Editorial

Much of this Bulletin is devoted to the accounts of various meetings that took place mainly in September and October 1999, which just goes to show how important a period this has been for improving cooperation in legal metrology both at international level (i.e. the OIML) and at regional level.

In fact the whole of the twelve-month period between the Seoul and Tunis CIML Meetings was a particularly productive period, during which the OIML has consolidated its strategic orientation and identified priority actions to be carried out, especially in the following areas:

- mutual recognition of test results;
- extension of the OIML Certificate System;
- development of cooperation between the OIML and other international and regional organizations;
- increase in activities aimed at favoring the development of metrology in emerging economies; and
- encouraging regional cooperation.

1999 seems to have been a favorable year for this last point, too. Most existing regional organizations are engaging in their specific activities in close cooperation with the OIML and are becoming typical examples that other regions wishing to establish their own cooperation forum may follow. And bearing in mind the need to develop in parallel international and regional cooperation, it does seem appropriate that participation in at least one regional cooperation forum be open to all countries.

Lastly, 1999 witnessed the reinforcing of OIML ties with a number of key international organizations in the fields of trade, standardization, accreditation, development aid, etc.

At the beginning of 2000 we send our best wishes to all those who strive to render the OIML more effective and more useful, and particularly to all readers of the Bulletin. ■

La majeure partie de ce Bulletin est consacrée à des rapports sur des réunions tenues principalement en septembre et octobre 1999. C'est dire combien cette période a été importante pour les progrès de la coopération en métrologie légale, tant au niveau international (l'OIML) qu'au niveau des régions.

Pour l'OIML, ce sont en fait les douze mois entre les réunions du CIML de Séoul et de Tunis qui ont été fructueux, avec un approfondissement des orientations stratégiques et une identification des actions à mener en priorité, en particulier dans les domaines suivants:

- reconnaissances mutuelles des résultats d'essais;
- extension du Système de Certificats OIML;
- développement de la coopération entre l'OIML et d'autres organisations internationales et régionales;
- accroissement des activités en faveur du développement de la métrologie dans les pays à économie émergente;
- encouragements à la coopération régionale.

Pour ce dernier point aussi, 1999 semble avoir été très favorable. Les organisations régionales existantes, pour la plupart, poursuivent leurs activités spécifiques en étroite coopération avec l'OIML et constituent des exemples types pour d'autres régions désireuses d'établir leur propre forum de coopération. Et compte tenu de la nécessité de développer en parallèle la coopération aux niveaux international et régional, il semble approprié que tout pays puisse participer à au moins une coopération régionale.

Enfin, 1999 aura permis à l'OIML de renforcer ses liens avec un certain nombre d'organisations internationales clés dans les domaines du commerce, de la normalisation, de l'accréditation, de l'aide au développement, etc.

En ce début d'année 2000 nos souhaits vont vers tous ceux qui œuvrent pour rendre l'OIML plus efficace et utile et, en particulier, vers tous les lecteurs de ce Bulletin. ■

BIML

UNCERTAINTY

Measurement uncertainty and legal limits in analytical measurements

Mirella Buzoianu, Reference Materials Laboratory,
National Institute of Metrology (INM), Bucharest, Romania

1 Introduction

Analytical measurements that are used as a basis for legal decisions must be reliable and therefore demand an appropriate statement of the degree of their uncertainty when evaluating the compliance of suspect matrices with maximum acceptable legal limits. Since most of these limits correspond to a low level of concentration, this necessarily leads to the evaluation of the minimum detectable signal, from which the minimum detectable inadmissible concentration can be obtained. To this end, Type 1 and 2 statistical errors must be considered. Also, estimating measurement uncertainty associated with very low levels of concentration very much depends on the correct identification and quantification of the main sources of uncertainty (due to the calibration, instrument, reference materials, etc.).

The *Guide to the Expression of Uncertainty in Measurement* [1] and *Quantifying Uncertainty in Analytical Measurement* [2] are used as normative references for the evaluation and expression of uncertainty in chemical measurements at all levels of accuracy from basic research and development to routine analysis. But the extent to which measurement uncertainty is taken into account when evaluating the compliance to maximum acceptable legal limits is still a problem under discussion.

The experience of the Romanian National Institute of Metrology (INM) in identifying and estimating measurement uncertainty in legal metrology activities concerning the protection of the environment is presented and reviewed; practical examples of measurement uncertainty estimation in spectro(photo)metric determinations (in particular the case of spectrometers used to determine metal pollutants in water) and the consideration of measurement uncertainty for interpretation of regulatory compliance are both discussed.

Within the framework outlined above, this paper aims to discuss the practical problems involved in metrological verification of the analytical spectrophotometers according to OIML Recommendations, mainly regarding detection limits and severity.

2 Brief review of metrological assurance in legal spectrometric measurements

Uniformity of all measurements is the main goal of the legal metrology activities in accordance with the Romanian Law of Metrology and the regulations issued in the field of metrology. Consequently, measurements in trade, in production and testing of pharmaceuticals or in the fields of health, safety and environmental protection are performed in a coherent measurement system within which the consistency of measurements is easily maintained and demonstrated.

Many different types of spectro(photo)meters (starting from the discontinuous wide band absorption photometers to completely automated atomic absorption (AA) spectrometers or inductively coupled plasma (ICP) atomic emission spectrometers) are extensively used to support most of the decisions made on the basis of quantitative chemical results in environmental protection and in public health.

Legal metrology principles clearly apply to such measurements and traditional metrological assurance of measurements implies:

- pattern approval of the instrumentation;
- calibration of the equipment;
- development of a proper system of reference standards (reference materials (RM's) and certified reference materials (CRM's) included); and
- achievement of traceability.

Note that an outline of the metrological assurance of legal analytical measurements is presented in [3].

Accordingly, all spectro(photo)meters used in legal activities are subject to pattern approval of each model

with any variants of that model and also subject to calibration or mandatory verification. Since the suitability of such instruments with regard to legal activity is specified their metrological performances are evaluated using, as a rule, legal metrological norm (NML) methods and appropriate standards and RM's. Several NML's and metrology procedures have been issued on the basis of the OIML Recommendations in the field of environmental protection. These issues provide the requirements for absorption photometers for water analysis (Testing Procedure no. 48/1997), atomic absorption spectrometers for measurement of metal pollutants in water (NML 9-02-94, based on OIML R 100), inductively coupled atomic emission spectrometers for measurement of metal pollutants in water (NML draft based on OIML R 116), as well as the methods and RM's or CRM's to be used for this purpose.

For metrological assurance of such measurements performed in the field of the environment only CRM's are recognized and accepted for use. The national system of CRM's developed by the INM for ensuring the required uniformity and accuracy of analytical measurements is presented in [4].

Under the Romanian Law of Metrology, any spectrometer used in a legal activity should be calibrated and/or verified by an authorized metrological laboratory. This laboratory, in turn, should calibrate its standards to INM, which owns the national standards of different physical and chemical quantities, and inter-compares them in a worldwide frame. The above chain characterizes the traceability of the result. To reach this target, in analytical measurements two aspects are to be considered:

- the instrument should be calibrated in a traceable manner; and
- RM's should assure traceability to the SI.

At this point, it should be noted that the above-mentioned legal metrology activities are more concerned with errors (for comparison with maximum permissible errors) as well as with other metrological characteristics (of the spectrometer, CRM's, measurement standards, etc.). However, approval or rejection of a spectrometer on a "wrong" basis or based on a hazardous decision has serious economic implications. This is why uncertainties introduced in verification or calibration of the spectrometer need to be taken into account when evaluating the compliance with legal limits stated in the NML or other procedures.

In addition, the increased use of certification/accreditation with reference to ISO standards on requirements, measurement and test methods, measurement equipment, quality control (ISO 9000 and 14000 series) have major legal implications: use of these leads to a harmonized common approach to metrology based on measurement uncertainty. In such laboratories the evaluation of compliance is particularly challenging when a completely unknown sample, different from those routinely analyzed, has to be evaluated and compared to maximum acceptable legal limits. Since most of these limits correspond to a low level of concentration, this necessarily leads to the importance of the evaluation of minimum detectable instrumental signal, from which the minimum detectable admissible concentration can be obtained, and of the appropriate instrumental sensitivity for the specific type of measurement.

3 Instrumental detection limits and sensitivity in NML's and the consequences for analytical measurements

Spectrometers used to measure metal pollutants in water are tested by measuring detection limits, optimum working range, short term precision and accuracy at minimum five representative analyte wavelengths that cover the complete spectral range of the instrument (AA spectrometer or ICP spectrometer). Additionally, AA spectrometers are tested for characteristic concentration and during pattern approval tests they are tested at the nominal limits of exploitation too.

Both AA and ICP spectrometric methods used in this field are relative methods of measurement. Therefore, to determine a certain concentration (which can be detected with reasonable uncertainty) or a characteristic concentration, two concentrations are compared via their instrumental random signals. In the case of detection limit tests, the first instrumental signals correspond to the analyte-free (blank) solution, and the second ones to a very low concentration of the specified analyte. Poor precision is obtained at the detection limit due to the significant percentage of the noise. Thus, a higher level of concentration (for instance of one hundred times the detection limit level) is more appropriate for this comparison.

To determine detection limits in accordance with the NML's specifications, spectrometers are tested in a standard configuration and under standard operating conditions as defined in the operator's manual. Calibration is required. Depending on the manufacturer's procedure, the functional relationship between signal and concentration is usually obtained by a linear least square regression using up to five reference solutions containing the specified analyte. Four series of ten measurements are performed on the blank solution. The standard deviation of the mean values is determined and then multiplied by three. Note that the definition of the detection limit given in OIML R 100 was adopted in NML 9-02-94. Starting from the definition and the

general verification procedure, the detection limit is a statistical measure of the smallest concentration of a particular analyte that can be distinguished from the baseline noise signal.

Using the slope (b) information, characteristic concentrations are determined from the equation:

$$C_{char} = \frac{0.0044}{b} \quad (1)$$

and provide useful information on the instrument sensitivity. Although the definition of the characteristic concentration is different from that of the sensitivity given in the VIM [7], for routine activities the second formulation is still widely used for this specification.

Some results on initial verification of the above instrument specifications with various different spectrometers used to measure metal pollutants in water are discussed below.

Usually, after installation any pattern approved AA spectrometer model is subject to an initial metrological verification when detection limits, characteristic concentrations, accuracy and short-term repeatability are tested using no more than five analytes. Copper is compulsory in this verification and single element CRM type 13.01, containing (1.000 ± 0.002) mg/L Cu, produced by the INM, is used to prepare the required diluted solution in a range of concentration of (0.5 ... 10) mg/L. The spectrometer is calibrated as far as possible according to the calibration procedure agreed in the manufacturer's instructions.

In a similar way, pattern approved models of ICP spectrometers are subject to initial metrological verification when detection limits, accuracy and short and long term repeatability are tested immediately after calibration. In this case, multi-element CRM's type 15.02 (containing zinc, manganese, copper, sodium, lithium and potassium), also produced by the INM, in the range of concentration recommended in OIML R 116 [8], are used.

The instrumental accuracy is determined as being the difference between the mean of read values (usually rounded to three decimals) of concentration on a standard solution of the specified analyte and the certified value of that solution. For AA spectrometers a limit of 7 % from the certified value is admitted. In the case of ICP spectrometers the uncertainty limits of the CRM's are considered.

The repeatability error is determined as being the relative standard deviation of 5 measurements performed on the standard solution of the specified analyte. A maximum 3.5 % relative error of repeatability is permitted for the AA spectrometers and 2 % for the ICP spectrometers.

Table 1 shows some results obtained on verification of common spectrometers (SOLAR 939/959, AAS 3/30/5, Baird ICP types) used to measure copper in water. Note that the spectrometers included a system for data acquisition and processing. The instrumental accuracy and repeatability of the flame AA spectrometers (instruments 1-7) were evaluated against a (2.00 ± 0.05) mg/L copper. A multi-element solution containing (10.00 ± 0.20) mg/L was used against the ICP spectrometer (instrument 8).

