imported or sold.

The observance of the metrological rules and regulations, and any deviation of the quantity of products during commercial operations, are now excluded from the list of items subject to supervision.

Instead of that in the Law, supervision over prepackaged products is formulated differently: State metrological supervision shall include observance over "obligatory requirements for deviation of the quantity of prepackaged products from the declared value on the package." And these obligatory requirements for deviation shall be established in technical regulations (article 15, item 4).

The Law introduces a new aspect of transferring the function of State metrological supervision, previously assigned to only one Federal executive power body, that is, Rostechregulirovaniye (former name – Gosstandart), to many other Federal executive power bodies whose staff are approved either by the President or the Government of the Russian Federation (article 16).

All these new aspects require the elaboration of a new concept of carrying out State metrological supervision and also a new mechanism. And then, of course, a set of new normative and legal documents is required to facilitate putting it into action.

Organizational bases

When analyzing the Law and its implementation, it is also worth highlighting Chapter 7 - Organizational bases for the assurance of measurement uniformity.

A distinctive feature of the new Law is the division of the functions and responsibilities among those who are involved in assurance of measurement uniformity. In accordance with the previous Law of 1993 (article 4), the control activities concerning the assurance of measurement uniformity were performed on behalf of government authorities by only one organization – the Gosstandart of Russia – and now according to this Law these functions of State regulation are shared by a number of Federal executive power bodies.

State policy

The main tasks of the Federal executive power bodies are determined in article 21, item 2. Let us consider two of them more closely - the development and implementation of State policies on assurance of measurement uniformity.

One can ask what form State policy on assurance of measurement uniformity should take.

The first purpose is to establish the legal bases for the assurance of measurement uniformity in the Russian Federation. The first major step – passing of the Law itself – has been done. And then, those Federal executive power bodies that carry out functions of development of State policy and normative and legal regulations (article 21, item 1, para. 1), are obliged, within the statutory period (2 years), to develop and approve all the legal acts controlling the performance of the State regulation functions concerning assurance of measurement uniformity. Only in this case is the condition for work in the legal field provided for all the parties involved in the process of assurance of measurement uniformity. The State shall fully fund execution of this work, in a timely manner.

The second purpose is the protection of the rights and legitimate interests of citizens, the public, and the state from the negative consequences of invalid or inaccurate measurement results. In other words, with the help of the forms stipulated by the Law (article 11) the State policy aims to create such an organizational/technical system which will allow the probability (or risk) of invalid results to be minimized. The fulfillment of this purpose is the most difficult task. First of all, because the organizational bases stipulated by the Law come into contradiction with the organizational logic of any activity. With scores of governing bodies sharing the same responsibility, a system could hardly be expected to be managed effectively. The situation is further aggravated by the fact that the feedback in the system of control (state metrological supervision) shall be executed, according to the Law, also by many executive power bodies.

So the answer to the above question can be found right in the first article, item 1, in the Law, where the purposes of the State policy are stated.

The third purpose is to satisfy the needs of citizens, the public and the state in obtaining objective, credible and consistent measurement results when they are used in order to ensure protection of citizens' life and health, preservation of the environment, or maintenance of defense and safety of the State, including economic safety. Let us carefully read the definition of this purpose. "Satisfaction of the needs…" In order to be able to satisfy the needs, they have at least to be identified. Does this mean that the State should do the monitoring of *"the needs of citizens, the public and state in obtaining (objective, credible and consistent) results of measurements…"*. I wonder what kind of problem it is and how it can be solved. The answer is quite evident. There is no need for fair words when defining the purposes. It would be more useful just to have a clear idea of the scope and the exact forms of state regulation that are really necessary.

The fourth purpose is assistance in the economic development of the Russian Federation and in scientific and technological progress. This is clear enough. The system of assurance of measurement uniformity is in itself an infrastructure of the economy and, by definition, it is intended to facilitate its development. So, in this sense the second and third purposes correlate with this one. Measurement uniformity is needed for only one purpose: to provide credible measurement results, that is, results that can be trusted when making decisions (in the broad sense of the word). If we consider this conclusion as a correct one, then the direction and gist of the state policy concerning assurance of measurement uniformity become quite understandable.

Regarding the organizational bases of assurance of measurement uniformity, the Law defines in rather vague terms the involvement of the metrological services, including legal entities and self-employed entrepreneurs, accredited in accordance with the established procedure, in carrying out activities on assurance of measurement uniformity (article 21, item 1, para. 4) but it does not specify the tasks they shall perform. Article 22 says that the Federal executive power bodies shall also create metrological services in the prescribed manner and their managers shall approve the policies where the tasks for these metrological services will probably be specified.

Such restrained regulating, or rather non-interference of legislature with metrological affairs in businesses, offers a great opportunity for the realization of creative activities, on the part of businesses and State metrological services, when solving the issues of organizing non-government services of assurance of measurement uniformity.

Experience of VNIIMS

And it is here that the experience of VNIIMS (All-Russian Research Institute for Metrological Service), which for many years has been working to promote this main branch of metrological infrastructure of the economy, could be just in time and very useful.

In fact, all the activities of the state metrological organizations are directed at providing conditions for the effective functioning of the metrological services in businesses with the purpose of obtaining the necessary and credible results of measurements.

Having considerable experience in providing scientific and methodological support in the organization of metrological services to ministries, corporations, concerns, large associations, and down to small businesses, the Institute has set itself the task of creating

a new concept of organization of a non-government infrastructure for the purpose of assurance of measurement uniformity, on the basis of the strategy of development of an innovative economy with advanced technologies, and which is also socially-oriented.

Though this work constitutes a major part of VNIIMS activities, it also determines a strategy for implementation of the Law, thus rendering meaningful the purposes established in article 1 of the Law.

Dwelling upon the necessity to implement the main provisions of the Law, another key area is worth noting: providing an information service to all participants in the process of assurance of measurement uniformity.

This task needs to be addressed comprehensively. Various databases, registers, and collections of normative and procedural documents that are now available must be brought together into a single system to which the user may have easy access to obtain the information contained in it.

Financing

The Law stipulates (article 25) that financing the work of creating and maintaining the Information Fund on assurance of measurement uniformity shall be at the expense of the Federal budget.

In order to ensure that the financing begins on time, designation of a working draft of this Fund has to be started right now, with a view to its timely implementation.

Concluding remarks

A total renewal of the normative and legal bases for the assurance of measurement uniformity is expected to be made, which will certainly create an increase in demand for documents and other information relevant to the implementation of the provisions of the Law and the use of normative legal and procedural documents.

Although no such structure is specified in the Law, the State Metrological Service still exists nonetheless – but it must not only be ready to meet the demand for information, but also be ready to carry out practical methodical guidance on familiarization with the provisions of the new Law.

References

[1] www.vniims.ru, see “activity”

[2] L.K.Issaev, *Russian Metrology under the new Legislation. Vol. XXXV, N 1, Jan.1994.*

ENVIRONMENTAL ISSUES

Integration of environmental aspects into OIML Recommendations

MORAYO AWOSOLA
OIML TC 9/SC 2 Secretariat

A main driver for developing OIML International Recommendations is their uniform applicability in promoting the global harmonization of legal metrology procedures, and the development of a worldwide technical structure that provides metrological guidelines for the elaboration of national and regional requirements concerning the manufacture and use of measuring instruments for legal metrology applications, such as:

- Belt weighers - OIML R 50:1997 *Continuous totalizing automatic weighing instruments (belt weighers)*
- Load cells - OIML R 60:2000 *Metrological regulation for load cells*
- Petrol pumps - OIML R 117:2007 *Measuring systems for liquids other than water*
- In-motion vehicle weighers - OIML R 134:2006 *Automatic instruments for weighing road vehicles in motion and measuring axle loads*.

As model regulations, OIML Recommendations play a crucial role in the development of technical solutions to demonstrate compliance with metrological law on how a product is made, used and maintained, or because they deal with the efficient use of natural resources in the test and analysis of instruments or materials in relation to their environmental behaviour or conditions. Manufacturers referring to OIML Recommendations can ensure that their instruments use fewer resources and not only meet the international specifications for metrological performance and testing, but also the environmental requirements throughout the product's whole life cycle.

Consequently, OIML Recommendations can have a substantial influence on the way measuring instruments impact on the environment.

Environmental thinking

OIML Recommendations are developed by Technical Committees and Subcommittees which are formed by OIML Member States. The stakeholders involved in these Technical Committees have already invested – and will continue to invest - significant resources in terms of knowledge base, technical know-how and financing to develop the Recommendations. Are these OIML stakeholders willing to invest further and enhance their role in protecting the environment by making environmental thinking an integral part in the Recommendation development process?

Sustainable development

The past two decades have seen a growing realization that the current model of global development is unsustainable. The increasing stress put on resources and environmental systems such as water, land and air is placing an increasing burden on the planet. This raises the question of whether the international legal metrology community should use OIML Recommendations as a tool to encourage sustainable consumption and production by changing the way that measuring instruments and services are designed, produced, used and disposed of - in short, achieving more with less?

Because instruments subject to the requirements of OIML Recommendations mostly deal with aspects of trade, quality, health, usage and the safety of measuring products or processes, by additionally considering environmental aspects, OIML Recommendations could make a positive contribution to sustainable development and the relevant implementing policies, such as the Integrated Product Policy (IPP) adopted by the European Commission.

Most measuring instruments affect the environment at some point in their life-cycle from raw material acquisition through production, distribution, use and disposal mainly due to the fact that environmental impacts are consequences of the consumption of energy and resources, emission of substances into the air, water and soil; and materials used, production methods, maintenance process and recycling. And as such OIML Recommendations can influence the environmental impacts of these measuring instruments if environmental aspects are integrated into them.

So how can we use OIML Recommendations to promote environmental thinking and sustainable development in legal metrology? A good place to start is to consider the structure of the OIML Recommendations.

The main elements of a Recommendation are:

- Scope,
- Application and Terminology;
- Metrological requirements;
- Technical requirements;
- Methods and equipment for testing and verifying conformity to requirements; and
- Test report format.

Scope

The *Scope*, which appears at the beginning of every OIML Recommendation, defines the subject and its aspects to be covered, thereby indicating the limits of the Recommendation's application. This scope can be expanded to ensure that environmental considerations are built into the OIML Recommendation development process at an early stage.

Application and Terminology

The *Terminology* element of the OIML Recommendation provides the necessary definitions for understanding certain terms used therein and can also be used to include the applicable environmental terms. Furthermore, the application element of the Recommendation which deals with the design and manufacture requirements of the relevant measuring instrument can influence the environmental impact of the product since the choices made at the product design stage, the materials used and the function of the product can influence the environmental impact.

Metrological requirements

The environmental aspects of an instrument may also depend on how the *metrological requirements* with which the instrument shall comply during tests, and while in service (for example, maximum permissible errors and influence quantities) are specified. This includes factors such as the level of noise, emissions, migration of hazardous substances, risks to the environment from accidents and misuse, etc., which are closely linked to the instrument's operating conditions and which can have some impact on the environment in which it operates.

Technical requirements

Technical requirements are specified to ensure compliance with the metrological requirements, e.g. requirements for construction, security of operation, protection against fraud, ease of reading, and descriptive markings, all of which can influence the design, choice of materials and the manufacture of the instrument. The instrument's impact on the environment can be influenced by the technical requirements in the Recommendation.

Methods and equipment for testing and verifying conformity to requirements; Test report format

The test requirements for instruments are necessary to ensure conformity to the OIML Recommendation requirements. The test results are recorded on the OIML *Test report*. Most importantly, the tests may themselves involve consumption of energy and resources as well as emissions and waste of energy or the use of environmentally harmful substances. Consequently, specifying environmentally friendly OIML test specifications is one route to ensuring compliance with environmental policies, e.g. providing compliance with legislation.

Conclusions

Consideration of environmental aspects during the development or revision of OIML Recommendations could help in establishing methods for measuring or, in some cases, better describing environmental parameters relevant for those instruments that are subject to the requirements in the Recommendations. Consequently, OIML stakeholders may need to consider whether there is a need to enhance the role of OIML Recommendations in environmental protection throughout their development and application stages.

References

- IEC Guide 109: Edition 2.0 2003-06
  Environmental aspects – Inclusion in electrotechnical product standards
- European Commission, DGXI
  Workshop on Integrated Product Policy, Final Report, Brussels, December 1998

Morayo Awosola
National Measurement Office (NMO)
Project Leader – International Business Team
Teddington, United Kingdom
morayo.awosola@nmo.gov.uk
Tel: +44 0 208 943 7287

This article on environmental issues in legal metrology is produced by Morayo Awosola, Secretariat for OIML TC 9/SC 2 Automatic Weighing Instruments and does not represent the views of any organisation.

ACCREDITATION

Tested/certified once, accepted everywhere

OECD Workshop and Policy Dialogue on TBT

5–6 October 2009

MERIH MALMQVIST NILSSON
SWEDAC

Introduction

This is a topic which has been the object of numerous jokes, especially amongst the users of certificates and reports issued by accredited conformity assessment bodies. Traditionally, producers have had to have their products re-tested and re-verified for each country/economy in which they planned to put their product on the market. This is clearly a costly process which does not necessarily increase the quality of the product or the service provided.

Accreditation has long been used as a tool to facilitate the free circulation of goods and services. Accreditation bodies and their most loyal clients have put a lot of hard work into making the end-users, specifiers and regulators understand and appreciate the reliability and robustness of an accreditation process in providing the market with confidence in the tested and certified products and services while, at the same time, providing a level playing field for all conformity assessment bodies which choose the accreditation route.

Success has not been immediate and many difficulties have had to be solved on the way. However, the many years of hard work and confidence building have started to pay off. There are both big and small success stories and in some cases, even the most conservative sectors have started putting their confidence in the work of accredited conformity assessment bodies. They are now asking for accreditation as the preferred route for the assessment of conformity assessment bodies, and consequently certificates issued under accreditation become the preferred route for the free circulation of products and services everywhere. This has also created long term partnerships between accreditation body organizations and various very important sectors.

An added value of accreditation is that a conformity assessment body does not need to be assessed by all the individual schemes, sectors or regulators wishing to use its services. The third party attestation provided through accreditation gives all market sectors the confidence they seek as long as the technical scope of accreditation meets their needs.

The very fact that ILAC and IAF have been invited to this 2-day seminar is, in fact, sufficient evidence that accreditation has an important role to play in the conformity assessment arena and in supporting one-stop-shopping, thus providing a good example for a success story.

Even though the topic of this session focuses on acceptance by regulators, the examples given here also reflect the acceptance of accreditation by the free market.

Examples of organizations and sectors which use accreditation in order to achieve the goal of "tested/certified once, accepted everywhere"

USA Regulators

There are today three US regulators which cite either in their rules or in their guidelines that they accept results of tests performed by conformity assessment bodies accredited by ILAC MRA signatories. These three are:

- Consumer Product Safety Commission (CPSC),
- Food and Drug Administration (FDA),
- Federal Highway Administration.

EU regulators through the new "Goods Package"

The biggest success story, all categories and all times, in the accreditation arena is probably the fact that the regulators of the European Union have now chosen to take accreditation as the preferred route for the assessment of conformity assessment bodies to be used in the regulated area. The EU regulators thus acknowledge that this will provide the quality, harmonization, transparency and level playing ground required in the market in order to guarantee the safety of products and services.

IECEE CB scheme (IEC System for Conformity testing and Certification of Electrotechnical Equipment and Components)

The IECEE CB scheme is one of the oldest schemes providing recognition around the world, through peer evaluation among its member bodies. Today it is in close partnership with ILAC and IAF promoting both accreditation and certificates issued by accredited bodies. In particular, the cooperation between the IECEE CB scheme and ILAC has been developed to a level where laboratories are assessed only once for acceptance. This assessment is provided through accreditation where the technical expertise of the IECEE CB scheme experts is used in the process.

OIML

Legal metrology is probably the oldest field of conformity assessment as regulators have always wanted to make sure that commerce is not performed in a manner that may disadvantage the private individuals involved. Assey offices (institutions to test the purity of precious metals), and the verification of scales and volumetric instruments have been part of the local quality infrastructure of each country for a long time. Today there is very close cooperation between the OIML, ILAC and the IAF where the OIML acknowledges the value of accreditation as a tool providing the necessary confidence in the work of the conformity assessment bodies active in field of legal metrology.

BIPM

The BIPM is the central organization whose members provide traceability of measurements to the market. Traditionally, the recognition of traceability provided by the BIPM has relied on the key comparisons it arranges and the peer evaluation system its members are involved in. Today, there is close cooperation between ILAC and the BIPM, which requests that its members seek accreditation as the primary route for recognition. The BIPM actively participates in the work of ILAC and its members.

Sector schemes in the area of food and feed

Today, no less than eight food safety and food quality schemes are seeking cooperation with accreditation body organizations to ensure that the name and quality of their schemes are not jeopardized. Many of these are certification schemes either as product certification or as certification of management systems and work in cooperation with the IAF or regional coordination bodies.

ENFSI (European Network of Forensic Science Institutes)

The European Network of Forensic Science Institutes recently decided to ask its members to seek accreditation to ensure the quality of their services. Crime today is often international, consequently evidence that will be used to convict the criminals involved may be found in different countries. This requires that evidence from one country can be used in another, which in turn means that evidence needs to be analyzed based on the same principles in different countries. ENFSI trusts that accreditation provides that confidence and will lead to better criminal justice. To provide this confidence ILAC and ENFSI cooperate closely to ensure that both crime scene investigation units and forensic laboratories are accredited.

WADA (World Anti-Doping Agency)

The World Anti-Doping Agency WADA is one of the most important organizations in the world of sports. It provides a level playing ground by actively seeking to stop the use of illegal drugs by athletes. WADA depends on two tools for the reliability of results: proficiency testing and accreditation. WADA requires today that laboratories performing anti-doping tests are accredited by an ILAC full member accreditation body.

USA Regulators

There are now three USA regulators citing the ILAC MRA in either rules or guidance documents (Federal Highway Administration, CPSC and FDA). There is also a growing number of global companies (e.g. GE, Boeing, Lockheed Martin, Sikorsky, Wal-Mart, Toys R Us, Coca Cola, American Spice Trade Association) placing similar ISO/IEC 17025 accreditation requirements or guidance on their suppliers to a greater or lesser extent.

There are many other organizations, regulators and specifiers who rely on accreditation to provide confidence to the market.

However, it would take time to list them all. The choice is not based on degree of importance or any other grading but aims mainly at giving a fair mixture of the different categories of organizations.

What do ILAC and the IAF do to maintain the confidence of the market?

The main tool for creating confidence is the effort put into harmonizing the work of accreditation bodies around the world in order to achieve reliability and comparability of results.

There are two main pillars to the work of ILAC and IAF:

- Manage and monitor a robust peer evaluation process to promote mutual recognition of results;
- Facilitate harmonization of accreditation processes between accreditation bodies in different economies.

To achieve this ILAC and the IAF use, among others, the following tools:

- Use of international standards as normative documents in the accreditation process;
- Provide involvement of all parties, for example regulators, specifiers, client organizations in the different committees of ILAC and IAF;
- Participate in standardization;
- Actively seek to create partnerships with key players in the conformity assessment arena;
- Provide harmonized guidance to their members.

The peer evaluation system of ILAC and the IAF relies in turn on the peer evaluation systems of the regional coordination bodies. Ultimately, it is the good work performed by accredited conformity assessment bodies that guarantees the good reputation that ILAC, the IAF and their members enjoy.

What happens now?

The number of success stories has increased substantially during the past few years. One may think that now is time for "business as usual", but that would be a very dangerous move. Confidence takes a long time to gain and can be lost instantly and it is just when we have built confidence that we have a lot to loose. We need to focus more than ever on doing our job properly according to international standards and in line with the expectations of the market, regulators, industrial specifiers and last but not least our clients, the work of which is the utmost proof of our success. ■

About the speaker/author

Merih Malmqvist Nilsson, M.Sc in Electrical Engineering

After working for eight years as research engineer in the computerization of mechanical measurements and mechanical testing at the Swedish National Testing Institute, Mrs. Malmqvist Nilsson moved on to SWEDAC (Swedish Board for Accreditation and Conformity Assessment) in 1986.

Until 2004 she worked both as lead assessor and in managerial capacity with the accreditation of laboratories and inspection bodies. She was also in charge of the assessor training programs of SWEDAC during that period. Mrs. Malmqvist Nilsson has performed over twenty evaluations of accreditation bodies for EA, ILAC and the IAF; she chairs the ILAC Arrangement Committee, the EA Horizontal Harmonization Committee, and is a member of the ILAC and EA Executive Committees. Today she is the Director of the International Secretariat of SWEDAC where all of SWEDAC's international activities are coordinated and managed.

MOMBASA 2009

44th CIML Meeting and Associated Events

Mombasa, Kenya

26–30 October 2009

The Kenyan Ministry of Trade hosted the following Meetings at the Sarova Whitesands Beach Resort & Spa, from 26 through 30 October 2009:

- *44th CIML Meeting,*
- *Seminar "Stakes and priorities of legal metrology for trade"*
- *Regional Bodies Round Table, and*
- *CIML Round Table on "Metrological Control".*

MOMBASA 2009

44th CIML Meeting: Opening Address

Eng. Abdulrazaq Ali
Permanent Secretary,
Ministry of Trade

I would like to take this opportunity to thank the International Committee of Legal Metrology for choosing Kenya as the venue for its 44th Meeting. I wish to extend a warm welcome to you all to Kenya and to Mombasa City, a city well known all over the world as a wonderful destination for tourism.

I am aware that during the CIML Meeting you will deliberate on metrology standards for the provision of credible measurements for various sectors including trade, health, safety, the environment and law enforcement.

As you may be aware, one of the mandates of the Ministry of Trade of the Republic of Kenya is to ensure fair trade and consumer protection, a mandate that is well articulated by the Weights and Measures Department of the Ministry. You will agree with me that fair trade and consumer protection is not possible without standards and an elaborate system of regulation of measurement.

The Government of Kenya recently launched a new blueprint for its economic development. This blueprint, commonly known as Edition 2030, envisages an economic growth rate of 10 %. To achieve this growth rate, we will be engaging the global economy through exports and imports. Our expectation is that we will consolidate our exports in realizing uniformity of measurements that will help, guide and simplify both national and international trade.

With these few remarks, may I now invite the Minister for Trade of the Republic of Kenya, the Honorable Amos Kimunya, to make his remarks and declare the CIML Meeting open. Thank you. ■

MOMBASA 2009

44th CIML Meeting: Opening Address

Hon. Amos Kimunya, MP
Minister for Trade

Thank you very much, Permanent Secretary. Alan Johnston, President of the International Committee of Legal Metrology, distinguished delegates, ladies and gentlemen:

It is indeed a great pleasure for me to join you this afternoon and to welcome you to the 44th Meeting of the International Committee of Legal Metrology that is being held in Mombasa, Kenya.

As you know, Mombasa City is a gateway and a major port to East and Central Africa. It is also a leading tourist destination with all kinds of entertainment and therefore at the very outset I wish to invite you to take full advantage of your being here to tour the city, to tour the environs, to relax on the beaches, to swim in the deep sea (there are no sharks!) and explore the coral reef whilst sampling some of Kenya's best tourism sites beyond Mombasa.

And perhaps, at the end of all that, since you are here as the experts on weights and measurements, in line with the modern trends in the world, to start looking at other measures, other indicators of development. You may wish to come up with a measure of happiness, so that we have now a standard measure for happiness which will come from your own experience in Mombasa. We may well wish, Mr. President, to call it the Mombasa Standard, as a measure of happiness. That will become legally enforceable, so that we can now start looking at development from how happy people are, based on the Mombasa Standard!

Now, ladies and gentlemen, I am sure you are the experts in this field. I do not want to get into the technical issues of measurements or why they are important,

why they are not. I would just want to take this time to look at it from a user's perspective, representing all the various people who are affected and impacted on by the work you do.

To just put it into perspective, hordes of people out there may be affected. But before that, let me also reiterate that Kenya is honored to be hosting this event this year and we do look forward to hosting it again at some time in the future. I am pleased to note that this is also the second time that this Meeting is being held on the African Continent. And this is very significant because Africa requires opening out to the standards and reinforcement of standards more than other places; you all come from places where standards are taken as the way of life, but we require a lot of that, together with enforcement and indoctrination. And holding this conference within Africa, within this region, is, to us, sending the signal and bringing that awareness that we all need, in terms of the need for conformity to the work that you are educating.

I am aware that this forum will provide an opportunity for those countries which are not yet Members to attend and share the experiences and the knowledge with the larger international community and I do wish to encourage all those that are here today that perhaps it is time they moved now from the observer status, or invited status, to actually becoming Members so that we can grow into an even bigger international organization that will have representation by right in every country on the globe.

You are here to deliberate on metrology standards for the provision of credible measurements for trade, health, safety, environmental protection and law enforcement. The expected outcome of this high profile meeting is obviously the adoption of international Recommendations. They will then guide national and international trade in goods and services.

Allow me to clarify the well known fact that fair trade will not drive without standards and regulations in measurement. The role of the OIML in developing metrology standards, therefore, cannot be ignored, since it champions fair trade practices and consumer protection by realizing uniformity of measurement. I wish to assure you that conformity by the business community to these Recommendations will ensure them access to international markets with reduced technical barriers. National domestication of the Recommendations through legislation will be a big motivation for investors to venture into the national markets, thereby creating more jobs for our youth.

Ladies and gentlemen, as you all know, the regime has greatly been affected by the OIML in supporting national enforcement authorities. This involves assessment of resources and facilities in terms of metrology that are not always available in all countries. Yet if done independently this would be very costly for the individual countries. Now such facilities include obviously the international systems for the evolution of measuring instruments as well as international systems for individual certification of the measurement results. The OIML also offers exchange of knowledge and confidence to its Members, through accessing technical information concerning new measurement technologies, their performance, reliability, test and evolution methods for measuring equipment. Furthermore, the OIML has a broad program for supporting Developing Countries with the following objectives.

First, and I believe the most important, facilitating the participation of the Developing Countries in the work of the OIML, taking account of specific Developing Countries' needs in OIML work, providing Developing Countries with appropriate credence for the development of legal metrology and facilitating Developing Countries' access to assistance and development programs for legal metrology. That is why I emphasize the fact that this Meeting is taking place within Africa, and I do hope there will be many more Meetings taking place in all the various corners so that the work of the OIML can actually be brought and be seen. Because, as we are talking here this week, there are so many Kenyans who know there is a difference between metrology and meteorology. Initially when we were discussing hosting of this Meeting, everyone was saying, "Why is the Minister of Trade interested in matters to do with the weather? That should be the Ministry of the Environment." But, as reality struck that there is a clear difference between metrology and the work that you do, and what the weather men do, which is a different technology but sounds the same, people get to understand the importance of those measurements in terms of promoting fair trade and in terms of ensuring that people get full value for the goods and services they are purchasing, and, indeed, on all the other health and safety issues that you are spending so much time working on the standards for.