Since the NML requires a detection limit of 0.003 mg/L for copper, instrument 4 (SOLAR 939 type) should be rejected. Also, if a characteristic concentration of copper of 0.03 mg/L is admitted several instruments (1 – AAS 5 Anal. Jena type, 4-6 – SOLAR 939/959 types and 7 – AAS 30 Zeiss Jena type) should also be rejected on initial verification. On the other hand, since the instrumental error of instrument 2 (SOLAR 959

Table 1 Some results on the verification of instrument specifications of spectrometers used to measure metal pollutants in water

	Detection limit (c_{Ld}), mg/L	Characteristic concentration (c_{char}), mg/L	Instrumental relative error (e), %	Repeatability error (R), %
Instrument 1	0.0026	0.0318	– 1.00	1.17
Instrument 2	0.0028	0.0297	– 7.50	0.77
Instrument 3	0.0015	0.0290	+ 7.00	0.33
Instrument 4	0.0036	0.0420	+ 0.50	0.25
Instrument 5	0.0030	0.0429	– 1.00	0.70
Instrument 6	0.0032	0.0432	– 1.00	0.10
Instrument 7	0.0030	0.0432	– 0.50	0.50
Instrument 8	0.0024	-	– 1.20	0.87

type) exceeded the limit of 7 % it should be rejected. It is obvious that such decisions have to take into account the instrumental calibration, uncertainties of the standard solutions used, uncertainty of the determination of a particular specification, as well as additional means to optimize instrumental working conditions (such as bandpass, lamp current, burner height, burner alignment, fuel flow, flame type or impact bead adjustment). Note that both detection limit and characteristic concentration values provide useful information about the intrinsic performance of the spectrometers (background precision, signal amplitude, sensitivity, signal to noise ratio, etc.), particularly if measurements include the acquisition of additional data. But in a real analytical measurement process, the lowest amount of an analyte in a natural matrix, which can be detected, may be adversely affected. Also, knowing the expected characteristic concentration allows the operator to predict the absorbance range, which will be observed for a specific concentration range of the analyte of interest.

To compare the calibration of AA spectrometers, Table 2 presents information on:

- the intercept, a, of the regression line;
- the slope, b, of the regression line;
- the uncertainties associated with them, s_a, s_b;
- the number of standard solutions used for the calibration, N;
- the number of replicate measurements, n; and
- the standard deviation of the points about the regression line, s.

The formulae described in [5] to obtain the regression line and the associated error estimates, presented in Table 3, were used.

One may note that the values of the slope of the regression line were homogenous enough and the standard deviation of the points about the regression line were dispersed within a range of (0.0002 … 0.0100). It is therefore very important to highlight the role of spectrometer calibration to achieve an appropriate uncertainty of such determination.

4 Uncertainty of the determination of the detection limit and characteristic concentration

The continuous increase in demand for the number of measurements supporting environmental policy and the continuous decrease in tolerance levels result in a necessary improvement of measurements and specifications. Since a specification such as instrumental detection limit, or characteristic concentration is used as a characterization of an intended function of the spectrometer, it is therefore an integrated part of metrology in the same manner as the definition of the measurand. Also, to compare a measured characteristic with a given specification (specification limit) measurement results are used. For instance, the mean result of several series of repeatable measurements on a blank solution and the slope of the calibration line are necessary to determine a specific result on the detection limit.

According to [1], any measurement result should be associated with a parameter that characterizes the dispersion of the values that could reasonably be attributed to the measurand, i.e. measurement uncertainty. Consequently measurement results performed in tests for pattern approval or for verification as well as calibrations carried out for legal metrology purposes should have an indication of measurement uncertainty, which have to be evaluated starting from:

- incomplete knowledge of the true value of CRM's (measurement standard);
- the use of CRM's or RM's in testing;

Table 2 Instrumental calibration of AA spectrometers tested

	a	s_a	b	s_b	N	n	s
Instrument 1	– 0.001	0.0002	0.1385	0.0001	1	10	0.0002
Instrument 2	0.027	0.0007	0.1375	0.0016	4	3	0.0100
Instrument 3	0.036	0.0030	0.1515	0.0005	3	3	0.0040
Instrument 4	– 0.002	0.0003	0.1034	0.0002	1	2	0.0003
Instrument 5	0.013	0.0030	0.1025	0.0005	3	2	0.0040
Instrument 6	0.003	0.0005	0.1018	0.0001	6	3	0.0005
Instrument 7	0.002	0.0005	0.1018	0.0005	4	3	0.0005

Table 3 Summary of the formulae used to obtain the regression line and the associated error estimates

Intercept: $$a_{(c)} = \bar{y} - b_{(c)} \cdot \bar{c}$$ where: $\bar{y} = \frac{1}{N \cdot n} \cdot \sum_{i=1}^{N} \sum_{j=1}^{n} y_{ij}$ and: $\bar{c} = \frac{1}{N} \cdot \sum_{i=1}^{N} c_i$
Standard deviation of the intercept: $$s_a = \sqrt{\frac{s_b^2}{N} \cdot \sum_{i=1}^{N} c_i^2}$$
Slope: $$b_{(c)} = \frac{\sum_{i=1}^{N} (c_i - \bar{c}) \cdot (y_i - \bar{y})}{\sum_{i=1}^{N} (c_i - \bar{c})^2}$$
Standard deviation of the slope: $$s_b = \sqrt{\frac{s^2}{\sum_{i=1}^{N} (c_i - \bar{c})^2}}$$
Std. deviation of the points about the regression line: $$s = \sqrt{\frac{\sum_{i=1}^{N} (y_i - \hat{y})^2}{N-2}}$$
Precision of the estimation of a predicted value: $$s_c = \frac{s}{b} \cdot \sqrt{\frac{1}{N} + \frac{1}{n} + \frac{(y_{meas} - \bar{y})^2}{b^2 \cdot \sum_{i=1}^{N} (c_i - \bar{c})^2}}$$
Equation of the regression line: $$\hat{y} = a_{(c)} + b_{(c)} \cdot c$$

- the assumption of linearity;
- the instrument being tested (random variations in the instrumental measurement affect both the response reference and the measured response).

In the particular case of detection limit verification, the author considers that variances due to the variability of the calibration of the instrument and due to the certified value of the RM's used should be combined in a square root way to estimate the overall uncertainty.

When measuring the characteristic concentration described by equation (1), variances due to the variability of the calibration slope and the certified value of the RM's may be considered. From the above observation it results that the magnitude of the calibration uncertainty is very important when evaluating the overall uncertainty of such tests.

Calibration of the spectrometers used to measure metal pollutants in water usually means the set of operations that establish, under specific conditions, the relationship, within a specified range, between values indicated by the instrument and the corresponding values assigned to calibration samples of known chemical composition or RM's at a stated uncertainty. As a common practice for such instruments, the regression line and its limits of confidence, illustrated in Fig. 1, synthesize the relationship between the two variables. Linear regression is based on the method of least squares to obtain the best-fitting straight line through the data and both the intercept (a) and the slope (b) are estimated with certain uncertainties. It also assumes certain conditions: the values of concentration are error free, and all errors are contained in the y-values (instrumental signals) only. However, even if CRM's are used in calibration they are associated with some uncertainties (usually smaller than those of the spectrometer).

During calibration, each input concentration will produce a repartition related to instrument signals around the estimated mean from the regression line, within a confidence range of $(1 - \alpha - \beta)$ probability. Note that α is the probability of a false positive error and β is the probability of a false negative error. The experimental variance of signals, the degree of uncertainty on the real location of the calibration line, and the precision of estimation will determine the magnitude of the confidence range. Uncertainties associated with y are not constantly homogeneous to the line and depend on the position of the center of this line, as is illustrated in Fig. 1. On the one hand confidence limits of the regression line allow a probable range to be predicted within which the signal value is expected to lie for a certain concentration. On the other hand, for any signal value (S) measured against an unknown concentration, it is possible to predict the corresponding concentration range of $(c_{min} - c_{max})$ with a probability of $(1 - \alpha - \beta)$. In the particular situation where the upper confidence

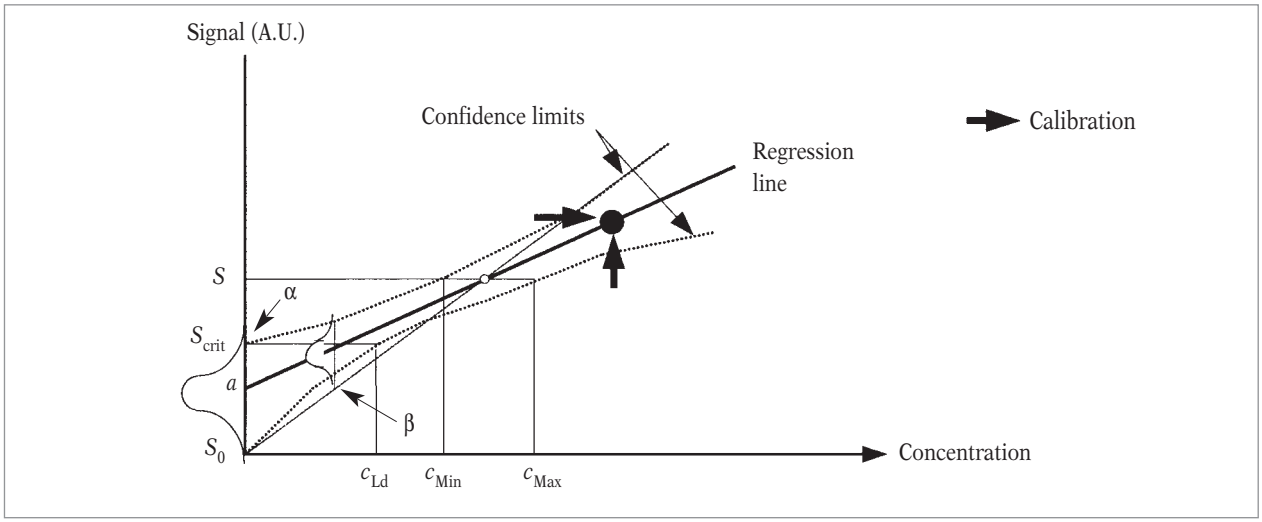


Fig. 1 Linear regression based on the method of least squares

limit intersects the y-axis (noted with S_{crit}), the concentration is equal to zero, corresponding to a blank solution. The standard deviation of the blank is given by s_a, and the limit of the confidence interval for the intercept, assuming that the instrumental signals follow a Student distribution, is $t_{(P;\ n-2)}s_a$. Since the detection limit is taken at a certain distance from a, it is the concentration c_{Ld} (at the intersection of the horizontal line from S_{crit} with a lower confidence limit). Near c_{Ld}, and quite far away from the center of the regression line, the lower confidence limit may be approximated by the corresponding asymptote (dotted line in Fig. 1) described by the general equation (2):

$$Y = a + b \cdot c + 3 \cdot t_{p;n-2} \cdot s_b \cdot (c - \bar{c}) \qquad (2)$$

Thus, we may describe the detection limit in terms of intercept, slope, standard deviation of the intercept and slope respectively, as well as the mean concentration of the regression line, accordingly to equation (3):

$$c_{Ld} = \frac{3 \cdot (s_a + \bar{c} \cdot s_b)}{b + 3 \cdot s_a} \qquad (3)$$

From this equation one may note that the uncertainty of determination of the detection limit may be estimated by combining in a square root way the relative standard deviation of the intercept, the standard deviation of the slope and the standard deviation of the certified concentration of the calibration sample corresponding to the center of the regression line. Also, note that in this approach the null hypothesis and Type 1 (α) and Type 2 (β) statistical errors have been considered.