In terms of the forum, I think it also allows the legal metrology services, the laboratories and factories, to have access to information on legal metrology in Member States and Corresponding Members. Through the OIML, countries obtain information on national legal metrology regulations, procedures to access markets, and the organization of national legal metrology systems. It also addresses the national and local responsible bodies and national conformity assessment procedures and markings. For the economy, legal metrology reduces both disputes and the need for duplicating measurements, while protecting those trading partners who have neither the skills not the facilities to perform their own measurements. It contributes to fair trade and more generally facilitates both domestic and international trade. And this is a key factor for economic development.

Turning to Kenya, and the results of our membership within the OIML: Kenya has continuously established through the Weights and Measures Act, which is the law governing weights and measures, various legislation on various categories of measuring instruments, based on the implementation of OIML guidelines. We are committed as a country not just to participate but to domesticate whatever it turns out at national and international level, because, partly in addition to all we do within our own borders, Kenya is a gateway to the way that trading blocks of East Africa Community, the Common Market for East and Southern Africa, COMESA, as well as the wider Africa, and we believe that we have been given that opportunity to be a gateway, but that opportunity also comes with some searching responsibility to play the role of big brother in terms of being the first to implement what comes out; and we hope with your support we will be able to domesticate as much as possible and then to ensure that it cascades to our sister states and neighboring blocks.

The Government has also ensured that its instruments meet international specifications for metrological performance and testing. The adoption of OIML guidelines has helped our domestic markets to operate effectively and increase our competitiveness, as well as providing an excellent source of technology transfer. For the last few years, technology has been advancing rapidly; many areas, including communications, automation, software and measurement instrumentation. There have been major changes in the ways in which the world communicates, trades and generally does business. Accordingly, the role of the OIML is becoming increasingly important in this new age of technology. I note that the OIML has observer status on the Committee on Technical Barriers to Trade, the TBT Committee of the World Trade Organization, and consequently, its Recommendations, or model regulations, are critical to national and international trade. By hosting this Conference, the Government of Kenya is indicating its continued support for international cooperation in metrology. It is also saying we are committed to fair trade, through ensuring that our measures and weights conform to an international standard. This collaboration with the OIML is critical in supporting the ability of nations to provide and to trade products and services globally.

As I conclude I wish to reiterate that the authorities which include the above responsibility in each country should work for the benefit of the business community and consumers in general. This forum is therefore a great opportunity for us to address international metrology issues that may have hampered trade in the past, I believe. That is why I want you to go around, go and see the chaps selling their curios on the beach, and see between any two traders, what measure they are using. Let us bring it down to that basic level, because 80 % of business, for example, in this country, is carried out by the micro and small to medium enterprises. They are not sophisticated. They do not have calibration to micro something. But how do we ensure that the customer at the other end is actually getting value, and on a consistent basis? And I believe that is the challenge I represent in the way the public I want to throw to this group of experts who have been drawn from all around the world, so that even as we think of that international standard, let us think of how that standard will benefit and apply to the welfare of the very lowest of the lowest as they are moving out of the range of economic development. In what we are doing today, how can the work of the OIML be mid-streamed to ensure that those people benefit and feel that benefit into the future?

I could go on and on. I must remind you that, probably by the end of Friday, I will be asking from Cairo whether the Mombasa Standard on Happiness has been developed, because we believe that in all this there should be something that we should be telling people - "people are now happier than they were last year because of A, B, C, D …" Think about it. And I think with these remarks and those challenges it is my pleasure to declare this 44th Meeting of the International Committee of Legal Metrology officially open and to wish you all the very best during your seminars, during your meetings, during interactions and I do hope that output of the Mombasa Meeting will change this world one way or the other. I wish to thank you very much and I will be with you for the rest of the day. I was told that because of the slight delays I have been forced to have lunch, which I have gladly accepted, and then I also have some time in the afternoon for any interaction you might wish to have, and then I will leave you to continue with your technical work. So thank you and welcome to Mombasa and to Kenya. ■

MOMBASA 2009

44th CIML Meeting: Opening Address

Mr. Alan E. Johnston
CIML President

Good afternoon everybody and welcome to Mombasa. I would like to thank our hosts for the excellent organization of this meeting and also the Minister of Trade for his Opening Remarks yesterday.

Earlier on today during lunch, the Minister told me that he had had to go to Cabinet level to obtain approval to hold the CIML Meeting in Kenya. He explained that the procedure was to first present the project to a small Cabinet Subcommittee, chaired by the Prime Minister. At this meeting, one of the other Ministers asked why the Minister of Trade was presenting information concerning a conference not on metrology, but on meteorology! It transpired that in a previous role, the Prime Minister was the head of the Kenyan Standards Organization – he then proceeded to explain to everybody in the room (including to the Minister) why the CIML Meeting was important, and why standards were important. So the moral of the story is that you never know who and where your friends are, and you should therefore treat everybody as if they were a potential friend. The Minister indicated to me that this had been the easiest Cabinet presentation he had ever made in his life!

Yesterday, we had a very interesting Seminar and I think the presentations, as well as the exchange of views, will be very useful in relation to our discussions during this CIML Meeting. I was particularly pleased with the level of participation during the Question and Answer period. My thanks to John Birch, Hakan Kallgren and Peter Mason for their presentations.

In terms of new OIML Member States, Colombia is in the process of ratifying the OIML Treaty, as well as the Metre Convention and I hope this membership will be official within a few months, so another important South American country will join us.

In terms of Corresponding Memberships, we welcome two economies: the Dominican Republic and the UEMOA, Union Economique et Monétaire Ouest Africaine. This is the first time a group of countries have become a Corresponding Member and is an interesting innovation for the OIML.

We congratulate a number of new CIML Members:

- Mr. Philippe Antognelli, Monaco
- Mr. Salesio Paul Njiru, Kenya
- Mr. Iksoo Kim, Republic of Korea
- Mr. Frans Deleu, Belgium
- Mr. Kresimir Buntak, Croatia
- Mr. Charles Sagala, Indonesia
- Mr. Dimitar Parnardziev, Macedonia
- Mrs. Magdalena Chuwa, Tanzania
- Dr. Tanasko Tasic, Slovenia
- Mr. K. Premasiri Kumara, Sri Lanka
- Prof. Dr. Mohamed Mokhtar Ahmed Ali Sharaf, Egypt
- Mr. Israfil Celik, Turkey.

I would also like to thank the BIPM (Dr. Pedro Espina) and ILAC (Mr. Chesolokile) for attending, as their support is extremely important to us.

Unfortunately we do not have the usual stakeholders in attendance at this meeting, as most of them are facing travel budget restrictions due to the economic crisis. You can obtain further insight into this matter if you read the report sent to us by CECIP. Of course we will continue to consult with stakeholders and include them in our work; this is a priority for the OIML.

This morning we had a meeting with Regional Legal Metrology Bodies where we discussed how to develop and improve mutual information about their respective work and matters of interest in legal metrology. We must continue to facilitate this exchange of information and views.

A number of important issues will be addressed in this CIML Meeting. We have a small number of new or revised publications to adopt, but the following matters will be of particular interest to Members:

First we will report to you about the discussions we had in the Presidential Council Meeting and then with the BIPM concerning the rapprochement between our two Organizations. This issue raised significant interest on the part of CIML Members and we will take some time to discuss this report.

Secondly tomorrow we will have a Round Table session, chaired by Manfred Kochsiek, concerning legal metrological control and our discussions should result in some direction related to the revision of D 1 and other OIML publications related to metrological control and supervision. I hope you will take an active part in these discussions tomorrow morning.

The financial issues are also a very important issue in this CIML Meeting. Following the Resolutions of the 43rd CIML Meeting, a new external auditor was appointed and she carried out both a financial and management audit of the accounts of the BIML. She also examined the rules proposed for accounting for the OIML pension scheme and agreed these rules can be used pending a revision of the OIML Financial Regulations. This topic is also likely to generate some discussion.

We will also have, for the first time, the Award for contributions to legal metrology in a developing country. We hope this new Award, which was adopted at the last CIML Meeting, will provide recognition to legal metrologists in developing countries who work towards the improvement of their legal metrology system.

That concludes my opening remarks. I hope that you will enjoy your time in Mombasa. Thank you very much for your attention. ■

MOMBASA 2009

44th CIML Meeting: Opening Address

Mr. Salesio Paul Njiru
Acting Director of Weights and Measures, Kenya
CIML Member for Kenya

The Honourable Minister of Trade,
The Permanent Secretary, Ministry of Trade,
The President of the CIML,
Your Excellency the Ambassador of Algeria,
Other Distinguished Guests,
Fellow Metrologists from the Member States,
Ladies and Gentlemen,

At this juncture I would like to warmly welcome the Permanent Secretary of the Ministry of Trade to invite the Honourable Minister who will officially open the 44th CIML Meeting. Before that, as CIML Member for Kenya I personally wish to welcome all of you to this very important meeting and to our great Nation – Kenya.

Kenya became an OIML Member in 1973 and since then we have benefited greatly from this membership and have participated in numerous CIML Meetings. We have continually revised our Weights and Measures Act which was first introduced in 1912, basing it on OIML Recommendations in order to ensure that we have in place a document that will help us reduce barriers to trade, since we trade internationally.

We have also developed technical procedures in the field of legal metrology. The Ministry of Trade has developed curricula for training Weights and Measures personnel, notably to enhance the level of professionalism in our service delivery. All the above has harmonized our Nation's legal metrology system with that of other Nations of the world, thus facilitating trade with other nations.

I wish to assure you that Kenya is committed to legal metrology and to prove that, I invite you to note that we have high ranking government representation here today, among which the Honourable Minister who has kindly set aside some time out of his busy schedule to open this great event. Indeed I wish to inform this gathering that the encouragement to bid for the hosting of this CIML Meeting came from the office of the Permanent Secretary; throughout the preparations his office has monitored progress very closely to ensure that no details were left aside.

With those introductory remarks I now take this opportunity to welcome the Permanent Secretary of the Ministry of Trade to address us, and also to invite the Minister of Trade to officially open this 44th CIML Meeting. ■

MOMBASA 2009

Awards and Letters of Appreciation

The OIML made two Awards in Mombasa for contributions to legal metrology, and four Letters of Appreciation

The Committee made an Award to

Dr. Arnold Leitner (Austria)

in recognition of his outstanding contribution to legal metrology

Letters of Appreciation

were also awarded to:

- *Mr. Alexey B. Diatlev, Russian Federation*
- *Mr. Wilhelm Kolaczia, Austria*
- *Mr. Momyshev Talgat Amangeldievich, Kazakhstan*

First OIML Award for Excellent Achievements in Legal Metrology

During the 44th CIML Meeting in Mombasa, CIML President Mr. Alan Johnston announced the winner of the first *OIML Award for Excellent Achievements in Legal Metrology in Developing Countries*.

The President handed over a special certificate to the winner, Eng. Osama Melhem, Director of the Metrology Department of the Jordanian Institution for Standardization and Metrology, for his outstanding contributions to the organization of metrology in Jordan and the development of legal metrology in particular.

As part of the Award ceremony Eberhard Seiler, OIML Facilitator for Developing Country Matters, explained the facts on which this decision was based. The examples he mentioned clearly showed the benefits for consumers and the contributions to fair trade in Jordan. Some of the methods are most certainly of interest to other legal metrology services, which could in turn benefit from the Jordanian experience.

The Facilitator referred to the April 2009 issue of the OIML Bulletin in which an illustrated description was published of the current situation of metrology in Jordan.

An additional project of special interest to Arabic-speaking countries (and indeed regional cooperation in general) was his translation of various OIML Publications into Arabic, including the International Vocabulary of Legal Metrology and the brochure on the International System of Units, printed by the Jordanian Institution. The BIML has made these translations freely available on its Developing Countries web site.

In his words of thanks Mr. Melhem stressed the fact that the progress his country had made in legal metrology over recent years would not have been possible without the extraordinary commitment of his collaborators, who therefore also had their share in this Award.

Besides the special certificate, the Award also includes participation in an international metrology event, chosen by the winner and financed by the OIML as a mark of appreciation.

Mr. N.K. Singhania of Shanker Wire Products Industries was awarded a Letter of Appreciation by the CIML President; in his absence the CIML Member for India received the Letter on his behalf. Mr. Singhania is a producer of weights, and among other activities with regard to legal metrology he regularly informs the metrology community in India about new achievements in the OIML, specifically with regard to weights and weighing instruments by producing and distributing a special news letter.

At the end of the Award ceremony the Facilitator lauded the high standard set by the first winner. He expressed his expectation that the Award will encourage others to strengthen their activities in legal metrology and called for applications for the 2010 Award. ■

Article by Eberhard Seiler (pictured left) with Osama Melhem (center) and Alan Johnston (right)

MOMBASA 2009

44th CIML Meeting

Agenda

Opening speeches

Roll call

Approval of the Agenda

1 Preliminary item: working language

2 Approval of the minutes of the 43rd CIML Meeting

3 Liaisons

3.1 BIPM
3.2 ILAC / IAF
3.3 Standardization bodies
3.4 UNIDO
3.5 CODEX ALIMENTARIUS
3.6 WTO
3.7 Other Organizations

4 Member States and Corresponding Members

4.1 New Member States and perspectives
4.2 New Corresponding Members
4.3 Member State contributions and arrears

5 Presidential Council activities

5.1 Report of the CIML President

6 Round Table on Metrological Control

7 Report on the Seminar "Stakes and priorities of legal metrology for trade"

8 Activities of the Bureau

8.1 Publications
8.2 Technical activities
8.3 Support to Regional bodies
8.4 Liaisons
8.5 Promotion of the OIML
8.6 General

9 Financial matters

9.1 Pension system
9.2 2008 Accounts

10 Developing Country activities

11 Technical activities

11.1 General
11.2 OIML Certificate System and the MAA
11.3 Publications submitted to the CIML for approval
11.4 TC/SC items for information
11.5 TC/SC items for approval

12 Human resource matters

12.1 Term of the mandate of the CIML President
12.2 Term of the contract of the BIML Director

13 Future meetings

13.1 45th CIML Meeting, 2010
13.2 46th CIML Meeting, 2011

14 Other matters

15 Decisions and Resolutions

16 Closure

FORTY-FOURTH MEETING
of the INTERNATIONAL COMMITTEE of LEGAL METROLOGY

Mombasa, 27–30 October 2009

RESOLUTIONS

Resolution no. 1:

The Committee instructed the CIML President and the BIML Director to prepare a detailed note on the use of French and English, to be submitted for approval at the 14th Conference in 2012.

Resolution no. 2:

The Committee approved the Minutes of the 43rd CIML Meeting with the following modification:

On page 51, Resolution 7, after “Switzerland”, insert: “and France”.

Resolution no. 3:

The Committee expressed its appreciation for the good cooperation between the Presidential Council and the Bureau of the CIPM, as well as between the BIML and the BIPM.

The Committee asked the Director of the Bureau to prepare a draft report on the rapprochement in order to inform the Member States of the two Organizations about this issue and to encourage further discussion during the 45th CIML Meeting. This report should be mainly strategic in nature and should consider the point of view of stakeholders of both Organizations, as well as consider the comments received from CIML Members.

This report will be discussed with the BIPM Director.

The Committee recommends that the report be sent to all Member States by the two Directors.

Resolution no. 4:

The Committee expressed its appreciation for the continued cooperation with ILAC and the IAF. In order to develop this cooperation at national level, CIML Members are invited, within the applicable national legal framework and regarding the responsibilities of the relevant national bodies, to contact their National Accreditation Bodies and promote the use of appropriate technical and metrological experts and lead assessors and the associated requirements in the OIML Systems in accreditation or peer assessment wherever appropriate.

Resolution no. 5:

The Committee instructed the Bureau to start a revision of the OIML/IEC Memorandum of Understanding and develop cooperation with the IEC similar to that followed for the revision of the OIML/ISO MoU.

QUARANTE-QUATRIÈME RÉUNION
du COMITÉ INTERNATIONAL de MÉTROLOGIE LÉGALE

Mombasa, 27–30 octobre 2009

RÉSOLUTIONS

Résolution n° 1:

Le Comité a donné instruction au Président du CIML et au Directeur du BIML de préparer une note détaillée sur l'utilisation du français et de l'anglais et de la soumettre à l'approbation de la 14ème Conférence en 2012.

Résolution n° 2:

Le Comité a approuvé le Compte-rendu de la 43ème Réunion du CIML avec les modifications suivantes:

En page 51, Résolution 7, après "Suisse", insérer: "et la France".

Résolution n° 3:

Le Comité a exprimé son appréciation pour la bonne coopération entre le Conseil de la Présidence et le Bureau du CIPM ainsi qu'entre le BIML et le BIPM.

Le Comité a demandé au Directeur du Bureau de préparer un projet de rapport sur le rapprochement, de manière à informer les Etats Membres des deux Organisations sur ce sujet et afin d'encourager davantage de discussion durant la 45ème Réunion du CIML. Ce rapport doit être principalement de nature stratégique et doit prendre en compte le point de vue des parties prenantes des deux Organisations, tout comme tenir compte des commentaires reçus de la part des Membres du CIML.

Ce rapport sera discuté avec le Directeur du BIPM.

Le Comité recommande que ce rapport soit adressé par les deux Directeurs à tous les Etats Membres.

Résolution n° 4:

Le Comité a exprimé son appréciation pour la coopération continue avec ILAC et IAF. Afin de développer cette coopération au niveau national, les Membres du CIML sont invités, dans le cadre légal applicable et au regard des différents organismes nationaux pertinents, de contacter leur Organisme National d'Accréditation et de promouvoir l'emploi des experts métrologiques et techniques appropriés, ainsi que les responsables d'audit et les exigences associées, lors d'accréditation ou d'évaluation par pairs dans les Systèmes OIML, lorsque cela est approprié.

Résolution n° 5:

Le Comité a donné instruction au Bureau de commencer la révision de l'Accord de Reconnaissance OIML/CEI et de développer avec la CEI, une coopération similaire à celle suivie lors de la révision de l'Accord de Reconnaissance OIML/ISO.

Resolution no. 5a:

The Committee instructed the Bureau to circulate the "Table of correspondence between OIML and ISO TCs" to OIML Technical Secretariats.

Resolution no. 6:

The Committee welcomed the Dominican Republic and the UEMOA[1] as new Corresponding Members.

The Committee instructed its President and the Bureau to continue to raise the level of awareness of the advantages of OIML Membership, in order to encourage the widest possible participation in the International Legal Metrology System.

Resolution no. 7:

The Committee requested Zambia to resume reimbursing its arrears and to pay back all its arrears as soon as possible.

Resolution no. 8:

The Committee took note of the report given by its President.

Resolution no. 9:

The Committee took note of the report on the activities of the Bureau.

Resolution no. 10:

The Committee asked that further work be carried out to establish the best way of reporting the OIML's pension liabilities, having regard to the obligations of Member States, with a view to proposing a new rule in a draft revision of the OIML Financial Regulations (B 8) to be submitted to the Fourteenth Conference in 2012 for approval.

The Committee did not approve the "BIML Accounts for the Year 2008" pending a decision on this new rule.

The Committee agreed that in the meantime the rule for recording the Provision for Pensions in the OIML liabilities used to draw up the 2008 accounts, should also be used for compiling the draft accounts for 2009.

Resolution no. 11:

The Committee took note of the oral information about the report on the management and the accounts of the Bureau and confirmed the need for the President to provide the written report, or at least a resumé of the report (if necessary for the protection of privacy without names) and the follow-up of actions taken.

[1] UEMOA = Union Economique et Monétaire Ouest Africaine (West African Economic and Monetary Union)

Résolution n° 5a:

Le Comité a donné instruction au Bureau de faire circuler aux Secrétariats Techniques de l'OIML la "Table de correspondance entre les TCs OIML et les TCs ISO".

Résolution n° 6:

Le Comité a souhaité la bienvenue aux nouveaux Membres Correspondants que sont la République Dominicaine et l'UEMOA[1].

Le Comité a donné instruction à son Président et au Bureau de continuer d'élever le niveau de prise de conscience des avantages à être Membre de l'OIML, de manière à encourager la plus large participation au Système International de Métrologie Légale.

Résolution n° 7:

Le Comité a requis de la Zambie la reprise du paiement de ses arriérés et de les rembourser aussi vite que possible.

Résolution n° 8:

Le Comité a pris note du rapport donné par son Président

Résolution n° 9:

Le Comité a pris note du rapport donné sur les activités du Bureau.

Résolution n° 10:

Le Comité a demandé que des recherches supplémentaires soient effectuées afin d'établir le meilleur moyen de présenter le passif du Système de Retraite OIML, vu les obligations des Etats Membres, dans le but de proposer une nouvelle règle à inclure dans un projet de révision du Règlement Financier de l'OIML (B 8) à soumettre pour approbation par la Quatorzième Conférence en 2012.

Attendant la décision sur cette nouvelle règle, le Comité n'a pas approuvé les "Comptes du BIML pour l'Année 2008".

Le Comité a accepté dans un même temps que la règle d'enregistrement dans la comptabilité OIML des Provisions du Système de Retraite, telle qu'utilisée pour préparer les comptes 2008, soit également utilisée pour compiler le projet des comptes pour l'année 2009.

Résolution n° 11:

Le Comité a pris note de l'information orale sur le rapport portant sur la gestion et la comptabilité du Bureau. Il a confirmé la nécessité que le Président fournisse le rapport écrit ou, au minimum, un résumé du rapport (non nominatif, si nécessaire pour la protection la vie privée) ainsi que le suivi des actions résultantes.

[1] **UEMOA = Union Economique et Monétaire Ouest Africaine**

Resolution no. 12:

The Committee took note of the report on Developing Country activities and expressed its thanks to the Facilitator for Developing Countries.

Resolution no. 13:

The Committee took note of the progress on the revision of part 1 of the Directives for OIML Technical Work and requested the Bureau and the Working Group to complete this revision with a view to submitting it to the CIML at its meeting in 2010 for approval.

Resolution no. 14:

The Committee expressed its appreciation for the training provided to TC/SC Secretariats and instructed the Bureau to continue to develop formats and templates for use by the TC/SC Secretariats.

Resolution no. 15:

The Committee approved the launching of an R 117 DoMC limited to fuel dispensers and based on OIML R 117:1995 and R 118:1995, including the requirements of OIML R 117-1 edition 2007 as additional requirements.

Resolution no. 16:

The Committee approved the following publications:

- Amendment to R 138 *Vessels for commercial transactions*;
- R 143 *Instruments for the continuous measurement of SO_2 in stationary source emissions*.

Resolution no. 16a:

The Committee approved the proposal to submit the DR of the following publication to direct CIML online approval:

- Revision of R 106-1 *Automatic rail-weighbridges. Part 1: Metrological and technical requirements – Tests*.

Resolution no. 17:

The Committee took note of the confirmation of the following publications:

- R 14 *Polarimetric saccharimeters graduated in accordance with the ICUMSA International Sugar Scale;*
- R 48 *Tungsten ribbon lamps for the calibration of radiation thermometers;*
- R 75-1 *Heat meters. Part 1: General requirements;*
- R 75-2 *Heat meters. Part 2: Type approval tests;*
- R 75-3 *Heat meters. Part 3: Test Report Format;*
- R 84 *Platinum, copper, and nickel resistance thermometers (for industrial and commercial use);*
- R 124 *Refractometers for the measurement of the sugar content of grape musts.*

Résolution n° 12:

Le Comité a pris note du rapport donné sur les activités des Pays en Développement et exprimé ses remerciements au Facilitateur pour les questions de Pays en Développement.

Résolution n° 13:

Le Comité a pris note des progrès effectués dans la révision de la partie 1 des Directives OIML pour les Travaux Techniques et a requis du Bureau et du Groupe de Travail, de terminer cette révision dans le but de la soumettre pour approbation par le CIML lors de sa réunion en 2010.

Résolution n° 14:

Le Comité a exprimé son appréciation pour la formation dispensée aux Secrétariats des TC/SCs et a instruit le Bureau de continuer le développement de formats et modèles à l'usage des Secrétariats des TC/SCs.

Résolution n° 15:

Le Comité a approuvé le lancement d'une DoMC R 117 limitée aux ensembles de mesurage routiers et basée sur l'OIML R 117:1995 et l'OIML R 118:1995, tout en incluant les exigences de l'OIML R 117-1 édition 2007 en tant qu'exigences additionnelles.

Résolution n° 16:

Le Comité a approuvé les publications suivantes:

- Amendement à la R 138 *Récipients pour transactions commerciales*;
- R 143 *Instruments pour le mesurage continu de SO_2 dans les émissions de sources fixes*.

Résolution n° 16a:

Le Comité a approuvé la proposition de soumettre à une approbation directe en ligne par le CIML, le DR de la publication suivante:

- Révision de la R 106-1 *Ponts-bascules ferroviaires à fonctionnement automatique. Partie 1: Exigences métrologiques et techniques - Essais*

Résolution n° 17:

Le Comité a pris note de la confirmation des publications suivantes:

- R 14 *Saccharimètres polarimétriques gradués selon l'Echelle internationale de Sucre de l'ICUMSA;*
- R 48 *Lampes à ruban de tungstène pour l'étalonnage des thermomètres à radiation;*
- R 75-1 *Compteurs d'énergie thermique. Partie 1: Exigences générales;*
- R 75-2 *Compteurs d'énergie thermique. Partie 2: Essais d'approbation de type et essais de vérification primitive;*
- R 75-3 *Compteurs d'énergie thermique. Partie 3: Format du rapport d'essai;*
- R 84 *Thermomètres à résistance de platine, de cuivre, et de nickel (à usages techniques et commerciaux);*
- R 124 *Réfractomètres pour la mesure de la teneur en sucre des moûts de raisin.*

Resolution no. 18:

The Committee approved the withdrawal of the following publications:

- R 70 *Determination of intrinsic and hysteresis errors of gas analyzers;*
- R 73 *Requirements concerning pure gases CO, CO_2, CH_4, H_2, O_2, N_2 and Ar intended for the preparation of reference gas mixtures;*
- D 7 *The evaluation of flow standards and facilities used for testing water meters.*

Resolution no. 19:

The Committee approved the following new work items:

- TC 3/SC 5: Revision of D 30 *Guide for the application of ISO/IEC 17025 to the assessment of Testing Laboratories involved in legal metrology;*
- TC 6: Revision of R 87 *Quantity of product in prepackages;*
- TC 6: New publication on methods to determine the actual quantity of product in prepackages (drained weight, etc.) in collaboration with WELMEC WG 6;
- TC 8: Revision of R 63 *Petroleum measurement tables;*
- TC 8: Revision of R 119 *Pipe provers for testing of measuring systems for liquids other than water.*

Resolution no. 20:

The Committee noted that the outcome of the periodic review by TC 8 on the confirmation, revision or withdrawal of the following publications:

- R 120 *Standard capacity measures for testing measuring systems for liquids other than water;*
- D 25 *Vortex meters used in measuring systems for fluids; and*
- D 26 *Glass delivery measures - Automatic pipettes*

was indecisive, but that for each there was a majority of P-members in favor of retaining the publications.