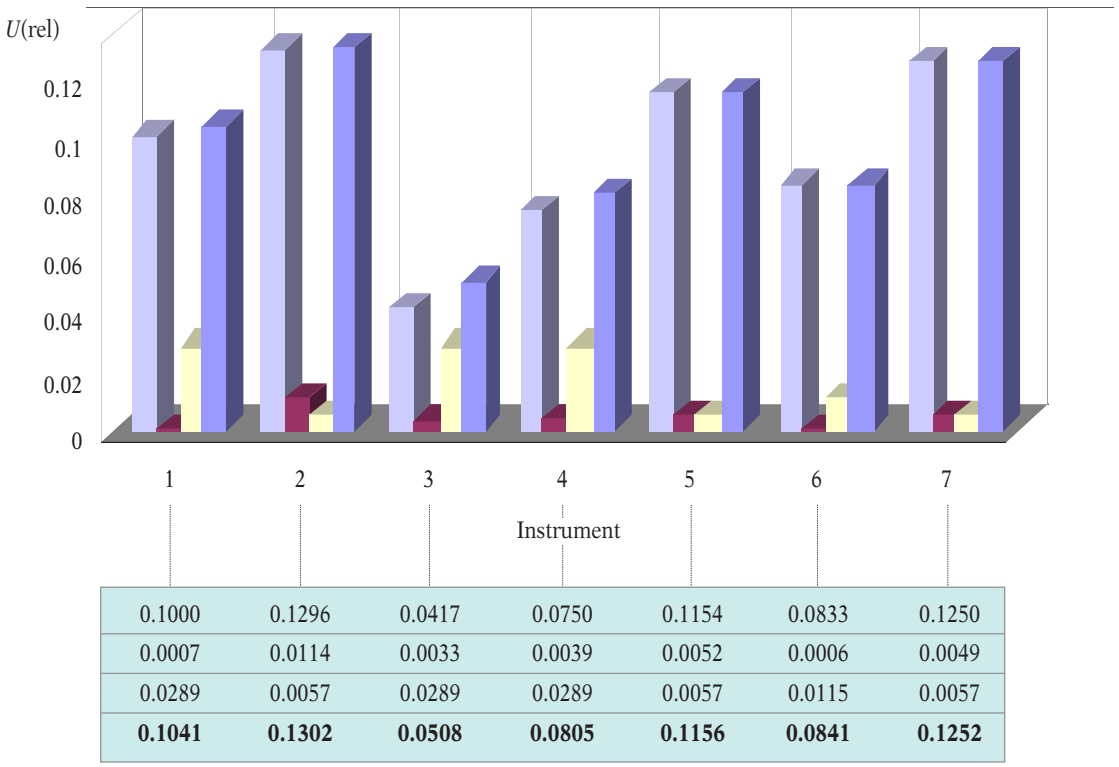
Using same approach the uncertainty of determination of the characteristic concentration is estimated by combining in a square root way the relative standard deviation of the slope and the standard deviation of the certified concentration of the calibration sample corresponding to the center of the regression line.

Starting from the results presented in Table 2, the estimated overall uncertainty (k = 1) and its components are illustrated in Fig. 2. Note that the first three values presented under each instrument represent the components described above and the fourth value is the estimated relative combined uncertainty. The lowest measurement uncertainty was estimated in the case of the verification of instrument 3 (13.02 %) and the highest for instrument 2 (5.08 %).These results concord with the fact that a precision of 11 % (k = 1) is practically expected for these concentration levels and instrumental conditions of measurements.

5 Evaluation of compliance to legislative limits

Several national standards indicate the upper limit of the concentration that can be accepted for different analytes currently determined in soil, water or atmospheric air, as well as the corresponding analytical procedures.

For a maximum acceptable concentration of a certain analyte c_{Max}, that has been set by the regulatory authority, the evaluation of the conformity of an unknown sample to certain legal limits means a statistical comparison of the instrumental signals obtained on the unknown sample to the instrumental signals obtained on a known sample having c_{Max} concentration using the t (Student) test. For a selected confidence level (1 – α), and supposing homogeneous variances, it is possible to



0.1000	0.1296	0.0417	0.0750	0.1154	0.0833	0.1250
0.0007	0.0114	0.0033	0.0039	0.0052	0.0006	0.0049
0.0289	0.0057	0.0289	0.0289	0.0057	0.0115	0.0057
0.1041	**0.1302**	**0.0508**	**0.0805**	**0.1156**	**0.0841**	**0.1252**

Fig. 2 Attempt to evaluate the measurement uncertainty components of the detection limit determination for AA spectrometers

state that the signal of the unknown sample S_X is significantly larger than S_{Max} if it is larger than (4):

$$S_{Max} + 2t_{(1-\alpha,\nu)}s_{Max} \quad (4)$$

where:

s_{Max} is the relevant standard deviation;
ν is the degree of freedom; and
t is the Student coverage factor.

Consequently, the Student test may be used to perform this evaluation:

$$t_{exp} = \frac{(S_x - S_{Max}) \cdot \sqrt{n_x}}{s_x} \quad (5)$$

where n_x is the number of observations made on the unknown sample.

If t_{exp} is larger than the critical one, the sample is not compliant at the selected confidence level. Once compliance has been evaluated, the concentration of the analyte in the suspected sample can be evaluated from the calibration curve.

The following example is given to illustrate the above approach.

Assume that a maximum concentration of 0.05 mg/L copper is accepted in a drinking water sample. An unknown sample containing approximately this concentration is measured against a flame AA spectrometer (instrument 7 type) using the calibration parameters described in Table 2. Three repeated measurements on the unknown sample gave an average response of 0.052 mg/L (for a mean absorbance of 0.0075 measured), a relative standard deviation of 1 %. Using the calibration results an uncertainty of 0.009 mg/L was estimated.

Since the considered legal regulation does not indicate any information on the uncertainty of the maximum accepted limit, the problem is to evaluate whether the concentration in the suspect sample is significantly higher.

For an average signal on the solution containing the limit level of concentration of 0.0072 and a standard deviation of 0.0002, the t-test gives the experimental t-value of 2.598, while the critical one-tailed value for a 0.95 confidence level is 2.920. Since $t_{exp} < t_{crit}$ the sample may be considered compliant, and a result of (0.052 ± 0.018) mg/L may be reported. Note that a coverage factor of two (k = 2) was used.

Such a result still requires an additional set of measurements using another calibration within a lower concentration range. In this frame, a higher character-

istic concentration specification for the instrument would be inappropriate to solve this measurement problem.

Conclusions

This paper has examined a number of problems concerning the uncertainty of determination of two metrological characteristics of spectrometers used to measure metal pollutants in water (detection limit and characteristic concentration), and how to consider this when evaluating the compliance against decision limits.

Clearly defined instrument specifications, knowledge of main sources of uncertainty affecting the measurement and adequate application of the Guide [1] requirements are the main targets.

Calibrating spectrometers for routine measurements against suitable CRM's considerably reduces the risk of the wrong decision being made when rejecting/accepting legal measurement results. ■

References

[1] *Guide to the Expression of Uncertainty in Measurement*, BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, Corrected and reprinted, 1995;

[2] *Quantifying uncertainty in analytical measurement*, EURACHEM (1995), London;

[3] Buzoianu M.: *Measurement uncertainty and its meaning in legal metrology of environmental chemistry and public health*, Accred. Qual. Assur. (1998) 3: 328-334;

[4] Duta S., Buzoianu M.: *Certified reference materials in spectrochemical measurements. Measurement uncertainty in this field*, Proceedings of the 8th International Congress of Metrology (1997), 230-234;

[5] ISO 11095:1996 *Étalonnage linéaire utilisant des matériaux de référence*;

[6] OIML R 100 *Atomic absorption spectrometer for measuring metal pollutants in water*.

[7] VIM: *International Vocabulary of Basic and General Terms in Metrology*, BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML, 1993;

[8] OIML R 116 *Inductively coupled plasma atomic emission spectrometers for measurement of metal pollutants in water*.

METROLOGICAL INFRASTRUCTURES

New directions for measurement in New Zealand

JOHN BARKER, Manager, Trade Measurement Unit,
Ministry of Consumer Affairs, New Zealand

Measurement and the economy - overview

New Zealand is a South Pacific nation with a developed economy. Its population is just under 4 million, made up of the indigenous Maori people, Europeans from the British settlement in the nineteenth century, and subsequent immigration, a proportion of which is from Pacific Island states.

The first statute relating to weights and measures was enacted in 1846, six years after the British Crown signed the Treaty of Waitangi with Maori - New Zealand's founding document as a nation state. Since the 1846 statute, the laws relating to the trade in goods sold by weight or measure have been regularly modernised.

New Zealand has been an OIML Corresponding Member since 1955.

During the last 15 years New Zealand's economy has been opened to allow increased trade, both in relation to exports and imports, through the removal of subsidies to producers, and tariffs on imported goods.

The country's economy is one based on trade in goods with a strong emphasis on agricultural based products. Also, there are large industries involved in steel and aluminium production and the processing of wood and paper products. New markets are being developed for goods sold on a measurement basis. For example, there has been a dramatic increase in the production and sales of New Zealand wine as it increasingly gains a worldwide reputation. Niche manufacturers are gaining a reputation for the design and manufacture of weighing instruments, petrol measuring systems and load cells.

The picture is one of a developed economy diversifying from the types of products it is known to produce and market. In the modern world of global trade, quality assurance and increased access to markets through reductions of quotas and tariffs, it is necessary for an economy to support its producers and manufacturers by having a robust infrastructure.

Identifying national measurement issues

New Zealand has recognised that, to draw maximum advantage from the new environment, the national measurement infrastructure has an increasing role to play. It must be strengthened by taking a more co-ordinated approach to measurement and standards issues.

The Ministry of Consumer Affairs, which is responsible for the administration of New Zealand's Weights and Measures Act and which holds our Corresponding Membership of OIML, has initiated a review of legal metrology in an effort to address some of the measurement issues affecting a modern economy. Other parties in the measurement infrastructure have signalled their willingness to take an active role in the review process.

A key development in identifying measurement issues for New Zealand will be a National Measurement Symposium, to be held in May 2000. The objective of the symposium is to assist New Zealanders by:

- demonstrating the economic and social benefits of an integrated measurement system based on traceability principles of measurement and international standards;
- improving the understanding of organisations and consumers of the importance of metrology;
- improving the nature and extent of co-operation and information-sharing among organisations and agencies nationally and internationally;
- improving the quality of the policy advice given to the New Zealand Government on all measurement-related aspects, through integrated perspectives and common understandings.

The symposium will be open to traders, manufacturers, industries and Government decision-makers. Our expectation is that key international metrologists will be invited to share their perceptions of the directions required as we enter the 21st century.

New Zealand's OIML links

One outcome of the review of legal metrology will be to develop a wider recognition of the benefits of full membership of OIML. The international trade in goods, and particularly food items, is a vital part of New Zealand's well being. Increasingly, compliance with standards, such as those contained in R 79 and R 87, will be the key to entry into most markets. This also applies to our small, but growing, industry involved in the manufacture of weighing and measuring systems. The need for an economy, with a stake in these areas of legal metrology, to take part in the development or re-development of the OIML International Recommendations becomes ever more pressing.

A stronger measurement infrastructure

New Zealand has all the components of a modern metrology infrastructure. These consist of:

- Measurement Standards Laboratory - New Zealand's national metrology institute;
- Trading Standards Service of the Ministry of Consumer Affairs - New Zealand's national trade measurement organisation;
- International Accreditation New Zealand - New Zealand's national authority for the accreditation of laboratories, inspection bodies and other technical competence based activities.

Other organisations play a key contributing role in the infrastructure, including Standards New Zealand and the Competition and Enterprise Branch of the Ministry of Commerce.

Awareness of the economic value of measurement

A number of international studies have looked at the value of measurement-related activities to particular economies. A small informal survey recently revealed that New Zealand industries and traders using measurement as a central part of their business were not focussed on the benefits of good measurement practice. Measurements were relied on without knowledge of why measurement accuracy is important to the profitability of a company through the benefits it brings to that company and, more generally, to society.

The results of this survey indicated that the Ministry of Consumer Affairs needed to be more active in demonstrating the value of accurate measurement to New Zealand businesses and consumers. Unless this was achieved we could not achieve a direction for improved measurement capability in the 21st century. Acceptance of the value of measurement was also a pre-requisite for holding the National Measurement Symposium. Therefore, we decided to commission a study on the value of measurement and to hold two workshops illustrating the benefits of accurate measurement.

The economic value of measurement

Brian Easton, a noted New Zealand economist, was commissioned to report on the economic value of measurement to the New Zealand economy. The study assessed the net benefits of a viable measurement system and infrastructure, referring to comparable international studies. It explored, in Brian Easton's phrase, how measurement as a systematic standard "is a sort of oil to ensure market transactions run smoothly". A copy of Mr. Easton's paper is available on the Ministry's website at www.consumer-ministry.govt.nz

Workshops on the benefits of accurate measurement

WORKSHOP 1

The first workshop was held in May 1999 and the theme was "Accurate Measurement - The Key to New Zealand's Trading Advantage"; fifty participants attended representing organisations from government departments concerned with the measurement infrastructure, key traders, trade associations, private sector verifiers of measuring instruments and consumer groups. The Hon. Peter McCardle, Minister of Consumer Affairs, opened the workshop and Tony Leverton, the Ministry's Manager, Trading Standards Service, welcomed participants.

The workshop consisted of two key presentations and a case study.

John Barker presented "The Importance of Measurement to Trade". The main themes of this presentation were:

- the amount of New Zealand's production in some key sectors;
- international developments such as globalisation, the role of the World Trade Organisation and technical barriers to trade; and
- the relationships with our largest trading partner (Australia) and with international legal metrology organisations such as the OIML and the Asia Pacific Legal Metrology Forum (APLMF).