The Committee further noted that a number of references in these publications are no longer up-to-date and that this was the reason for some P-members to vote for a revision.

The Committee, therefore:

- requests the secretariat of TC 8 to submit to the Bureau listings of updated references for these publications; and
- instructs the Bureau to publish the lists of updated references and updated versions of these publications.

Resolution no. 21:

The Committee took note of the information given on the election of a President to be held in 2010 and reminded CIML Members that candidacies must be sent to the Bureau at the latest by the end of May 2010.

Resolution no. 22:

The Committee noted that the term of the BIML Director will expire at the end of 2010.

The Committee decided to advertise the position of Director of BIML in 2010 with the aim of either appointing a new Director or reappointing the present Director.

Résolution n° 18:

Le Comité a approuvé le retrait des publications suivantes:

- R 70 *Détermination des erreurs de base et d'hystérésis des analyseurs de gaz;*
- R 73 *Prescriptions pour les gaz purs CO, CO_2, CH_4, H2, O_2, N_2 et Ar destinés à la préparation des mélanges de gaz de référence;*
- D 7 *Evaluation des étalons de débitmétrie et des dispositifs utilisés pour l'essai des compteurs d'eau.*

Résolution n° 19:

Le Comité a approuvé les nouveaux sujets de travail suivants:

- TC 3/SC 5: Révision du D 30 *Guide pour l'application de la Norme ISO/CEI 17025 à l'évaluation des Laboratoires d'Essais intervenant en métrologie légale;*
- TC 6: Révision de la R 87 *Quantité de produit dans les préemballages;*
- TC 6: Nouvelle publication sur les méthodes pour déterminer la quantité réelle de produit contenue dans un préemballage (poids égoutté, etc.) en collaboration avec le Groupe de Travail 6 de WELMEC;
- TC 8: Révision de la R 63 *Tables de mesure du pétrole;*
- TC 8: Révision de la R 119 *Tubes étalons pour l'essai des ensembles de mesurage de liquides autres que l'eau.*

Résolution n° 20:

Le Comité a noté que le résultat de la revue périodique du TC 8 portant sur la confirmation, la révision ou le retrait des publications suivantes:

- R 120 *Mesures de capacité étalons pour l'essai des ensembles de mesurage de liquides autres que l'eau;*
- D 25 *Compteurs à vortex utilisés dans les ensembles de mesurage de fluides;* et
- D 26 *Mesures en verre à délivrer - Pipettes automatiques*

n'était pas concluant, mais que pour chacune d'entre elles, une majorité de Membres-P était favorable au maintien de ces publications.

Le Comité a également noté que nombre de références dans ces publications ne sont plus à jour et que cela était la raison pour laquelle certains Membres-P avaient voté pour une révision de ces publications.

Aussi, le Comité:

- a requis du Secrétariat du TC 8 de soumettre au Bureau les listes des références de ces publications mises à jour; et
- a instruit le Bureau de publier ces listes de références mises à jour ainsi que les versions mises à jour de ces publications.

Résolution n° 21:

Le Comité a pris note des informations fournies relatives à l'élection du Président, devant se tenir en 2010, et a rappelé aux Membres du CIML que les candidatures devaient être adressées au Bureau au plus tard fin mai 2010.

Résolution n° 22:

Le Comité a noté que le terme du contrat du Directeur du BIML arriverait à échéance à la fin de l'année 2010.

Le Comité a décidé de passer une annonce, en 2010, concernant le poste de Directeur du BIML dans le but soit de nommer un nouveau Directeur, soit de renommer le Directeur actuel.

Resolution no. 23:

The Committee thanked the USA for its presentation on the venue of the 45th Committee Meeting to be held in Orlando (Florida), USA from 20–24 September 2010.

Resolution no. 24:

The Committee thanked the Czech Republic for inviting the Committee to hold its 46th meeting in the Czech Republic in 2011, and accepted this invitation.

Resolution no. 25:

In the seminar on *Priorities for Legal Metrology for Trade*, the issue of international standards to facilitate trade was raised.

The Committee noted that:

- the increasing importance of prepackaged foods and beverages in global trade now accounts for over 75 % of agri-foods exports;
- developing country exports are particularly disadvantaged by having to conform to a multiplicity of international requirements; and
- the review of the longstanding OIML R 79 arising from the World Wine Trade Group Labeling Agreement and the 2006 OIML seminar on prepackaging have not resulted in an exemption for wine labeling.

The Committee recommended that CIML Members bring this resolution to the attention of their national WTO-TBT enquiry point. ■

Résolution n° 23:

Le Comité a remercié les Etats-Unis pour leur présentation sur l'organisation de la 45ème Réunion du Comité qui se tiendra aux Etats-Unis à Orlando (Floride), du 20 au 24 septembre 2010.

Résolution n° 24:

Le Comité a remercié la République Tchèque pour leur invitation à tenir la 46ème Réunion du Comité en République Tchèque en 2011, et a accepté cette invitation.

Résolution n° 25:

Durant le Séminaire portant sur *les Priorités de la Métrologie Légale pour le Commerce*, la question des normes internationales pour faciliter le commerce fut levée.

Le Comité a noté que:

- l'importance croissante des aliments et boissons préemballés dans le commerce mondial constitue actuellement plus de 75 % des exportations agro-alimentaires;
- les exportations des pays en développement sont particulièrement désavantagées d'avoir à être conformes à une multiplicité d'exigences internationales; et
- la revue de l'ancienne OIML R 79 émanant de l'Accord du Groupe Mondial du Commerce du Vin et le Séminaire OIML 2006 sur les préemballés n'ont pas abouti à une dispense d'étiquetage pour le vin.

Le Comité a recommandé que les Membres du CIML portent cette Résolution à l'attention de leur point d'information national OMC-OTC. ■

REGIONS

Mass Metrology Workshop for Caribbean countries

Report compiled by
CROSQ / CARIMET AND PTB

Background

The CARICOM Regional Organization for Standards and Quality (CROSQ) was created in 2002 as an intergovernmental organization by a treaty among the following fourteen Member States of the Caribbean Community (CARICOM): Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago.

CROSQ is the regional body for promoting efficiency and competitive production in trade and services, through the process of standardization and the verification of quality. CROSQ is the successor to the Caribbean Common Market Standards Council (CCMSC), and supports the CARICOM mandate in the expansion of intra-regional and extra-regional export of goods and services. CROSQ is mandated to represent the interest of the region in international and hemispheric standards work, to promote the harmonization of metrology systems and standards, and to increase the pace of development of regional standards for the sustainable production of goods and services in the CARICOM Single Market and Economy (CSME) and the enhancement of social and economic development. CARIMET is a Technical Committee and the Metrology Arm of CROSQ and the representative sub-region of Sistema Interamericano de Metrologia (SIM), the Hemispheric Metrology Body.

In recent years, CROSQ has focused on activities to develop a regional quality infrastructure (RQI). Externally funded projects have contributed significantly to this effort. The Inter-American Development Bank (IDB) is funding two projects, the first aimed at increasing competitiveness of Small and Medium-sized Enterprises (SME project 2005–2011) and the second at harmonizing RQI for improving market access and competitiveness (RQI project 2007–2011). CARIMET has been very closely involved with the development and implementation of activities under the RQI project. The Physikalisch Technische Bundesanstalt (PTB) is similarly working in close collaboration with CROSQ in the implementation of the RQI project.

In early 2008, a baseline study was undertaken to assess the current metrology situation in the region. The countries visited portrayed differences in their capacities to fulfill metrological functions and to satisfy industrial demand for adequate and recognized calibration services. Other deficiencies observed included a lack of traceable measurement equipment at the level of the National Standards Bodies (NSBs) as well as a lack of equipment maintenance and repair, adequate use of laboratory space, maintenance of environmental conditions and a lack of personnel and training.

The study recommended that the following traceable measurements be developed in the short to medium term: mass, weighing instruments, volume, flow (flow meters), length, temperature, electrical (power meters) and pressure.

An in-depth analysis of the country-specific situation showed that current metrological capabilities were at variance with market demands. Based on their level of competence, the laboratories were categorized as A (lowest), B, and C (highest) and category-specific development, including material investment and capacity building activities, was recommended.

Noel Osbourne, executive director of the BSJ, addressing participants on the first day of the workshop

Workshop - venue and logistics

A workshop was undertaken at the Bureau of Standards Jamaica (BSJ) in Kingston, Jamaica from 8–12 September 2008, with participants from every CROSQ member country, except The Bahamas (due to a hurricane). The Workshop was planned by the Project Execution Unit (PEU) of the CROSQ-RQI project in collaboration with BSJ and the PTB. BSJ was requested to host the workshop and accepted the challenge; they did an excellent job. In addition to the logistic arrangements, BSJ also contributed financially to the workshop.

The program

1. Welcome and opening remarks
2. RQI Project overview
3. Introduction to basic metrology
4. Negative impacts of un-calibrated instruments
5. Demands and needs
6. BSJ Laboratory visit
7. Introduction to mass and weighing instruments calibration methodologies
8. Introduction to uncertainty estimation
9. Introduction to the regional metrology network (idea and CARL's concept)
10. Inter-comparisons (planning and conducting)
11. Introduction to ISO 17025
12. Simulated practical calibration exercises
13. Planning of further attachments

Participants

A total of 21 technicians from Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Dominica, Haiti, Montserrat, St. Vincent and Grenadines, St. Lucia, Suriname, St. Kitts and Nevis participated in the workshop.

Facilitators

Facilitators were drawn from countries within SIM including some CARIMET countries and also Germany. They included Barbados (CROSQ Secretariat), Chile (Centro de Estudios de Medición y Certificación de Calidad – CESMEC, the National Laboratory for Mass in Chile), Germany (PTB), Jamaica (BSJ), Mexico (Centro Nacional de Metrologia – CENAM, the National Metrology Institute of Mexico) and Trinidad and Tobago (Trinidad and Tobago Bureau of Standards – TTBS).

Workshop activities

The aim of the workshop was to address the needs relevant to the other laboratories and focused on mass and weighing instruments calibration. The program was for a period of five days. The facilitators were experienced metrologists who were well-versed in their respective topics, which were technical in nature; the

Practical exercise I

presentations were quite intensive but very interactive with participation by the entire group, both facilitators and participants.

The training was intended to develop the capability and competence of the participating laboratories in mass and weighing instruments calibration so that they can effectively participate in the Regional Network and ensure that the national physical standards are maintained and relevant services provided efficiently and with traceability.

At the end of the training, participants should have been able to:

i *identify* calibration needs from industry and the Public and Private Sectors;
ii *maintain and store* the instruments in a condition that would not impair their reliability;
iii *calibrate* basic mass and weighing instruments;
iv *develop and calculate* an uncertainty budget for the relevant measurements;
v *document* the calibration system and procedures in order to obtain recognition and conform to ISO/IEC 17025;
vi *initiate* participation in inter-comparisons;
vii *support* the Regional Metrology Network.

Evaluation

The following key points were noted:

1. The workshop was rated high (good or above) by 95 % of the participants with respect to impression, quality, and use of equipment, tools and techniques.
2. Objectives i–iii (above) were listed as being achieved by 90 % of the participants, objective v by 85 % and objective vii by 95 %.
3. A significant 65 % did not feel that objectives iv and vi were achieved (this includes 2 and 3 individuals, respectively, who did not answer this question).
4. While 75 % of participants were satisfied with the planned attachments, 25 % were not.

The most consistent comment was that there was a need for more practical exercises.

Overall consensus

Generally, participants thought the program was too intense and in some case too technical. However, most of the presentations were clearly comprehensible and the information will therefore be usable.

Participants expressed the view that the planning and execution was done well, the presenters were well informed and were able to answer all questions to their satisfaction.

Facilitators opined that their audience was very interested in the proceedings and participated extensively. In some instances, facilitators changed their presentations, adapting them to the needs and levels of the participants.

Clearly, more work needs to be done in the area of calculating uncertainty budgets and participation in inter-comparisons – the two areas that received low scores in the evaluation.

Practical exercise II

Conclusion

The planning and implementation of the workshop was efficient and effective. The program was relevant to the needs of the participants. It was well attended, with the exception of the Bahamas who could not attend because of hurricane Ike. An important recommendation is that CROSQ should carefully analyze the professional education and experience of the nominated participants as part of the selection process in order to ensure that all participants have the capacity and competence to participate effectively in the program.