Dr. Chris Sutton, Director and Chief Metrologist, Measurement Standards Laboratory presented "The Integrity of Measurement – now and in 2010". Dr. Sutton outlined:

- the requirements for measurement integrity, particularly measurement traceability;
- the role and elements of a standards and conformance infrastructure (SCI);
- trade implications for the SCI; and
- a vision for the SCI in 2010.

Workshop participants then listened to a case study presented by Mr. Roger Kissling, Quality Consultant, New Zealand Dairy Board. The case study was entitled "Trade Measurement and its Value to Exporting". The study concerned recent issues which had arisen in the United Kingdom with the import of New Zealand spreadable butter, and the measurement of the fat content to establish whether the butter could be imported into the European Union.

Conclusions from the first workshop included:

- confirming the need to build consensus and demonstrate the value of measurements;
- recognising the economic value of measurement;
- supporting international standards rather than regional standards; and
- supporting full membership of the OIML.

WORKSHOP 2

The second workshop was held in June 1999 and the theme was "Accurate Measurement - Building Fairness for New Zealand". Fifty-five participants attended the workshop. Representation was from a wider range of groups and included quality assessors, health agencies, enforcement agencies and sporting associations. Again, the Hon. Peter McCardle opened the workshop and Tony Leverton welcomed the participants.

The workshop considered three case studies - measurement in sport, traffic speed and blood pressure.

Mr. Bob Bishop, Executive Director, Sport Science New Zealand provided a study on "Measurement in Sport". Bob Bishop explained about the effort that goes into ensuring accurate measurement in sporting events. Advanced equipment is used to record and measure performance by top athletes. Careful checking and calibration by expert sport scientists occurs before every meeting and well-researched methods are used to record results. An example of how precise measurements need to be was of the US sprinter Maurice Greene who had only days before broken the 100 metre world record by 0.05 seconds.

Inspector Ron Phillips, Inspector In Charge, Calibration Unit, New Zealand Police, provided a study on "The Drive to Road Safety - Accurate Measurements Save Lives". Inspector Phillips detailed the history of traffic radar and noted that the first road traffic radar device was invented in New Zealand in 1946. The workshop heard how systems are developed to prove the accuracy of speed guns and speed cameras. The New Zealand Police have developed practical methods to establish that not only do speed measuring devices work in the laboratory but also can be proved to be measuring accurately in differing environments on the roads.

Dr. Stewart Mann, Cardiologist, Hutt Valley Health Ltd. presented a study on "The Measurement of Human Arterial Blood Pressure". Dr. Mann's study provided a practical example of the need for legal measurements in the health area. Dr. Mann set out a history of blood pressure measurements, the difficulties of obtaining a consistent reading and technical problems with various types of sphygmomanometers.

Conclusions from the workshop included:

- appreciation of the need for better industry knowledge and public awareness of the benefits of accurate measurement;
- a call to identify areas of measurement weakness;
- a requirement for better co-ordination of measurement related issues is required, and
- an acknowledgement that education is a key to better measurement practices and this should start in schools.

This workshop also endorsed the conclusions from the first workshop.

Future directions

The economic study and the workshops have laid the foundations for our Year 2000 National Measurement Symposium. They have identified directions for enhancing the New Zealand Measurement Infrastructure and for encouraging all parts of the infrastructure to work in a more co-ordinated way. The various component agencies are all committed to this aim and have already agreed to meet and decide on an action plan for the future. They will discuss the conclusions from these workshops and take action on them, for the benefit of all New Zealanders. We expect a more user-focused measurement infrastructure that provides assurance and informs all sectors of the New Zealand economy.

The added value of accurate measurements from improved awareness and infrastructure collaboration, will enhance New Zealand's trading reputation, provide ongoing assurance to traders and consumers, and gain efficiencies for producers and improved quality of services for non-trade legal measurements. ■

Key meetings held in Tunisia

- Round Table on Euro-Mediterranean Cooperation
- OIML Development Council Meeting
- CIML Meeting
- Presidential Council Meeting

34

The OIML met at the Abou Nawas Hotel, Tunis, from Tuesday 5 through Friday 8 October 1999 for a series of meetings that followed a Round Table on Euro-Mediterranean Cooperation chaired by Mr. Jean-François Magana (CIML Member for France) and Mrs. Ghaïet-El-Mouna Annabi (CIML Member for Tunisia). There was also a brief meeting of representatives of Regional Legal Metrology Organizations.

On Tuesday 5th October the OIML Development Council held a full day of discussions - with a record number of delegates attending - and from the Wednesday for three days the 34th CIML Meeting was held under the Presidency of Mr. Gerard Faber including, at the end of the week, a meeting of the Presidential Council.

Full accounts of these meetings are given on the following pages, accompanied by a selection of photos taken during the events and in surrounding areas. A full program of tours for accompanying persons was laid on by our Tunisian hosts, and two receptions were given: an OIML Welcome Reception on the Wednesday evening and a Dinner laid on by the Tunisian Ministry of Commerce on the Thursday night, including a very enjoyable band of local musicians and dancers.

Abou Nawas Hotel, Tunis

The speeches and meeting accounts have been translated into French and are published after the corresponding English text.

Welcome Speech by Mr. Mondher Zenaïdi Tunisian Minister of Commerce

Mr. President of CIML,
Mr. Director of BIML,
Representatives of OIML Member States,
Honorable guests, Ladies and Gentlemen,

Allow me first of all to express my pride and happiness in delivering the inaugural speech at this, the 34th CIML meeting, that is this year being held in Tunis. I would like to take this opportunity to express my gratitude to the OIML for having chosen Tunisia to host its meeting.

My thanks equally go to the organizers of this meeting, which undoubtedly constitutes an appropriate opportunity for all those concerned with legal metrology to study issues related to this matter due to their importance for consumers and enterprises alike.

Over the past years the world has witnessed important developments consisting mainly of the emergence of globalization of the economy, regional gatherings and important scientific developments, especially in the technological field and other areas including telecommunication and computer sciences. The phenomena of economic globalization, fierce competition and the opening up of international markets allow only products of a very high quality produced at lower costs to enter markets in the light of a new global economy in which high quality and economic efficiency constitute the cornerstones of exchanges.

In the midst of these changes, Tunisia has, since the Change of the 7th of November and under the leadership of President Zine El Abidine BEN ALI, implemented an integrated program to liberalize and reform our economy by implementing a market economy system, liberalizing foreign trade, regulating internal trade and providing incentives for individual initiatives in industry, trade, agriculture and services.

All these reforms have led to the consolidation of economic productivity and to respectable rates of development. Over the latest decade the GDP has increased by approximately 5 % at constant prices and by 6 % in non-farming sectors; exports increased by 7 % at constant prices.

These reforms equally concerned legal metrology, whose importance nobody is oblivious to, as a means to protect consumers and promote domestic and foreign trade thanks to the use of accurate accredited measuring instruments and the use of scientific methods governed by law. His Excellency the President of the Republic declared during the inauguration of the second congress of the Tunisian Association of Industrialists and Traders (UTICA), on November 29, 1995 the updating of the framework of legal metrology which dates back more than a century and the enacting of a new law.

This new law was indeed enacted last May. It facilitated a better definition of legal measuring units, the organization of their use by adopting the international system of measuring units called SI. This system is characterized by the harmony between its component elements and a better definition of measuring units, and is equally presently adopted by most OIML Member States, including Tunisia. This system will supersede the metric system that has been abandoned by developed countries for some years now.

In addition to clarifying prerequisites of manufacturing, repairing and marketing measuring instruments, this new law has clearly defined the various types of legal metrology verifications such as recognition of pattern approval, initial verification and statistical control of prepacked products in addition to technical verification. The aim is to give the consumer the right to demand the verification of a measuring instrument should he or she doubt its ability to accurately assess the measured quantities.

In addition to all this a consultative body, the National Council of Legal Metrology, has been set up. It comprises representatives of all the ministries concerned with measuring activities. Its tasks consist essentially in encouraging research in and the promotion of legal metrology, the development of training, a better dissemination of information and encouraging cooperation and the exchange of expertise between national and international organizations.

We have equally consolidated the legal metrology departments by providing them with competent staff, and have set up an integrated training program in addition to creating a technical branch at the National Institute of Applied Sciences and Technology to train technicians in metrology. The first group of students has graduated this year and they will undoubtedly contribute to the success of

the upgrade program implemented by the Tunisian State thanks to the strong will of its President BEN ALI to introduce quality systems according to ISO 9000 and to monitor the role of metrology in enterprise as a prerequisite for high quality.

Besides, other measures have been taken to set up laboratories for the calibration of measuring and weighing instruments and containers to ensure that the verification tools used by metrology agents are accurate and in conformity with international standards. This is in addition to the preparatory work underway for the implementation of a national laboratory for the testing of measuring instruments, in conformity with International Recommendation R 76 issued by your Organization.

Tunisia was among the first countries to join the OIML and to consistently take part in its activities. It has made efforts to consolidate the orientations of the OIML as it believes in the need to coordinate actions in this field at international level to facilitate transactions and to eliminate technical obstacles that hinder trade. Tunisia's chairmanship of the OIML Development Council is at the same time an honor bestowed upon our country and bears testimony to the good reputation Tunisia enjoys within international organizations. We will do our utmost to coordinate efforts with all the countries of this Development Council to implement its program so that these countries may keep pace with the development that metrology is witnessing and to make the Council the best forum for those entrusted with metrological verification by giving them the opportunity to take part in training programs.

I would like to take this opportunity to hail the delegations from the shores of the Mediterranean who took part in the Round Table held on Monday for their efforts, the results they have obtained and the ideas they have put forward. This Round Table constituted a forum to study the appropriate solutions to the problems relating to metrology in general and the methods and ways of verifying measuring instruments from their design to their marketing nationally and internationally. This initiative equally constitutes a framework for setting up a cell of cooperation between both shores of the Mediterranean to promote the activities of metrology and the structures entrusted with legal metrology in this area. It undoubtedly constitutes another model for consolidating cooperation between the countries that took part in this meeting.

Ladies and gentlemen,

In conclusion, I would like to pay tribute once again to the OIML for the tremendous work it has been doing to promote legal metrology at all levels and to provide experts with information and advice concerning this field in general and the methods of verifying the different measuring instruments in particular.

I would equally like to congratulate the Development Council for all its efforts and actions carried out for the benefit of developing countries, for training their experts, and for the consolidation of the infrastructures of the departments entrusted with implementing the legislation and recommendations concerning legal metrology.

My warm thanks go to all of you and may your meeting be crowned with success.

I equally wish all the participants a pleasant and agreeable stay in our country. Thank you for your attention. ■

Mrs. Annabi and Mr. Faber welcome Mr. Mondher Zenaïdi, Tunisian Minister of Commerce

Opening Address by Mr. Gerard Faber CIML President

Mr. Minister of Commerce,
Ladies and Gentlemen,
Dear Colleagues,

It is my great pleasure to welcome you to this the 34th Meeting of the International Committee of Legal Metrology and I would like to immediately express my sincere thanks to all those who, here in Tunis, have played a role in the preparations for this Meeting. I am sure that their efforts will be fully recognized and that, at the end of the week, it will be my duty and pleasure to express the deep appreciation of the OIML community for such successful arrangements.

This Meeting obviously presents a number of very special characteristics. One of these is the fact that, for the very first time, the CIML meets on the African continent and in an Arabic country.

Up to now we have held Meetings either in Europe, North or South America, Asia and Oceania but, with the exception of OIML participation in meetings or workshops organized for example by UNESCO in Egypt or by ARSO in Togo, we have never held an important OIML meeting on the African continent.

I must say that there are a number of converging signals that show that the African continent in general, and Maghrebian countries in particular, are step by step occupying a significant place in legal metrology cooperation: just a few months ago a number of OIML representatives, including myself, attended a commemorative meeting in South Africa; before that, at the end of last year, a workshop on OIML R 76 had been organized by SADCMEL in Zimbabwe; I note too the development of regional or sub-regional bodies. I do hope that these are all strong signs indicating the rapid development of metrology in this region.

The other specific features of this CIML Meeting are the following:

- for the very first time regional legal metrology organizations as well as regional bodies having activities connected with legal metrology have been officially invited to attend a CIML Meeting; of course, up to now, a number of CIML Members were in fact also representing certain regional bodies at CIML Meetings; however, this invitation should not be considered as a formalization and an officialization of the situation; in fact, we would be glad that regional bodies consider it as an opportunity to develop their own inter-regional cooperation;
- also for the very first time, OIML Corresponding Members have been formally invited to attend a CIML Meeting; this is the proof of the interest that the OIML has in making sure that as many countries and economies as possible will benefit from its activities and participate in them according to their resources.

Apart from these new characteristics, this CIML Meeting will - once again - have to examine matters and to make decisions of significant importance for the life of our Organization.

Following the Birkeland Report that was finalized one year ago, the Presidential Council and the BIML have identified a number of actions which should be carried out rapidly or in any case over the next two or three years. Proposals were sent to you some months ago and I am confident that you have been able to carefully examine them with a view to accepting the proposed work plan, improved and supplemented in line with any comments you may have.

Matters of development must also be duly considered: yesterday, a meeting of the OIML Development Council was held under Mrs. Annabi's chairmanship, and we eagerly await the Council's report and proposals for future work.

Also on the agenda are the traditional items dealing with conformity assessment, mutual recognition of test results, certification, technical activities, and so on.

Concerning cooperation between the OIML and other international and regional bodies, as already mentioned, we will be having discussions concerning legal metrology activities at regional level. We will also have discussions concerning liaisons between the OIML and the WTO, with the participation of a representative of this Organization, Mrs. Liu, from the WTO Technical Barriers to Trade Committee, who will join us this afternoon or tomorrow morning at the latest.

A new item on our agenda deals with the activities of the Presidential Council. For the sake of transparency it has been considered appropriate that the CIML President gives a report about the Presidential Council at each CIML

Meeting. It will then be evident that the Council is an advisory body and that all decisions still remain the responsibility of the CIML, except in urgent cases where the CIML President has to make immediate decisions according to the OIML Convention.

Since this CIML Meeting is the last one before the Eleventh International Conference of Legal Metrology, we will have to start preparing this important event and to consider financial and other matters which will result in decisions being made by the Conference.

Another very specific matter will have to be carefully examined during these three days: the preparation for the selection and appointment of a new Director to succeed Mr. Athané. Several months ago I sent you a proposal endorsed by the Presidential Council. During this Meeting I will inform you of the reactions I have received (of which there are very few), but do not hesitate to contact me should you wish to express your views.

Since I have raised the question of key human resources, I think that it is perhaps appropriate to introduce Item 4 of the agenda straight away, which deals with the CIML Presidency. You will thus have the possibility to reflect about the situation, to exchange your views during the coffee breaks, lunches and dinners, and to be ready for a discussion which will prepare you for the decision that you will have to make next year.

I myself retired at the end of last year as Director General of the Dutch Metrology Institute, but I maintain close links with metrology in general and legal metrology in particular through my new position of Advisor to the Dutch Government for these matters. My Government has also confirmed my role as CIML Member for the Netherlands, and I maintain close links with the NMi experts responsible for OIML affairs, which enables me to keep in touch with the various aspects of OIML activities.

As a consequence of this new situation, I can now devote far more time to the OIML than was possible up to last year, and I must say that I am very pleased with this situation considering the personal interest that I have in OIML affairs.

As you know, my present term will come to an end in December 2000 and the CIML must start reflecting about what action to take. I have discussed this situation with some of you, including the two Vice-Presidents, and I would like to inform you very simply that, if you so wish, I am ready and willing to continue as CIML President.

Re-conducting my position would also maintain the necessary continuity over a period during which there will be a significant change in the BIML's management.

However, the Committee may also consider the possibility of appointing a new President who will take over from me at the end of next year. If so, it would be my responsibility to start identifying possible candidates and to make it possible for you to make the right choice at the next Meeting. Anyway, you now have three days to consider the various aspects of this topic.

A similar situation exists concerning Vice-President Chappell, whose term will also come to an end next year. Under Item 4 of the agenda I will give the floor to Sam so that he may express his views concerning his position.

Before concluding, since I have introduced a matter connected with the composition of the Committee, I will now welcome the new CIML Members who have been appointed since the Seoul Meeting. These are:

- for Ireland, Mr. Farragher,
- for Japan, Mr. Sakurai,
- for Kazakhstan, Mr. Turspikov,
- for the Republic of Korea, Mr. Park,
- for Romania, Mr. Ocneanu,
- for Slovakia, Mr. Orlovský, and
- for Spain, Mr. Garcia.

Concerning Finland, we have been informed that Mrs. Juntilla has left her legal metrology functions but we have not yet received any information concerning a new CIML Member.

Ladies and Gentlemen,

I would like to reiterate my thanks to our Tunisian hosts and to congratulate them for the excellent preparations for our meetings. I also would like to express my wish to all participants that, thanks to their active contribution, this CIML Meeting will be as fruitful as possible for the future of the OIML.

Thank you for your attention. ■

Round Table

Euro-Mediterranean Cooperation in Legal Metrology

Monday, 4 October 1999

A Round Table on Euro-Mediterranean Cooperation in Legal Metrology was held in Tunisia on Monday 4th October 1999 in conjunction with the OIML Development Council and 34th CIML Meetings. The Round Table was chaired by Mr. Jean-François Magana (France) and Mrs. Ghaïet-El-Mouna Annabi (Tunisia).

The economic and social development of countries within the Mediterranean Region requires the development of a legal metrology structure and policy in each country: it is clearly important for the countries within this Region to organize cooperation that is specific to the Region and which would extend and deepen OIML work at regional level.

Thirty-three delegates attended the Round Table from fourteen countries, two Regional Legal Metrology Organizations (RLMO's) and the BIML. At the beginning of the meeting delegates were invited to present themselves and give a brief description of legal metrology activities in their respective countries.

Albania commented that there was a need to coordinate legislation on legal metrology and this was confirmed by comments from the Algerian delegation: assistance is definitely required for a number of issues such as the choice of instruments used to equip laboratories, the training of qualified staff in modern communication techniques such as Internet and mutual recognition of type approval with other countries. Legislation in Algeria is, continued the Algerian delegate, very strict as far as type approval is concerned.

The Representative of the Palestinian Authority explained that they had operated weights and measures activities successively under Jordanian, Israeli and other legislation, including Egyptian legislation for Gaza. They were now working on harmonizing and modernizing weights and measures legislation and would favorably consider receiving external assistance, for example from the Euro-Mediterranean Cooperation.

Prof. Kochsiek (Germany) envisaged an ideal situation in which a global measurement system would be active within some ten to twenty years. To achieve this, discussions would be needed at Regional level on harmonizing legal metrology, on offering courses and on providing consultancy, etc.

Other countries confirmed these views: Cyprus and Spain already have ties with other countries and look forward to further cooperation; Spain is additionally willing to provide training assistance.

Mr. Magana noted that legal metrology has been rapidly changing over the last two years both in industrialized and other countries. Metrology is now recognized as being of utmost importance, despite the fact that industry is not that familiar with metrology; this is why the Higher School of Metrology was established in Douai, Northern France. As far as the need for technical assistance was concerned, Mr. Magana underlined the fact that each country only has limited resources at its disposal, hence the need for regional cooperation.

Legal metrology in Israel mainly concerns equipment used in shops and in petrol stations but Israel does require assistance in other fields in which legal metrology is not yet that developed. In fact, much legal metrology legislation dates back to 1947 (though new laws are now being drafted). Assistance in these areas would therefore be appreciated. The Israeli delegation also proposed to the Palestinian delegation to establish bilateral contacts.

Morocco has very few calibration laboratories but does have the intention of creating others.

Tunisia confirmed its need for assistance as far as the verification of measuring instruments is concerned, especially in training skilled and qualified personnel. The Tunisian delegation felt that OIML certificates are often not sufficient for legal metrology services and, moreover, due to their limited access to Internet, it is not that easy for Tunisia to gather key information on the origin of OIML certificates.

Mr. Bennett then gave a detailed presentation of WELMEC, the European Cooperation in Legal Metrol-

Participants attending the Round Table

ogy, showing in particular how metrological regulations are evolving, what mutual recognition mechanisms exist, and mentioning technical assistance and training, laboratory equipment and also the subject of verification equipment traceability.

Mr. Birch gave a presentation of legal metrology cooperation within APLMF and IOLMF, pointing out that these regional bodies include both highly industrialized and developing countries - as will be the case within the Euro-Mediterranean Cooperation.

It was suggested that working groups be set up after volunteers had drafted work projects for them; it was put forward that each subject area be dealt with by a group of two experts, one from a European country and one from a Mediterranean country.

The main theme raised was that of training. Mr. Wallerus presented his institute, the German Academy of Metrology (DAM), which develops both basic and advanced training of legal metrology staff. Based in Munich, DAM is a non profit-making organism which is independent from industry and manufacturers. It offers training courses on instrument verification, on the application of ISO 9000 and EN 45000 standards, etc. It also offers training and technical assistance programs in English, German, Russian and Chinese.

The Douai Higher School of Metrology used to train engineers specializing in legal metrology. It has just reopened with a specialized course for metrological engineers in industry: the course lasts one year and is open to students who are already engineers or who already have an equivalent diploma. The course consists of eight months of theory and practical application followed by a further four months spent on a specific project in industry. A specialized engineer diploma is awarded at the end of the course. In the coming years it is envisaged to offer legal metrology courses both for engineers and for technicians.

In concluding the day's Round Table discussions, Mr. Magana drew up a series of resolutions (see below).

The participants in the Euro-Mediterranean Legal Metrology Cooperation:

1 Draw the CIML's attention to the necessity to rapidly revise International Document D 1 *Law on Metrology*, taking into account both the nature of each country's administrative set-up and also the use of quality tools such as accreditation and certification of quality systems.

2 Draw the CIML's attention to the need to update documents related to the means that legal metrology services should have at their disposal.

3 Thank Mr. Wallerus (Germany) and Mr. Boudissa (Algeria) for volunteering to study together the terms of reference and the work program of a working group on training, which would be set up at the next Cooperation meeting.

4 Thank Mr. Laamoumri (Morocco) and Mr. Birdseye (UK) for volunteering to study together questions raised by recognition of pattern approval, especially for countries that do not have an extensive range of approval means, and to present their conclusions, in time for the next Cooperation meeting.

5 Thank Mrs. Dori (Israel) and Mr. Ben Hassine (Tunisia) for volunteering to study, put forward ideas for an action plan and suggest a work program for evaluating needs in technical assistance, in time for the next Cooperation meeting.

6 Thank Mr. Magana (France) for volunteering to study, together with Mrs. Annabi (Tunisia), actions that could be tabled at the next Cooperation meeting on the subject of mutual information.

7 Ask Mrs. Annabi and Mr. Magana to express the wish to those countries that had been unable to attend this meeting that they become involved in Cooperation activities, and send them information relating to the results of this meeting.

8 Ask Mrs. Annabi to ensure that liaisons are created between this Cooperation and other regional cooperations, notably with MENAMET, with a view to jointly resolving problems of traceability.

9 Ask Mrs. Annabi and Mr. Magana to continue to make contacts with development aid organizations (European Commission, African Development Bank, Islamic Development Bank, etc.) with a view to their participation in the next meeting.

10 Agree to organize the next meeting of this Cooperation in conjunction with the OIML 2000 Conference. ■

Meeting of Representatives of Regional Legal Metrology Organizations: *Tunis, 5 October 1999*

Dr. Bennett, Chair of WELMEC, took the opportunity of the Tunis meetings to organize a meeting of representatives of eight RLMO's: the Conveners of the Euro-Mediterranean Cooperation, SADCMEL, WELMEC, APLMF, IOLMF, SIM, COOMET and COLAMEL attended.

It was concluded that in addition to the worldwide role of the OIML, coordination between RLMO's based on mutual information and sharing of certain resources is definitely of value; further collaboration should therefore be initiated.

Dr. Bennett agreed to arrange a further meeting in London in October 2000 to discuss these important issues in more depth. ■

OIML Development Council Meeting

Tuesday, 5 October 1999

The OIML Development Council meeting was opened by Mrs. Ghaïet-El-Mouna Annabi, who had been elected as its Chairperson in 1998 in Seoul. A record thirty-five countries attended the meeting plus five OIML Corresponding Members who attended as Observers, together with six legal metrology organizations, a delegation from the Palestinian Authority and four BIML staff members. This was also the first time that the Development Council meeting was held over one full day.