It was agreed that before participants progressed to the next step of participating in attachments at the most developed NMIs in the region, they would be given a preparation assignment to allow them to recapitulate and to ensure that what was covered during the workshop was assimilated and understood. ■

Acknowledgements

We wish to acknowledge the following for their contribution to the success of the workshop:

- BSJ - Management and Staff
- PTB - Technical Cooperation Working Group for Latin America and the Caribbean
- CROSQ Member States in Attendance: Management and Participants
- CROSQ: Management and Staff
- The facilitators / presenters:

Giselle Guevara	EU-funded CROSQ-Caribbean Laboratory Accreditation Services (CLAS) Project
Luis Omar Becerra	CENAM
Francisco Garcia	CESMEC
Tweedsmuir Mitchell	BSJ
Francis Hamilton	TTBS
Friedrich Pietsch	PTB

Facilitators and participants in the Mass Metrology Workshop, Jamaica

LIAISONS

ISO CASCO WG 29 Meeting: Revision of ISO/IEC Guide 65

29 June – 1 July 2009 Geneva, Switzerland

RÉGINE GAUCHER, BIML

ISO CASCO Working Group 29 has started the revision of ISO/IEC Guide 65:1996 *General requirements for bodies operating product certification systems*.

The revision will lead to a new standard ISO/IEC 17065 being published which will define the requirements for certification bodies certifying products, services and processes.

The last Working Draft (WD6) has been circulated amongst ISO CASCO WG 29 members. The comments received were discussed at the meeting held on 29–30 June and 1 July 2009 in Geneva, Switzerland.

On the basis of the conclusions of the meeting, a first Committee Draft has been drawn up and was circulated amongst ISO CASCO Members in September for a four-month consultation for comments and votes.

It is worth highlighting that the revision of ISO/IEC Guide 65 is closely linked to OIML Technical Work, in particular that of:

- OIML TC 3, which is responsible for metrological control;
- OIML TC 3/SC 5 which is responsible for the OIML Certificate System and the MAA and in particular OIML D 29, OIML B 3 and OIML B 10; and
- OIML TC 6 which is setting up a certification system for prepackages. ■

Objectives and structure of CASCO

ISO/CASCO is ISO's policy development committee on conformity assessment, reporting to the ISO Council. CASCO, as it is commonly referred to, was established in 1970 to study means of conformity assessment, prepare documents concerning the practice and operation of conformity assessment, and to promote their use.

CASCO's terms of reference and objectives are to:

- study means of assessing the conformity of products, processes, services and management systems to appropriate standards or other technical specifications,
- prepare standards and guides relating to the practice of testing, inspection and certification of products, processes and services, and to the assessment of management systems, testing laboratories, inspection, certification and accreditation bodies, and their operation and acceptance,
- promote mutual recognition and acceptance of national and regional conformity assessment systems, and the appropriate use of International Standards for testing, inspection, certification, assessment and related purposes.

CASCO membership is open to all ISO member bodies as participating (P) or observer (O) members, with both developing and industrialized countries well represented.

www.iso.org/iso/resources/conformity_assessment/objectives_and_structure_of_casco.htm

Opposite: ▶
Table showing the status (as at November 2009) of current Standards and Documents developed by ISO CASCO

Ref.	Scope	Title of the Standard or Document	Edition	Additional information
ISO 9000	Quality management systems	Quality management systems - Fundamentals and Vocabulary	2005	Confirmed in 2009
ISO 9001	Quality management systems	Quality management systems - Requirements	2008	
ISO 9004	Quality management systems	Managing for the sustained sucess of an organization - A quality management approach	2009	
ISO/IEC 17000	Vocabulary and general	Conformity assessment - Vocabulary and general principles	2004	Confirmed in 2008
ISO/IEC 17025	Calibration and testing	General requirements for the competence of testing and calibration laboratories	2005	EN 45001 has been withdrawn. A Technical Corrigendum was published on 15 August 2006
Guide ISO/IEC 43-1	Calibration and testing	Proficiency testing by interlaboratory comparisons - Part 1: Development and operation of proficiency testing schemes	1997	ISO/IEC DIS 17043 *Conformity assessment - General requirements for proficiency testing* approved. Next step FDIS (April 2010)
Guide ISO/IEC 43-2	Calibration and testing	Proficiency testing by interlaboratory comparisons - Part 2: Selection and use of proficiency testing schemes by laboratory accreditation bodies	1997	ISO/IEC DIS 17043 Conformity assessment - General requirements for proficiency testing approved. Next step FDIS (April 2010)
Guide ISO/IEC 68	Calibration and testing	Arrangements for recognition and acceptance of conformity assessment results	2002	Confirmed in 2009
ISO/IEC 17020	Inspection	General criteria for the operation of various types of bodies performing inspection	1998	Under revision
ISO/IEC Guide 65	Product cerfication	General requirements for bodies operating product certification systems	1996	Under revision. ISO/IEC 17065 is under development
ISO/IEC Guide 67	Product cerfication	Conformity assessment - Fundamentals of product certification	2004	Under revision (ISO/IEC 17067)
ISO/IEC 17021-1	Management systems certification	Conformity assessment - Requirements for bodies providing audit and certification of management systems	2006	
ISO/IEC 17021-2	Management systems certification	Conformity assessment - Part 2: Requirements for third party certification auditing of management systems		DIS ballot ending 02/2010
ISO/IEC 17024	Certification of persons	Conformity assessment - General requirements for bodies operating certification of persons	2003	Under revision
ISO/IEC 17040	Peer assessments	General requirements for peer assessment of conformity assessment bodies and accreditation bodies	2005	Confirmed in 2009
ISO/IEC 19011	Audits	Guidelines for quality and/or environmental management systems auditing	2002	Under revision
ISO/IEC 17011	Accreditation	Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies	2004	Confirmed in 2008
ISO Guide 27	Mark of conformity	Guidelines for corrective action to be taken by a certification body in the event of misuse of its mark of conformity	1983	Under revision. Will be included in the revision of ISO/IEC Guide 67 (ISO/IEC 17067)

CECIP

Working Group Meetings and General Assembly

Saint Petersburg, Russian Federation

21–22 May 2009

VINCENT VAN DER WEL, CECIP President

Even CECIP has noticed the effects of the recent economic uncertainty. Companies' turnover has in many cases decreased significantly, resulting in the need for earnings and spending to be rebalanced. Travel costs are often the first area in which cuts have to be made, and for CECIP's Working Group meetings as well as the annual General Assembly, this unfortunately resulted in fewer participants than in previous years.

Fortunately though, this development did not have a negative effect on the fighting spirit, which continues to go from strength to strength. The Working Groups met on 21 May 2009, followed by the General Assembly on 22 May. The logistics were in the very capable hands of the Russian Federation for weighing equipment, AIMWE, which selected Saint Petersburg, the old capital, as the meeting venue. At this time of the year the days are long and the nights are short, thus offering plenty of daylight working hours!

The Legal Metrology Working Group meeting began in a very energetic manner, with discussions for example on the results of WELMEC Working Group 5 *Market surveillance*, and the revision of the EN45501 Standard *Non automatic weighing instruments*. The Business and Trade Working Group met for the second time; this group also showed the right spirit and decided to carry out a market survey to check the compliancy of imported scales with the relevant EU legislation. The intention is to use the results of this observation to convince the relevant authorities to pay more attention to market surveillance in the field of weighing machines. The efficiency of market surveillance is insufficient today and as a result, a large number of non complaint scales are imported into and traded in the EU market. This seriously disturbs fair competition and has to be combatted in a combined effort by both industry and the relevant authorities.

The General Assembly was addressed by four guest speakers on the topics of metrology in Russia, economic and trade relations with Russia, and Europe's new ICSMS market surveillance system. It was interesting to hear that long ago in Russia the church controlled weights and measures. Metrological markings existed in the names of the prince and of the city. Today, fortunately, OIML Recommendations are used as a basis.

The Assembly took a number of decisions, given below, proving once again that CECIP is taking the necessary steps to continue as a powerful international body:

- A new office was opened in Brussels at the end of 2008 and the appropriate amendments were made to the statutes.
- The President of the Business & Trade Working Group was appointed: Mr. Urs Widmer, C.E.O. of Mettler Toledo.
- A new Bureau member was appointed: Mr. Guy Mairot, Director of SCAIME and President of the French Federation COFIP.
- The new Permanent Secretary was appointed: Mr. Heiki Sirkel (Belgium).
- A new logo with a matching corporate design was unveiled (see below).
- A new design was unveiled for the web site: http://www.cecip.eu

The Russian Federation hosted an excellent gala dinner with a top-notch show of typical Russian ballet and singers with deep bass voices. The next day the program concluded with a tour round Saint Petersburg's palaces and a boat trip along the canals and the river Neva. ■

CECIP

OIML Certificate System:
Certificates registered 2009.09–2009.11
Up to date information (including B 3): www.oiml.org

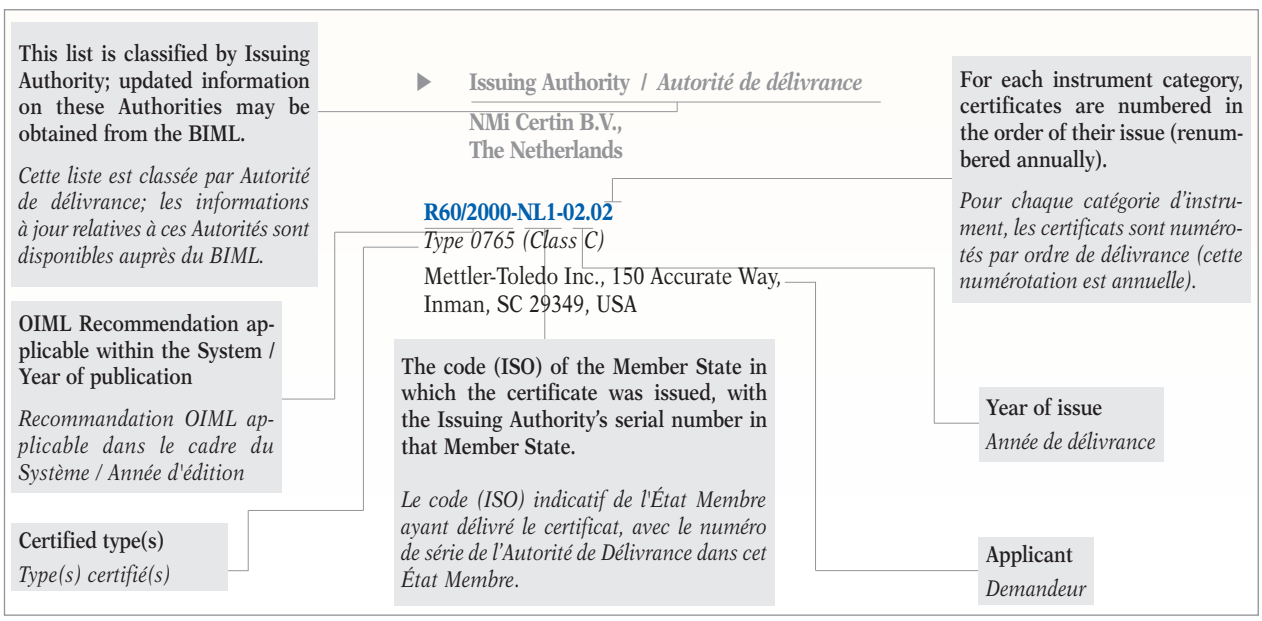
The *OIML Certificate System for Measuring Instruments* was introduced in 1991 to facilitate administrative procedures and lower costs associated with the international trade of measuring instruments subject to legal requirements.

The System provides the possibility for a manufacturer to obtain an OIML Certificate and a test report indicating that a given instrument type complies with the requirements of relevant OIML International Recommendations.

Certificates are delivered by OIML Member States that have established one or several Issuing Authorities responsible for processing applications by manufacturers wishing to have their instrument types certified.

The rules and conditions for the application, issuing and use of OIML Certificates are included in the 2003 edition of OIML B 3 *OIML Certificate System for Measuring Instruments*.

OIML Certificates are accepted by national metrology services on a voluntary basis, and as the climate for mutual confidence and recognition of test results develops between OIML Members, the OIML Certificate System serves to simplify the type approval process for manufacturers and metrology authorities by eliminating costly duplication of application and test procedures. ■



Système de Certificats OIML:
Certificats enregistrés 2009.09–2009.11
Informations à jour (y compris le B 3): www.oiml.org

Le *Système de Certificats OIML pour les Instruments de Mesure* a été introduit en 1991 afin de faciliter les procédures administratives et d'abaisser les coûts liés au commerce international des instruments de mesure soumis aux exigences légales.

Le Système permet à un constructeur d'obtenir un certificat OIML et un rapport d'essai indiquant qu'un type d'instrument satisfait aux exigences des Recommandations OIML applicables.

Les certificats sont délivrés par les États Membres de l'OIML, qui ont établi une ou plusieurs autorités de délivrance responsables du traitement des demandes présentées par des constructeurs souhaitant voir certifier leurs types d'instruments.

Les règles et conditions pour la demande, la délivrance et l'utilisation de Certificats OIML sont définies dans l'édition 2003 de la Publication B 3 *Système de Certificats OIML pour les Instruments de Mesure*.