Since the 1998 Development Council meeting in Seoul, of which the Minutes were published and distributed and a report included in the January 1999 OIML Bulletin, a number of contacts have been made or maintained with international organizations, regional legal metrology bodies and developing countries; OIML representatives participated in meetings of UN/ECE, ISO DEVCO and the WTO TBT Committee and a number of other contacts have additionally been made.

In Mrs. Annabi's letter of December 1998, it had been proposed that a strategy group be created to guide Development Council activities, but this strategy group will not be implemented as in fact the Presidential Council itself is the global OIML strategy group. However, the Chairperson of the Development Council is now a Member of the Presidential Council which will ensure that the cause of developing countries is taken into account at this level.

Amongst the key issues discussed during this meeting it was generally felt that developing countries' training and financing means were the first issues that should be looked into by the reconstituted Development Council. Also, the application of the OIML Certificate System to developing countries was a priority and it was agreed that as many workshops as possible should be held in developing countries and financial assistance obtained so that delegates from these countries might attend meetings, training sessions and seminars. To this end, cooperation with international funding organizations such as UNIDO, the World Bank, the International Monetary Fund and development banks was of prime importance to ensure that the proposed financing might be accomplished. Raising the profile of legal metrology in industrialized countries is also important in providing development aid to less developed countries.

It was, therefore, generally felt that the main concern that developing countries have is how to finance their activities (training, equipment, etc.) and this should be reconsidered by the Council. Unfortunately none of the funding organizations that had been invited were able to attend the meeting, though contact would be made with them following the week's meetings.

On the subject of Development Council Working Groups, it was reported that only WG 1 was currently still active; this group is managed by Dr. Wallerus of DAM, Germany. The question was asked whether the other Development Council Working Groups could or should be reactivated.

It was decided that WG 2, which is concerned with OIML cooperation with other organizations and information exchange between international, regional and national organizations on various subjects, would be discontinued. The Russian-managed WG 3 on information and documentation was currently inactive due to Russia's workload on other matters. Prof. Kochsiek therefore proposed to redefine the various working group structures and goals; the conclusions are summarized in Resolutions 2–5 below.

Under Item 3 reports were given by representatives of Regional Legal Metrology Organizations: APLMF, COOMET, SADCMEL, WELMEC, COLAMEL, SIM and IOLMF.

Concerning Item 4, the proposals for the 2000–2001 Work Program, the following subjects were deemed as being priority issues:

1 The revision of OIML D 1 *Law on Metrology*, which was also brought up in the Birkeland Report, and has been on the Development Council Work Program for a number of years;

2 Activation of relevant TC's and SC's, the association between the Development Council and the BIML or the possible establishment of further working groups; this would ensure that deadlines are met in activating OIML TC's and SC's;

3 Seminar on the modernization of legislation for legal metrology: this could be organized by the BIML in conjunction with the revision of Document D 1, possibly by the summer of 2000;

4 Validation of training courses, videos and other training material could be checked, for example by the BIML, to ensure that such tools are in line with current OIML requirements and Recommendations.

A subject brought up at the 1998 Seoul Meeting was also reiterated, i.e. the drawing up of a list of technical experts who would be able to provide technical assistance notably to developing countries.

The final item discussed concerning the forthcoming year's work program was the possibility of opening a Development Council web site: a proposal was made by Mrs. Annabi to incorporate a sub-site specifically relevant to the Development Council within the existing OIML site. The BIML will work on this project in conjunction with Mrs. Annabi.

To conclude the meeting, a number of resolutions were drawn up and adopted; these are listed below:

Resolutions of the OIML Development Council Meeting

The OIML Development Council:

1 took note of a report presented by its Chairperson and by the BIML concerning reactions of Council Members to a letter from Mrs. Annabi and to an inquiry made by the BIML, and requested the BIML to use these reactions in the final drafting of the Council work program for 2000–2001;

2 took note of a report from Dr. Wallerus concerning WG 1 activities on training (of which the participation list was updated on this occasion) and expressed its appreciation for both the accomplished and the ongoing work; the Council also took note of proposals from Mr. Birch concerning the possible certification or validation of training courses and facilities and requested Dr. Wallerus and Mr. Birch to reflect on the proposal;

3 disbanded WG 2 on external liaisons because of the lack of activity of this WG and decided that this matter should be under the direct responsibility of its Chairperson;

4 requested Dr. Issaev to try to accelerate the work of WG 3 on information and equipment, possibly to split this WG into two WG's, one for information, one for equipment, and to report to the Council in order to permit it to decide whether to maintain this/these working group(s) or to adopt alternative solutions to perform the tasks;

5 requested the BIML to develop terms of reference and working methods for WG's attached to the Council;

6 noted the reports presented by the Conveners of regional organizations and suggested that they systematically take into consideration the aims of the OIML Development Council when developing their own work programs;

7 took note of information given by Prof. Kochsiek and Mr. Athané concerning a UNIDO-OIML-PTB program and decided to request the CIML to support OIML participation in this program; the Council recognized the need to ensure that consultants used in the program had appropriate legal metrology expertise (see also 14 below);

8 took note of information given by Mr. Magana concerning an emerging cooperation in legal metrology in the Euro-Mediterranean region;

9 took note of a report from its Chairperson concerning the use of the Internet in assisting developing countries and requested Mrs. Annabi and the BIML to rapidly develop the ideas presented on this occasion, taking into consideration any comments submitted by Council Members during or after the meeting;

10 requested the CIML to urgently initiate a revision of D 1 in parallel with an action on the harmonization of national metrology legislation and requested the BIML to work on the organization of a seminar on these topics, including considerations on the administrative organization of legal metrology;

11 requested the CIML to accelerate (or reactivate as appropriate) the work of TC's/SC's of specific interest to developing countries and to look at the possibility for the Development Council to be represented in this work;

12 took note of a proposal aimed at placing lists of measuring instruments approved in other countries at the disposal of developing countries;

13 took note of information delivered by certain members and by its Chairperson concerning special activities connected with the Council's aims and encouraged them to pursue these activities;

14 requested its Chairperson and the BIML to reflect on the possibility of establishing lists of experts whose competence will have been assessed in an appropriate manner;

15 requested its Chairperson and the BIML to urgently develop a comprehensive work program for the 2000–2001 period and to submit it to Council Members for approval by correspondence before the end of 1999;

16 decided to hold its next meeting in October 2000 in connection with the Eleventh OIML Conference;

17 requested its Chairperson and the BIML to introduce an item relating to funding on the agenda of future Council meetings. ■

Agenda - 34th CIML Meeting

34

Opening addresses – Roll-call - Quorum – Approval of the agenda

1 Approval of the minutes of the 33rd CIML Meeting

2 Member States and Corresponding Members

2.1 New Members - Expected accessions
2.2 Situation of certain Members
2.3 Implementation of the decision made by the Committee at its 33rd Meeting concerning increased participation of Corresponding Members in certain OIML activities

3 Financial matters

3.1 Adoption of the Auditor's report for 1998
3.2 Examination of the financial situation for 1999
3.3 Budget for the year 2000

4 CIML Presidency

5 Director of the Bureau

6 OIML Long-term policy: implementation of the decisions made by the Committee at its 33rd Meeting concerning the output of the Braunschweig International Seminar and of the Birkeland Report

7 Report on the activities of the Presidential Council

8 Development Council

8.1 Report on the Development Council meeting of October 5, 1999
8.2 Work program of the Development Council
8.3 Liaisons with relevant international and regional organizations

9 Liaisons with international and regional organizations

9.1 World Trade Organization (WTO)
9.2 Standardization organizations (in particular: ISO, IEC, UN/ECE)
9.3 Accreditation organizations (in particular: ILAC and IAF)
9.4 Regional Legal Metrology Organizations (RLMO's)
9.5 Regional organizations having activities connected with legal metrology (in particular: European Commission and CEN/CENELEC)
9.6 Others

10 Activities linked with mutual recognition of test results, accreditation, etc.

11 Technical activities

11.1 Work program of OIML TC's/SC's
11.2 Examination of the situation of certain TC's/SC's
11.3 Approval of draft Recommendations
11.4 Availability of OIML publications on paper, electronic media and via Internet; use of Internet within the OIML

12 OIML Certificate System

12.1 General information
12.2 New Recommendations applicable within the System

13 Preparations for the Eleventh Conference

13.1 Information concerning the organization of the Conference
13.2 Proposed agenda
13.3 Examination of a preliminary proposal for the 2001–2004 budget taking into consideration BIML staff requirements for that period

14 Report on BIML activities

15 Future Meetings

15.1 35th CIML Meeting (2000)
15.2 36th CIML Meeting (2001)

16 Other matters

17 Adoption of decisions

Closure

34th Meeting of the International Committee of Legal Metrology

Wednesday, 6 – Friday, 8 October 1999

34

The CIML held its 34th Meeting at the Abou Nawas Hotel, Tunis, from Wednesday 6th through Friday 8th October 1999. 45 OIML Member States attended (with an additional three who were represented), together with five OIML Corresponding Members, seven institutions in liaison with the OIML, the CIML Immediate Past President and four BIML staff members including its Director.

The minutes of the 33rd CIML Meeting were approved without comment (**Item 1**), and under **Item 2** *Member States and Corresponding Members* Mr. Athané informed Delegates that since the last CIML Meeting, no new Member State had joined the Organization; however, three countries were considering changing their status from Corresponding Member to full Member State and one new country (Uzbekistan) was interested in joining the OIML.

Two Corresponding Members had been readmitted during the year. Two or three countries were currently experiencing difficulty in paying their annual contributions, however no action needed to be taken yet; additionally, the situation of countries in a lower contributory class will be examined during the Eleventh Conference in the year 2000.

Concerning Item 2.3 *Implementation of the decision made by the Committee at its 33rd Meeting concerning increased participation of Corresponding Members in certain OIML activities* the Committee had taken two decisions concerning Corresponding Members: firstly, they would be admitted as observers at CIML Meetings. Five Corresponding Members were indeed present at this 34th Meeting; other Corresponding Members were unfortunately experiencing budgetary problems, and it was clear that the OIML can not finance their trips. It was confirmed that all OIML Corresponding Members will be invited to the Eleventh Conference. Secondly, in 1998, OIML Corresponding Members had been invited to participate in the technical work of OIML TC's and SC's. Indeed, over the last year, a small number of Corresponding Members did participate in two or three such meetings, notably in the TC 3 meeting held in Paris last June. This gradual increase in participation of Corresponding Members renders the management of increased participation easier.

Under **Item 3** *Financial matters*, the auditor's report for 1998 was adopted without comment, and Mr. Athané informed participants under Item 3.2, *Examination of the financial situation for 1999*, that there were no changes in the budget estimations although he noted that Member State contributions are on average now being paid later than they were last year. He recognized that some countries and regions have had certain economic problems over the past few months, but had received confirmation from many of these countries that their contributions would be paid by the end of 1999.

The full accounts, together with the 1999 financial table, will be sent out by the beginning of 2000 with relevant explanations. Under Item 3.3, *Budget for the year 2000*, a document was distributed to Delegates, and this subject gave rise to a number of comments. Certain countries felt that the year 2000 contributions should remain fixed in view of certain national budgetary restrictions. Mr. Faber replied that even if the inflation rate in France was currently very low, we do still have a

Delegates attending the 34th CIML Meeting at the Abou Nawas Hotel, Tunis

budget to balance. The Organization is facing a future in which it must deal with a number of new work project proposals, an increasing workload and maybe even extra unforeseen costs. The safest way, he felt, to deal with the 2000 budget, was therefore to follow it as it had previously been proposed. He added that if we accept to reduce the 2000 budget and adopt a 0 % increase, the start-off point for budgetary discussions during the Eleventh Conference would be lower, rendering any increase in the budget more difficult to accept.

It was also pointed out that the Bureau and the Organization as a whole does need a strong commitment from governments in order to successfully continue its activities; this includes paying annual contributions. Mr. Magana pointed out that maintaining the budget at a zero growth rate would not necessarily allow for any degree of freedom in taking on additional projects, and the BIML was already hard-pushed to accomplish the actions it had already set out to achieve. Mr. Issaev (Russian Federation) supported the Conference proposal but recommended taking into account the needs of developing countries, who may experience certain difficulties in paying. However, the OIML Convention does not provide for setting two parallel base contributory share calculation procedures, i.e. one for developing countries and one for industrialized countries. The calculation basis for all Member States must be the same. As a conclusion to these discussions, and following a formal vote, the budget was maintained as fixed by the Tenth Conference.

Discussions were held under **Item 4** *CIML Presidency* and **Item 5** *Director of the Bureau*; the decisions taken by the Committee have been communicated to OIML Member States. A Selection Committee was formed to manage the recruitment of the new Director.

A paper was distributed which had been drawn up by the BIML and endorsed by the CIML Presidium concerning **Item 6**, *OIML Long-term policy, and the implementation of the decisions made by the Committee at its 33rd Meeting concerning the output of the Braunschweig International Seminar and of the Birkeland Report.*

Mr. Faber commented that the drawing up of this document was a big step forward for the Organization and it was encouraging to see that its future strategy had been so well identified. He opened the floor to questions and suggestions.

Concerning the first section of this Report, on *improving and accelerating the technical activity of OIML TC's and SC's and increasing the participation of OIML Members*, Mr. Athané pointed out that this should not exclude developing countries; on the contrary, these countries should be encouraged to actively participate in technical activities in the future. Mr. Birch found the document very informative and agreed that the scope of legal metrology should be expanded.

Under point B of the Report, *Developing procedures for mutual recognition or equivalents agreements*, Sam Chappell (USA) informed participants that a document was being developed on manufacturers' declarations of conformity of instruments to initial verification requirements of an instrument if a quality system is in place.

Seton Bennett (UK) added that there should perhaps be a reference to IAF as well as to ILAC when discussing aspects of legal metrology laboratory accreditation.

Mr. Vaucher (Switzerland) agreed that mutual recognition of results and procedures is a very important issue in this chapter of the Report and mentioned the mutual recognition agreement that was due to be signed in Paris at the CGPM in the week following this CIML Meeting.

Under the subject of *developing an OIML system for marking prepacked products that meet OIML requirements*, an area that concerned the Presidential Council and OIML TC 6, Mr. Faber stressed the importance of this field, a comment that was reiterated by Mr. Gögge (Germany), who thanked the BIML for including this Item, which he and Mr. Birch (Australia) had suggested at the Seoul CIML Meeting.

Mr. Kildal (Norway) reminded Delegates of the EU Directive on prepacked products; he felt that maybe OIML work in this area would be superfluous as EU Directives are in fact legally binding. Sam Chappell replied that a working group meeting was being held on this subject and he would report back to the Committee on the outcome.

Under point C dealing with *the importance of legal metrology and identifying the bases of legal metrology amongst other aspects of metrology and related activities*, Mr. Birch drew Delegates' attention to the degree of urgency that should be allocated to reviewing OIML D 1 *Law on Metrology* and related publications. This comment was brought up on a number of occasions during the week's meetings and will be treated as a priority by the BIML.

On the subject of *facilitating and improving the work of CIML Members, of the Presidential Council and of the BIML, not forgetting OIML cooperation with RLMO's*, Mr. Issaev felt that the *CIML Members' Guide* was a priority and asked whether it could be republished before the deadline that had previously been set of July 2000. Mr. Athané replied that a draft revision had already been drawn up and that he was waiting until the deadline for comments from Presidential Council Members before taking further action: up to now he had only received one written response; he therefore requested Presidential Council members to accelerate their consideration of this document.

Mr. Klenovský (Czech Republic) felt that maybe the OIML web site could serve to reduce the BIML's work load by rendering communication more efficient. Mr. Athané replied that this subject would be dealt with in

some detail under Item 11, though he advocated a certain degree of caution since not all OIML Member States and Corresponding Members yet have access to the Internet, though he agreed that this was a major step forward in increasing communication between the various OIML Member States and other bodies.

Seton Bennett also reaffirmed the necessity to improve communication between the various regional organizations and the BIML, and noted that cooperation in this field is positive and is set to continue.

Under Item D.5 of the OIML Long-term policy Document, *Improving cooperation between the OIML and other international and regional bodies*, Mr. Faber agreed that cooperation in this area is of utmost importance and will serve to make our Organization more effective. This was one of the most important conclusions of the Birkeland Study.

Another objective in the Long-term policy Document was to identify consumer associations at international and regional levels that are likely to be able to engage in cooperation with the OIML.

Mr. Nyström (Sweden) said that this type of cooperation is not always easy to achieve.

The BIML, affirmed Mr. Athané, had recently contacted many measuring instrument user groups, manufacturer's associations, etc. and had received favorable responses which the BIML would implement soon. This concluded discussions on Item 6.

Under **Item 7**, *Report on the activities of the Presidential Council*, Mr. Faber summarized the recent Council discussions which had included some ideas about the 2001–2004 budget and the review of OIML technical activities. The implementation of the CIML decision concerning increased participation of Corresponding Members was confirmed and in-depth discussions had been held on the subject of what actions should be taken following the completion of the Birkeland Study. There had been an information exchange concerning the Software Seminar held in Paris in the week prior to the Tunis meetings; information was given on the Measuring Instruments Directive (MID), on the Seminar held recently in South Africa, and on the specific development of metrology in France.

During this week's Presidential Council Meeting, held in conjunction with the 34th CIML Meeting, the subjects of the new BIML Director, the budget and the 2000 London Conference would be discussed.

A Report was then given by Mrs. Annabi and Mr. Dunmill concerning **Item 8** *Development Council activities* and the Council's meeting held prior to this CIML Meeting. A detailed account is published in this Bulletin.

Under **Item 9**, *Liaisons with international and regional organizations*, information was given concerning the World Trade Organization: Ms. Vivien Liu, who had been invited as a special guest to the meeting, reminded Delegates that the OIML had been admitted as an Observer Member of the WTO TBT Committee in November 1997, and the two Organizations were enjoying very good working relationships. The OIML has participated in several important events and has exchanged views and briefed members on its work. Ms. Liu gave a comprehensive presentation of WTO activities and affirmed the WTO TBT's objective of ensuring that activities relating to mandatory technical regulations and voluntary standards do not create barriers to trade. OIML cooperation in this field was developing well and would continue to be expanded.

The OIML was also enjoying excellent relations with the ISO Central Secretariat: Mr. Athané summarized the specific case of the development of a joint ISO 3930/ OIML 99 on vehicle exhaust emissions which is being adopted by both Organizations. However two countries within ISO had voted "no", therefore the draft Standard had had to be submitted to all ISO Member Countries. The text is due to be published shortly as a joint publication. Final editorial changes are awaited from the ISO secretariat and a test report will be developed by the Netherlands during 2000. ISO will inform the Organization as to whether they are interested in also producing a joint test report; if not, this document will be purely an OIML publication.

The OIML is also producing application documents relevant to ISO 17025 and Guide 65; TC 3/SC 5 is responsible for this area. These application documents will either be published as OIML documents or as ISO/OIML joint texts. Mr. Athané has asked ISO to identify the relevant ISO experts willing to cooperate with the OIML on the development of these application documents.

Concerning cooperation with the IEC, work still has to be carried out on OIML Recommendations 58 and 88 concerning sound meters for which the relevant OIML TC is vacant. The IEC is currently drawing up standards and joint IEC/OIML publications are envisaged in this field.

On the subject of the UN/ECE, a Workshop was held (and attended by the BIML) on the use and implementation of International Standards. The OIML is the only

Organization to have surveyed the implementation of its International Recommendations. Reports were also given on cooperation with ILAC concerning accreditation and a brief summary concerning cooperation with RLMO's, representatives of which gave in-depth presentations.

The BIML will be making further contacts with the World Health Organization and with the European Commission and will report back next year. Concerning the BIPM, no meetings had been scheduled over the last year, however Mr. Faber was due to attend the CGPM Conference in Paris the following week and would be talking to Mr. Kovalevsky and Mr. Quinn with a view to activating cooperation with BIPM.

Sam Chappell then reported on **Item 10**, *Activities linked with mutual recognition of test results, accreditation, etc.*

Last year, Mr. Chappell had delivered a report on the draft OIML document on mutual acceptance of OIML pattern evaluations. This project had been started in April 1998 to explore the means by which multilateral agreements could be established for such acceptance. Some progress had been made, in particular on the occasion of a meeting held in February 1999. It was decided to incorporate this project in the OIML working plan. So, a meeting of OIML TC 3 was held in June 1999, hosted by the BIML, to review all of TC 3's work programs. A new subcommittee SC 5 on *Conformity assessment* was established and a document was distributed giving details of how this decision had come about.

It was decided to disband TAG_{cert} and the revision of the document on the OIML Certificate System will be the responsibility of this new subcommittee, of which the joint secretariat will be held by the USA and the BIML.

The objective and scope of the new TC 3/SC 5 would therefore be to establish, according to OIML requirements, the rules and procedures for fostering mutual confidence in the results of testing of measuring instruments and a legal metrology control among OIML Member States.

Three main working projects were identified as being of a high priority for TC 3/SC 5: firstly the document on the OIML Certificate System for Measuring Instruments, secondly the draft document on mutual acceptance agreement of OIML pattern evaluation and thirdly the Working Draft document on the expression of uncertainty in measurement in legal metrology applications.

Sam Chappell then gave a detailed transparency presentation of these work program aspects, including comments on the revision of OIML R 87 *Net content in packages*, concluding discussions on Item 10.

Discussions were then held on **Item 11**, *Technical activities*. The BIML distributed a *Report on Technical Activities* in which it was stated that annual reports had been received by the BIML from all 18 TC's and 42 SC's and sent to CIML Members earlier in 1999. Based on these reports it can be stated that there was an overall increase in the activity of OIML technical bodies during 1998 compared to previous years.

As a result of this activity four Draft Recommendations were to be presented for approval under Item 11.3 and other Drafts will be presented to CIML Members for postal ballot by the BIML later this year.

Concerning the work program of OIML TC's and SC's, two new subcommittees have been established together with their work programs as proposed during the 33rd CIML Meeting: TC 15/SC 1 *Measuring instruments for ionizing radiations used in medical applications* (Russian Federation) and TC 15/SC 2 *Measuring instruments for ionizing radiations used in industrial processes* (USA).

At the June 1999 TC 3 meeting, it was decided to establish a new SC, together with its work program of five projects, including that of the TAG_{cert} and simultaneously to discontinue the TAG_{cert}. TC 3/SC 5 *Conformity assessment* was established, as previously described. The formal establishment of these three subcommittees together with their work programs was approved by the CIML.

Concerning revisions and new work projects proposed by TC's and SC's, a number of new projects were introduced by TC's 8, 9, 11, 17 and 18.

Concerning R 101 and R 109, following repeated consultations between the Russian secretariat and the BIML, it was considered inappropriate to publish their annexes together with the original texts of the Recommendations, but rather to initiate their revision based on comments and proposals received from members of the subcommittee. The CIML approved the proposed work projects.

Under the responsibility of Germany, the activity of TC 3/SC 4 has been restarted and a situation report was presented at the June 1999 TC 3 meeting.

Two OIML TC's/SC's were currently vacant: TC 13 and TC 8/SC 1. The BIML had received a fax from Dr. Leitner (Austria) indicating that Austria is willing to assume responsibility for TC 8/SC 1 *Static volume measurement*. The UK is considering taking on TC 13.

Volunteers are also needed to assume responsibility for certain work projects within TC 16/SC 1 since the Netherlands can only continue work on R 99.

On the subject of transfer of responsibility, the responsibility for the review and revision of OIML R 35 *Material measures of length for general use* is to be transferred from TC 7/SC 1 (Russian Federation) to TC 7 (UK), as proposed by the UK and agreed by Russia. The CIML approved this request.

It was also decided to establish a new subcommittee TC 5/SC 2 *Software*, of which France and Germany will

assume the joint secretariat. Other urgent priorities were identified which have already been dealt with in this account: for example, the revision of D 1, the drawing up of the document *Expression of uncertainty in measurement in legal metrology applications* and the subject of *Prepackages*. These three projects will be taken on by the USA and it was pointed out that the OIML has the responsibility to accelerate work on uncertainty in legal metrology, failing which WELMEC will feel obliged to draw up its own respective document.

On the subject of the approval of Draft OIML Recommendations, the four Drafts submitted for approval were approved by the Committee:

- Revision of R 60 *Load cells,* which will be published as soon as possible by the BIML pending final comments to be received from the secretariat;
- *Multi-dimensional measuring instruments,* for which the secretariat has taken note of comments received and modified the document accordingly. A test report has also been drawn up by Australia, and is ready to be sent out for postal vote. This document was delayed to first ensure that the Recommendation itself was approved by the Committee. The Recommendation, together with its test report, will be published as one document;
- Revision of R 49 *Water meters* and revision of R 65 *Material testing machines* were also approved.