Les services nationaux de métrologie légale peuvent accepter les certificats sur une base volontaire; avec le développement entre Membres OIML d'un climat de confiance mutuelle et de reconnaissance des résultats d'essais, le Système simplifie les processus d'approbation de type pour les constructeurs et les autorités métrologiques par l'élimination des répétitions coûteuses dans les procédures de demande et d'essai. ■

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Diaphragm gas meters
Compteurs de gaz à parois déformables

R 31 (1995)

▶ Issuing Authority / *Autorité de délivrance*
State General Administration for Quality Supervision and Inspection and Quarantine (AQSIQ), China

R031/1995-CN1-2009.01
Diaphragm gas meter - Type: J2.5
ChongqingJinGYi Gas Meter Co. Ltd., Sanggongliban, Nanan District, CN-400067 Chongqing, P.R. China

R031/1995-CN1-2009.02
IC card gas meter - Type: CG-L-J4
Beijing Jinchuang Combined Gas Meter Co. Ltd., Room 5-7B, Huateng International, No. 2, Dajiaoting Middle Street, Choayang District, CN-100124 Beijing, P.R. China

▶ Issuing Authority / *Autorité de délivrance*
NMi Certin B.V.,
The Netherlands

R031/1995-NL1-2009.01
Diaphragm gas meter: model EM-G4, EM-G2,5, EM-G1,6
Elektrometal S.A., ul. Stawowa 71, PL-43-400 Cieszyn, Poland

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Water meters intended for the metering of cold potable water
Compteurs d'eau destinés au mesurage de l'eau potable froide

R 49 (2006)

▶ Issuing Authority / *Autorité de délivrance*
Office Fédéral de Métrologie METAS, Switzerland

R049/2006-CH1-2009.04
Cylindrical piston meter intended for the metering of cold water (T30) - Type: RTK-OPV or -OPX, RTK-HPV or -HPX, RTK-SPV or -SPX, RTK-APV or -APX
E. Wehrle GmbH, Obertalstrasse 8,
DE-78120 Furtwangen, Germany

▶ Issuing Authority / *Autorité de délivrance*
National Measurement Institute (NMI), Australia

R049/2006-AU1-2009.01
Sensus model 220C water meter
Sensus Metering Systems GmbH, Industriestrasse 16, DE-67063 Ludwigshafen, Germany

▶ Issuing Authority / *Autorité de délivrance*
National Weights and Measures Laboratory (NWML), United Kingdom

R049/2006-GB1-2007.01 Rev. 1
Family of cold water meters - V100 to V230
Elster Metering Ltd., Pondwicks Road, Luton LU1 3LJ, Bedfordshire, United Kingdom

▶ Issuing Authority / *Autorité de délivrance*
NMi Certin B.V.,
The Netherlands

R049/2006-NL1-2009.01
Water meter intended for the metering of cold potable water and hot water, model "waterflux" class 1 and 2
Krohne Altometer, Kerkeplaat 12,
NL-3313 LC Dordrecht, The Netherlands

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Automatic catchweighing instruments
Instruments de pesage trieurs-étiqueteurs à fonctionnement automatique

R 51 (2006)

▶ Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R051/2006-GB1-2009.05
D3 family of checkweighers
Prisma Industriale S.R.L., Via la Bionda, 17, IT-43036 Fidenza (PR), Italy

R051/2006-GB1-2009.07
Venus 300 checkweigher / weight or weight-price labeller
Societa Cooperativa Bilanciai a.r.l, Via S. Ferrari No. 16, IT-41011 Campogalliano, Modena, Italy

▶ Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R051/2006-DE1-2009.01 Rev. 1
Automatic catchweighing instrument - Type: GLM-E
Bizerba GmbH & Co. KG, Wilhelm-Kraut-Strasse 65, DE-72336 Balingen, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Metrological regulation for load cells (applicable to analog and/or digital load cells)
Réglementation métrologique des cellules de pesée (applicable aux cellules de pesée à affichage analogique et/ou numérique)

R 60 (2000)

▶ Issuing Authority / *Autorité de délivrance*
State General Administration for Quality Supervision and Inspection and Quarantine (AQSIQ), China

R060/2000-CN1-2009.03 (MAA)
Electronic load cell - Model CC1
Kubota Corporation, 1-2-47 Shikitsu-higashi, Naniwa-ku, Osaka, Japan

R060/2000-CN1-2009.04 (MAA)
Load cell - Model PE NH
Zhejiang South-Ocean Sensor Manufacturing Co. Ltd., No. 888, Xingyuan Street, Qianlong Development Zone, CN-313216 Qianyuan Town, Deqing County, Zhejiang Province, P.R. China

▶ Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R060/2000-GB1-2009.06 (MAA)
Stainless steel bending single point load cell
CAS Corporation, #19, Ganap-ri, Gwangjuk-Myoun, Yangju-Si, KR-482-841 Gyeonggi-Do, Korea (R.)

R060/2000-GB1-2009.07
Stainless steel compression strain gauge load cell
Leon Engineering S.A., 8 Tsoka Street, GR-19600 Mandra Attica, Greece

R060/2000-GB1-2009.09
Stainless steel shear beam load cell
BWT B.V., Havervelden 8, NL-5281 PT Boxtel, The Netherlands

▶ Issuing Authority / *Autorité de délivrance*

NMi Certin B.V.,
The Netherlands

R060/2000-NL1-2004.16 Rev. 2
Load cell, with a digital output - Type: RC3D
Flintec GmbH, Bemannsbruch 9,
DE-74909 Meckesheim, Germany

R060/2000-NL1-2009.11 (MAA)
Single point bending beam load cell - Type: C2X1-...
Minebea Co. Ltd. Measuring Components Business Unit, 1-1-1 Katase Fujisawa-shi,
JP-251-8531 Kanagawa-ken, Japan

▶ Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R060/2000-DE1-2009.10
Strain gauge double bending beam load cell - Type: ILEC-SS
Keli Electric Manufacturing (Ningbo) Co. Ltd.,
No. 199 Changxing Road, Jiangbei District,
CN-315033 Ningbo, P.R. China

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Automatic gravimetric filling instruments
Doseuses pondérales à fonctionnement automatique

R 61 (2004)

▶ Issuing Authority / *Autorité de délivrance*

NMi Certin B.V.,
The Netherlands

R061/2004-NL1-2009.01
Automatic gravimetric filling instrument - Type: MP..., LW..., SA..., TU..., DW... series
Multipond Wâgetechnik GmbH, Truanreuterstrasse 2-4,
D-84478 WaldKraiburg, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Nonautomatic weighing instruments
Instruments de pesage à fonctionnement non automatique

R 76-1 (1992), R 76-2 (1993)

▶ Issuing Authority / *Autorité de délivrance*

International Metrology Cooperation Office, National Metrology Institute of Japan (NMIJ) National Institute of Advanced Industrial Science and Technology (AIST), Japan

R076/1992-JP1-2008.01 Rev. 1 (MAA)
Non-automatic weighing instrument - Type SJ-.../ SJ-...K
A&D Company Ltd., 3-23-14 Higashi-Ikebukuro,
Toshima-Ku, JP-170-0013 Tokyo, Japan

R076/1992-JP1-2009.01 (MAA)
Non-automatic weighing instruments - Electronic balance TX series
Shimadzu Corporation, 1, Nishinokyo-Kuwabara-cho,
Nakagyo-ku, JP-604-8511 Kyoto, Japan

▶ Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R076/1992-GB1-2009.04 Rev. 1
Non-automatic weighing instruments comprising the GSE 90-Series electronic weight indicators connected to a compatible R 60 load cell and the 675 Bench Scale
Avery Weigh-Tronix Ltd., Foundry Lane, Smethwick
B66 2LP, West Midlands, United Kingdom

R076/1992-GB1-2009.10 (MAA)
Angel Series, AP Model, non-automatic weighing instrument
CAS Corporation, #19, Ganap-ri, Gwangjuk-Myoun,
Yangju-Si, KR-482-841 Gyeonggi-Do, Korea (R.)

R076/1992-GB1-2009.11
Non-automatic weighing instrument, utilising the indicator designated 758 CSV manufactured by Cardinal Scale Manufacturing
Cardinal Scale Manufacturing Co., 203 East Daugherty Street, P.O. Box 151, US-64870 Missouri, Webb City, Missouri, United States

Issuing Authority / *Autorité de délivrance*

NMi Certin B.V.,
The Netherlands

R076/1992-NL1-2009.13 Rev. 1
Non-automatic weighing instrument - Type: 490 series
Precisa Gravimetrics A.G., Moosmattstrasse 32, CH-8953 Dietikon, Switzerland

R076/1992-NL1-2009.24
Non-automatic weighing instrument - Type: RM-50...
Shanghai Teraoka Electronic Co. Ltd., Tinglin Industry Developmental Zone, Jinshan District, CN-201505 Shanghai, P.R. China

R076/1992-NL1-2009.25
Non-automatic weighing instrument - Type: CL500 Series / CL5000J-C Series
CAS Corporation, #19, Ganap-ri, Gwangjuk-Myoun, Yangju-Si, KR-482-841 Gyeonggi-Do, Korea (R.)

R076/1992-NL1-2009.27
Non-automatic weighing instrument - Type: SC-240MA
Tanita Corporation, 14-2, 1-Chome, Maeno-cho, Itabashi-ku, JP-147-8630 Tokyo, Japan

R076/1992-NL1-2009.28
Non-automatic weighing instrument - Type: AE.., AS.., BE.., EQ.., ES.., SE.., SS..
Kingship Weighing Machine Corp., 739, Renhua Road, Dali City, TW-Taichung 412, Taiwan R.O.C, Chinese Taipei

R076/1992-NL1-2009.29
Non-automatic weighing instrument - Type: LP/ LP-1 / LP-1.6 / LP-1.7 / LP-T / XP
CAS Corporation, #19, Ganap-ri, Gwangjuk-Myoun, Yangju-Si, KR-482-841 Gyeonggi-Do, Korea (R.)

R076/1992-NL1-2009.30
Non-automatic weighing instrument - Type: bPro.../ bC-.../RL20-...
Mettler-Toledo (Changzhou) Measurement Technology Ltd., No. 111, West HaiHu Road, ChangZhou XinBei District, CN-213125 Jiangsu, P.R. China

Issuing Authority / *Autorité de délivrance*

Swedish National Testing and Research Institute AB, Sweden

R076/1992-SE1-2008.01 Rev. 2 (MAA)
Graduated, self-indicating, electronic, multi-interval non-automatic weighing instrument - Type: UNI-7P, UNI-7H, UNI-7 EV1, UNI-7 EV2, UNI-7 SS, UNI-7B, UNI-7RP
Ishida Co. Ltd., 44, Sanno-cho, Shogoin, Sakyo-ku, JP-606-8392 Kyoto, Japan

Issuing Authority / *Autorité de délivrance*

DANAK The Danish Accreditation and Metrology Fund, Denmark

R076/1992-DK1-2009.04
Non-automatic weighing instrument - Type: FT-11 / FT-11D / FT-12 / FT-13 / FT-16 / FT-16D
Flintec GmbH, Bemannsbruch 9, DE-74909 Meckesheim, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Non-automatic weighing instruments
Instruments de pesage à fonctionnement non automatique

R 76-1 (2006), R 76-2 (2007)

Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R076/2006-GB1-2009.01 (MAA)
Non-automatic weighing instrument designated the JPL
Xiamen Jadever Scale Co. Ltd., 4F, No. 42, Huli Avenue, Huli Ind District, CN-Xiamen 361006, Fujian, P.R. China

R076/2006-GB1-2009.02 (MAA)
Weighing indicator, as part of a non-automatic weighing instrument, designated the WPI-700
Digi Europe Ltd., Digi House, Rookwood Way, Haverhill, Suffolk CB9 8DG, United Kingdom

R076/2006-GB1-2009.03
Weighing indicator, as part of a non-automatic weighing instrument, designated the D1050
Societa Cooperativa Bilanciai a.r.l, Via S. Ferrari No. 16, IT-41011 Campogalliano, Modena, Italy

▶ Issuing Authority / *Autorité de délivrance*
NMi Certin B.V., The Netherlands

R076/2006-NL1-2009.26
Indicator, as a part of a non-automatic weighing instrument - Type: IND131 / IND331
Mettler-Toledo (Changzhou) Measurement Technology Ltd., No. 111, West HaiHu Road, ChangZhou XinBei District, CN-213125 Jiangsu, P.R. China

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Automatic level gauges for fixed storage tanks
Jaugeurs automatiques pour les réservoirs de stockage fixes

R 85 (2008)

▶ Issuing Authority / *Autorité de délivrance*
National Weights and Measures Laboratory (NWML), United Kingdom

R085/2008-GB1-2009.01
Family of probes and consoles used for measuring the level of fuel, or other liquids, in storage tanks
Gilbarco Veeder Root, Crompton Close, Basildon SS14 3BA, Essex, United Kingdom

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Discontinuous totalizing automatic weighing instruments
Instruments de pesage totalisateurs discontinus à fonctionnement automatique

R 107 (2007)

▶ Issuing Authority / *Autorité de délivrance*
Physikalisch-Technische Bundesanstalt (PTB), Germany

R107/2007-DE1-2009.01
Automatic discontinuous totalizing weighing instrument - Type: ST-Bulk
Bizerba GmbH & Co. KG, Wilhelm-Kraut-Strasse 65, DE-72336 Balingen, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Fuel dispensers for motor vehicles
Distributeurs de carburant pour véhicules à moteur

R 117 (1995) + R 118 (1995)

▶ Issuing Authority / *Autorité de délivrance*
State General Administration for Quality Supervision and Inspection and Quarantine (AQSIQ), China

R117/1995-CN1-2008.01
Fuel dispenser - Model CMD1687SK - G22
Hong Yang Group Co. Ltd., No. 3 GaoXiang Road, GaoXiang Industrial Zone, Ouhai District, CN-325006 Wenzhou, Zhejiang Province, P.R. China

R117/1995-CN1-2008.02
Fuel dispenser - Model JDK50D2226Y, JDK50D1116Y, JDK50D2226Q, JDK50D1116Q
Zhejiang Lanfeng Machine Co. Ltd., No. 2 Minor District of the Hi-Tech, Park Wenzhou Econ and Tech, Development Zone, CN-325011 Zhejiang Province, P.R. China

R117/1995-CN1-2008.03
Fuel dispenser - Model SK52GF222A, SK52QF222A, SK52GF111A, SK52QF111A

Beijing Sanki Petroleum Technology Co. Ltd., No. 7 Third Kechuang Street, Economic Technological Development Area, CN-100023 Beijing, P.R. China

R117/1995-CN1-2008.04
Fuel dispenser - Model RXJ-6323L, RXJ-4222L, RXJ-6320L, RXJ-4220L, RXJ-8440L, RXJ-8420L

Xiamen RongXing New Century Petroleum Equipment Mfg. Co. Ltd., No. 1299 TongJi M. Rd, CN-361100 Tongan, Xiamen, P.R. China

R117/1995-CN1-2008.05
Fuel dispenser - Model RXJ-2240JN, RXJ-2220JN, RXJ-2120JN

Xiamen RongXing New Century Petroleum Equipment Mfg. Co. Ltd., No. 1299 TongJi M. Rd, CN-361100 Tongan, Xiamen, P.R. China

R117/1995-CN1-2008.06
Fuel dispenser - Model RXJ-2140JN

Xiamen RongXing New Century Petroleum Equipment Mfg. Co. Ltd., No. 1299 TongJi M. Rd, CN-361100 Tongan, Xiamen, P.R. China

R117/1995-CN1-2009.01
Fuel dispenser - Model CS30J1110G, CS30J2120G, CS30J2220G, CS30D1110F, CS30D2120F, CS30D2220F

Censtar Science & Technology Co. Ltd., No. 4 Xuesong Road, High-Tech Development Area, CN-100023 Zhengzhou, P.R. China

▶ **Issuing Authority / *Autorité de délivrance***

Russian Research Institute for Metrological Service (VNIIMS)

R117/1995-RU1-2004.01 Rev. 1
L&T Fuel dispensing pump SPRINT series/Z-line series/PaceMaker-IV series

Larsen & Toubro Ltd. (L&T), Petrol Dispensing Pumps & Systems, Gate No. 1 "C" Building 1st Floor, Powai works, IN-400072 Mumbai, India

R117/1995-RU1-2004.01 Rev. 2
L&T Fuel dispensing pump SPRINT series / Z-line series / Pace Maker-IV series

Larsen & Toubro Ltd. (L&T), Petrol Dispensing Pumps & Systems, Gate No. 1 "C" Building 1st Floor, Powai works, IN-400072 Mumbai, India

R117/1995-RU1-2006.08 Rev. 1
Fuel dispensers SWADES I and SWADES II SERIES

Aplab Ltd., Plot-12, TTC Industrial Area, Digha, Airoli Post, IN-400 708 Navi Mumbai, India

R117/1995-RU1-2009.03
L&T Extra heavy duty pump-SPRINT Series

Larsen & Toubro Ltd. (L&T), Petrol Dispensing Pumps & Systems, Gate No. 1 "C" Building 1st Floor, Powai works, IN-400072 Mumbai, India

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Evidential breath analyzers
Éthylomètres

R 126 (1998)

▶ **Issuing Authority / *Autorité de délivrance***

Centro Español de Metrologia, Spain

R126/1998-ES1-2009.02
Evidential breath analyzers SAF'IR Evolution

SERES Environnement, 360 rue Louis de Broglie, Parc de la Duranne, B.P. 20 087, FR-13793 Aix en Provence, France

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Instruments for measuring the areas of leathers
Instruments pour la mesure de la surface des cuirs

R 136 (2006)

▶ **Issuing Authority / *Autorité de délivrance***

Physikalisch-Technische Bundesanstalt (PTB), Germany

R136/2006-DE1-2009.01
Instrument for measuring the areas of leathers - Type: LQScan 1809

GFal, Rudower Chaussee 30, D-12489 Berlin, Germany

OIML CERTIFICATE SYSTEM

List of OIML Issuing Authorities (by Country)

The list of OIML Issuing Authorities is published in each issue of the OIML Bulletin. For more details, please refer to our web site: www.oiml.org/certificates. There are no changes since the October 2009 issue of the Bulletin.

AUSTRALIA

AU1 - National Measurement Institute	R 49	R 50	R 51	R 60	R 76	R 85
	R 106	R 107	R 117/118	R 126	R 129	

AUSTRIA

AT1 - Bundesamt für Eich- und Vermessungswesen	R 50	R 51	R 58	R 61	R 76	R 85
	R 88	R 97	R 98	R 102	R 104	R 106
	R 107	R 110	R 114	R 115	R 117/118	

BELGIUM

BE1 - Metrology Division	R 76	R 97	R 98

BRAZIL

BR1 - Instituto Nacional de Metrologia, Normalização e Qualidade Industrial	R 76

BULGARIA

BG1 - State Agency for Metrology and Technical Surveillance	R 76	R 98

CHINA

CN1 - State General Administration for Quality Supervision and Inspection and Quarantine	R 60	R 76	R 97	R 98

CZECH REPUBLIC

CZ1 - Czech Metrology Institute	R 49	R 76	R 81	R 85	R 105	R 117/118
	R 134					

DENMARK

DK1 - The Danish Accreditation and Metrology Fund	R 50	R 51	R 60	R 61	R 76	R 98
	R 105	R 106	R 107	R 117/118	R 129	R 134
DK2 - FORCE Technology, FORCE-Dantest CERT	R 49					

FINLAND

FI1 - Inspecta Oy	R 50	R 51	R 60	R 61	R 76	R 85
	R 106	R 107	R 117/118			

FRANCE

FR1 - Bureau de la Métrologie	*All activities and responsibilities were transferred to FR2 in 2003*				
FR2 - Laboratoire National de Métrologie et d'Essais	R 31	R 49	R 50	R 51	R 58
	R 60	R 61	R 76	R 85	R 88
	R 97	R 98	R 102	R 105	R 106
	R 107	R 110	R 114	R 115	R 117/118
	R 126	R 129			

GERMANY

DE1 - Physikalisch-Technische Bundesanstalt (PTB)	R 16	R 31	R 49	R 50	R 51
	R 58	R 60	R 61	R 76	R 85
	R 88	R 97	R 98	R 99	R 102
	R 104	R 105	R 106	R 107	R 110
	R 114	R 115	R 117/118	R 126	R 128
	R 129	R 133	R 136		

HUNGARY

HU1 - Országos Mérésügyi Hivatal	R 76				

JAPAN

JP1 - National Metrology Institute of Japan	R 60	R 76	R 115	R 117/118	

KOREA (R.)

KR1 - Korean Agency for Technology and Standards	R 76				

THE NETHERLANDS

NL1 - NMi Certin B.V.	R 21	R 31	R 49	R 50	R 51
	R 60	R 61	R 76	R 81	R 85
	R 97	R 105	R 106	R 107	R 117/118
	R 126	R 129	R 134		

NEW ZEALAND

NZ1 - Ministry of Consumer Affairs, Measurement and Product Safety Service	R 76				

NORWAY

NO1 - Norwegian Metrology Service	R 50	R 51	R 61	R 76	R 105
	R 106	R 107	R 117/118	R 129	

POLAND

PL1 - Central Office of Measures	R 76	R 98	R 102		

ROMANIA

RO1 - Romanian Bureau of Legal Metrology	R 97	R 98	R 110	R 114	R 115

RUSSIAN FEDERATION

RU1 - Russian Research Institute for Metrological Service	R 31	R 50	R 51	R 58	R 60
	R 61	R 76	R 85	R 88	R 93
	R 97	R 98	R 102	R 104	R 105
	R 106	R 107	R 110	R 112	R 113
	R 114	R 115	R 117/118	R 122	R 126
	R 128	R 129	R 133	R 134	

SLOVAKIA

SK1 - Slovak Legal Metrology (Banska Bystrica)	R 49	R 76	R 117/118		

SLOVENIA

SI1 - Metrology Institute of the Republic of Slovenia	R 76				

SPAIN

ES1 - Centro Español de Metrología	R 51	R 60	R 61	R 76	R 97
	R 98	R 126			

SWEDEN

SE1 - Swedish National Testing and Research Institute AB	R 50	R 51	R 60	R 61	R 76
	R 85	R 98	R 106	R 107	R 117/118

SWITZERLAND

CH1 - Federal Office of Metrology METAS	R 16	R 31	R 49	R 50	R 51
	R 60	R 61	R 76	R 97	R 98
	R 105	R 106	R 107	R 117/118	

UNITED KINGDOM

GB1 - National Weights and Measures Laboratory	R 49	R 50	R 51	R 60	R 61
	R 76	R 85	R 98	R 105	R 106
	R 107	R 117/118	R 129	R 134	
GB2 - National Physical Laboratory	R 97				

UNITED STATES

US1 - NCWM, Inc.	R 60	R 76			

VIETNAM

VN1 - Directorate for Standards and Quality (STAMEQ)	R 76				

The OIML is pleased to welcome the following new

CIML Members

- **Egypt:**
  Prof. Dr. Mohamed Mokhtar Ahmed Ali Sharaf
- **Slovenia:**
  Dr. Tanasko Tasić
- **Sri Lanka:**
  Mr. K. Premasiri Kumara

Corresponding Member

- **UEMOA (Union Economique et Monétaire Ouest Africaine)**

OIML Meetings

TC 6 Prepackaged products
Meeting scheduled for 1–5 March 2010 - NCRS (Pretoria, South Africa)

TC 8/SC 5 Water meters
Meeting scheduled for 22 April 2010 - AFNOR (Paris, France)

TC 1 Terminology
Meeting scheduled for 29–30 September 2010 - GUM (Warsaw, Poland)

TC 3/SC 5 Conformity assessment
Meeting scheduled for October 2010 (Dates and venue to be confirmed shortly)

Bulletin Subscribers:

Did you know that the OIML Bulletin is available online?

If you are a Subscriber and do not yet have a login or password, please contact us:

bulletin@oiml.org

www.oiml.org
Stay informed

www.metrologyinfo.org

Joint BIPM-BIML Web Portal

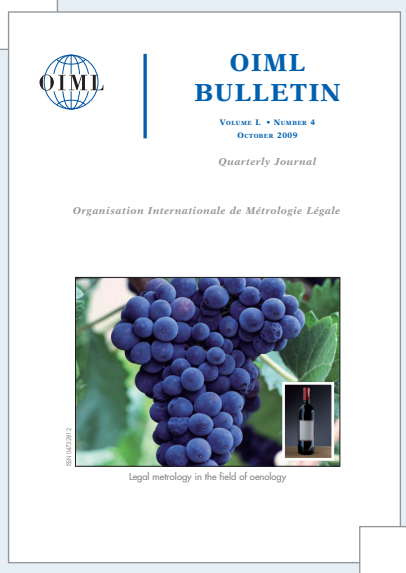
Committee Drafts

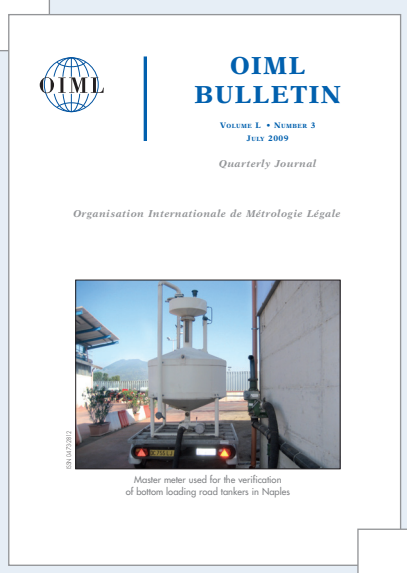
Received by the BIML, 2009.09 – 2009.12

Ophthalmic instruments - Impression and applanation tonometers	E	4 CD	TC 18	DE
Revision OIML B 3: OIML Certificate System for OIML Type Evaluations of Measuring Instruments	E	2 CD	TC 3SC 5	US + BIML
Revision OIML B 10-1: Framework for a Mutual Acceptance Arrangement on OIML Type Evaluations (MAA)	E	1 CD	TC 3SC 5	US + BIML

Call for papers

OIML Members
RLMOs
Liaison Institutions
Manufacturers' Associations
Consumers' & Users' Groups, etc.





- Technical articles on legal metrology related subjects
- Features on metrology in your country
- Accounts of Seminars, Meetings, Conferences
- Announcements of forthcoming events, etc.

The **OIML Bulletin** is a forum for the publication of technical papers and diverse articles addressing metrological advances in trade, health, the environment and safety - fields in which the credibility of measurement remains a challenging priority. The Editors of the Bulletin encourage the submission of articles covering topics such as national, regional and international activities in legal metrology and related fields, evaluation procedures, accreditation and certification, and measuring techniques and instrumentation. Authors are requested to submit:

- a titled, typed manuscript in Word or WordPerfect either on disk or (preferably) by e-mail;
- the paper originals of any relevant photos, illustrations, diagrams, etc.;
- a photograph of the author(s) suitable for publication together with full contact details: name, position, institution, address, telephone, fax and e-mail.

Note: Electronic images should be minimum 150 dpi, preferably 300 dpi.

Technical articles selected for publication will be remunerated at the rate of 23 € per printed page, provided that they have not already been published in other journals. The Editors reserve the right to edit contributions for style, space and linguistic reasons and author approval is always obtained prior to publication. The Editors decline responsibility for any claims made in articles, which are the sole responsibility of the authors concerned. Please send submissions to:

The Editor, OIML Bulletin
BIML, 11 Rue Turgot, F-75009 Paris, France
(chris.pulham@oiml.org)