It was noted that concerning R 49, two Drafts had initially been sent to the BIML: one concerning mechanical water meters and the second concerning both mechanical and electronic meters. The latter was approved by the Committee.

Item 11.4 dealt with the availability of OIML publications on paper, electronic media and via the Internet.

Chris Pulham informed the Committee that a survey had been conducted by the BIML at the beginning of 1999 to ascertain the degree to which OIML Members had access to the Internet; the results were published in the April 1999 issue of the OIML Bulletin. The OIML has now had its own web site for almost three years; this site has been created by BIML staff at virtually zero expense. The site now comprises approximately 25 pages including general information on legal metrology, the role of the BIML and its staff, Member listings, Latest news, Calendar of OIML meetings, Technical Committees including composition and state of progress of the work, the OIML Certificate System (with a complete list of registered OIML certificates), Publications and Links to web sites of organizations in liaison with the OIML. Account was taken of ideas and suggestions made by CIML Members during the survey and these have served to further develop the site.

Over the last year some 8000 connections were recorded. This number is currently at the level of about 1000 connections per month - emanating from all over the world - and the site is referenced on four or five search engines. Since the end of September 1999, a new menu system is fully operational; the site is bilingual English-French and will soon be trilingual with the addition of the Spanish language; the Spanish CIML Member has kindly offered to translate the relevant pages into Spanish.

Concerning the availability of OIML publications on various media, no immediate decision has been taken to "abandon" paper printing of OIML publications; this subject will be gone into in more depth during the Eleventh Conference in London next year. However, the BIML is increasing its efforts to make publications available in a universally readable electronic format (Adobe Acrobat PDF) and at the present time 43 Recommendations are available in both French and English, either on disc or directly available from our site for direct download by CIML Members, including notably all the Recommendations applicable within the OIML Certificate System.

A new online order form has recently been incorporated in the site so that other customers (apart from CIML Members) may order directly online.

Discussions then moved on to **Item 12** *The OIML Certificate System* including general information on the System and Recommendations applicable within it. A document distributed by the BIML gave the background to the establishment and details of the evolution of the System which was launched on 1st January 1991 with the aim of facilitating, accelerating and harmonizing the work of national or regional bodies that approve patterns of measuring instruments. To date, some 540 certificates have been issued, 28 OIML Recommendations are applicable within the System and 21 Issuing Authorities in 19 Member States have been established. More than 120 applicants and manufacturers of measuring instruments from 25 countries were granted OIML certificates by Issuing Authorities of 13 Member States.

Concerning Item 12.1, the question of further development of the Certificate System was brought up:

certain actions will be carried out within the framework of the new TC 3/SC 5, including defining the principles of juridical protection of OIML certificates, coordinating the development of this system with relevant activities carried out by international and regional organizations concerned with testing, certification, conformity assessment and accreditation, organizing intercomparisons aimed at harmonizing national requirements and pattern evaluation procedures, or making use of intercomparisons carried out within other international or regional bodies and publishing the results, and raising confidence of Issuing Authorities and others and the application of accreditation procedures to OIML certification.

CIML Members and the BIML were actively encouraged to continue promoting the System at national, international and regional levels. And the OIML's status of Observer within the WTO TBT Committee may be used advantageously to promote OIML certification activities based on the high priority allocated by the TBT Agreement to conformity assessment based on internationally harmonized standards.

An inquiry will also be carried out among manufacturers of measuring instruments with a potential interest in the System with a view to better understanding their demands and hence encouraging them to better utilize the System; also international and regional organizations in liaison with the OIML will be kept informed about the advantages of and further development of the System.

It was also added under Item 12.2 that three of the Recommendations approved by the Committee will become applicable within the System following their publication.

Mr. Athané raised the specific case of OIML R 60 *Load cells*. A decision was taken by the Committee on this Item, notably concerning the additional tests required for the 1999 edition of R 60 compared to the 1991 edition, and the period over which certificates may still be issued for the 1991 edition.

Under **Item 13** *Preparations for the Eleventh Conference*, it was reported that arrangements for the London meetings were well underway; the NWML was confident that the event would be a success. It was also suggested that a Round Table on a subject of interest to the Organization could be organized in conjunction with the Eleventh Conference and 35th CIML Meeting; ideas for subjects that could be discussed during such a Round Table were invited from CIML Members, who should submit them to the BIML before the end of 1999.

Mr. Athané had drawn up a preliminary proposal for the 2001–2004 budget, taking into consideration BIML staff requirements for that period. In commenting on this document, Mr. Athané mentioned that the Presidential Council would meet early in 2000 to discuss this budget proposal; ideas from CIML Members were still welcome and the cut-off date to submit them by was 31 December 1999. He added that the economic situation of certain countries led him to conclude that an increase in the number of permanent BIML staff cannot be envisaged. However, it would still be possible to consider hiring experts for specific time periods and to accomplish specific tasks. The funding for this would come from the reserve fund, so that a budget increase would not be necessary. He suggested considering the possibility that there would be no increase in Member State contributions, but that if any new Member States were to join the Organization, their contributions would be simply added to the budget, thus increasing the total amount available.

The BIML distributed a *Report on its activities* under **Item 14**. This document is reproduced in full in the *Update* section of this OIML Bulletin.

On the subject of *Future meetings*, **Item 15**, for the year 2001 (i.e. for the 36th CIML Meeting) invitations were received in order of priority from the Russian Federation, Australia and Israel. A decision will be made in due course, but it was noted that Israel's invitation could equally apply to the 2002 Committee Meeting.

Finally, concerning *Other matters* under **Item 16**, Mr. Magana gave information to the Committee concerning a speech made recently by the French Minister for Industry which was distributed to all participants concerning the development of metrology in France.

Mr. Faber concluded the Meeting by warmly thanking our Tunisian hosts for their excellent organization of the Meetings and for the incomparable hospitality that they had extended to Delegates and accompanying persons. He also thanked Mr. Mondher Zenaïdi for honoring Members with his presence at the opening of the Meeting and for his words of support not only for the Organization but for the concept of metrology as a whole. The Meeting had been a complete success, and Mr. Faber was especially happy that it had taken place in a Maghreb country for the very first time. This would, he hoped, pave the way for excellent future cooperation between developing and industrialized countries that are Members of the Organization, and maybe encourage other states that are not yet Members to join. ■

Presidential Council Meeting

Following the 34th CIML Meeting, a brief meeting of the Presidential Council was convened by President Faber in order to review the CIML Decisions and to initiate their implementation. It was also decided to hold the next Council Meeting in Paris during the week 21–25 February 2000, if possible in conjunction with a joint Metre Convention/OIML meeting and an OIML TC or SC technical meeting. ■

Réunions clés tenues en Tunisie

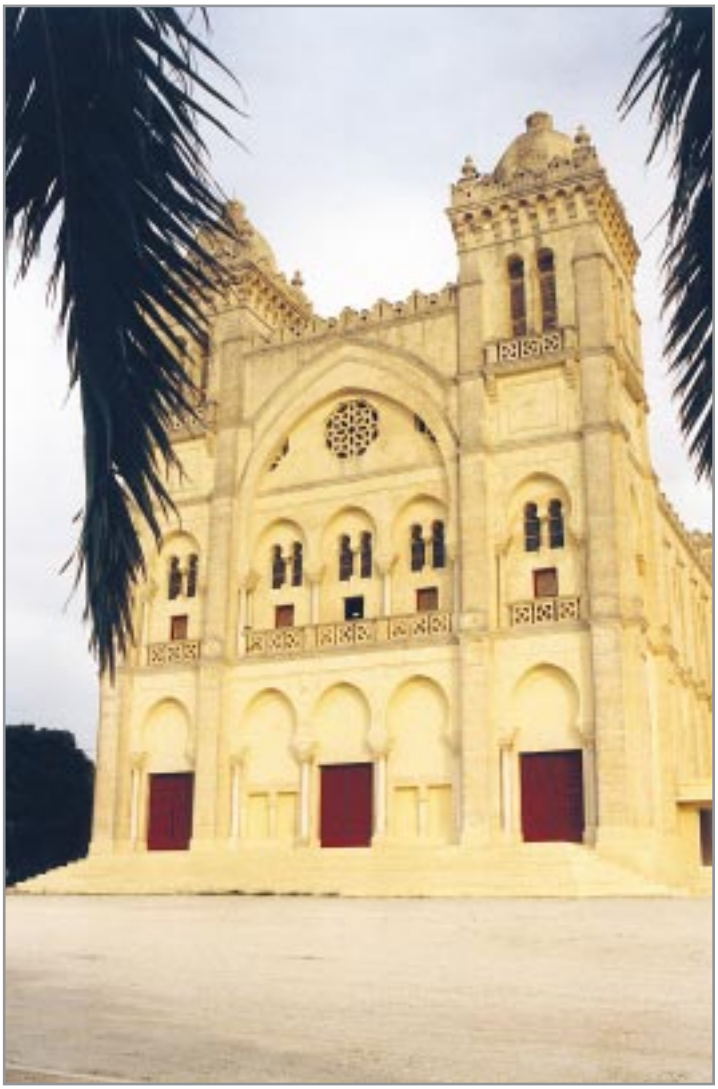
- Table Ronde sur la Coopération Euro-Méditerranéenne
- Conseil de Développement de l'OIML
- Réunion du CIML
- Réunion du Conseil de la Présidence

34

L'OIML s'est réunie à l'Hôtel Abou Nawas à Tunis, du mardi 5 au vendredi 8 octobre 1999, pour une série de réunions à la suite d'une Table Ronde sur la Coopération Euro-Méditerranéenne présidée par M. Jean-François Magana (Membre du CIML pour la France) et par Mme Ghaïet-El-Mouna Annabi (Membre du CIML pour la Tunisie). Une brève réunion des représentants de diverses ORML a également eu lieu.

Le mardi 5 octobre s'est tenu le Conseil de Développement de l'OIML; les débats ont duré une journée complète avec un nombre record de délégués présents; du mercredi au vendredi a eu lieu la 34ème réunion du CIML, présidée par M. Gerard Faber, suivie à la fin de la semaine par une réunion du Conseil de la Présidence.

Les comptes rendus complets de ces réunions sont présentés dans les pages suivantes, accompagnés d'une sélection de photos prises à l'occasion et dans les environs. Un programme complet d'excursions a été organisé par nos hôtes tunisiens à l'intention des personnes accompagnant les délégués, ainsi que deux réceptions: une Réception d'accueil de l'OIML se tenant le mercredi soir et un Dîner offert par le Ministère tunisien du Commerce le jeudi soir, animé par un très agréable groupe de musiciens et de danseurs locaux.



La Cathédrale de Carthage

Discours de Bienvenue par M. Mondher Zenaïdi Ministre Tunisien du Commerce

Monsieur le Président du CIML,
Monsieur le Directeur du BIML,
Mesdames et Messieurs les représentants des États Membres de l'OIML,
Chers invités,

Permettez-moi tout d'abord d'exprimer ma fierté et ma joie d'adresser le discours inaugural de la 34ème réunion du CIML qui se tient cette année à Tunis. J'aimerais profiter de cette occasion pour exprimer ma reconnaissance à l'OIML d'avoir choisi la Tunisie pour accueillir cette réunion.

Mes remerciements s'adressent également aux organisateurs de cette réunion qui constitue à n'en pas douter une occasion appropriée pour tous ceux qui sont concernés par la métrologie légale, d'étudier les problèmes liés à ce sujet du fait de leur importance aussi bien pour les consommateurs que pour les entreprises.

Ces dernières années, le monde a été témoin d'importants développements consistant principalement dans l'apparition de la globalisation de l'économie, de regroupements régionaux et d'importants développements scientifiques, particulièrement dans le domaine technologique et dans d'autres secteurs tels que les télécommunications et l'informatique. Les phénomènes de globalisation économique, de compétition féroce et de l'émergence de marchés internationaux ne permettent qu'à des marchandises de très haute qualité et produites à de très faibles coûts de pénétrer des marchés se situant dans cette nouvelle économie globale où la haute qualité et le rendement économique constituent la pierre angulaire des échanges.

Parmi ces changements, depuis le Changement du 7 novembre et sous la direction du Président Zine El Abidine BEN ALI, la Tunisie a mis en application un programme mixte destiné à libéraliser et à réformer notre économie par la mise en place d'un système d'économie de marché, la libéralisation du commerce extérieur, la réglementation du commerce intérieur et l'adoption de mesures encourageant les initiatives individuelles dans les domaines de l'industrie, du commerce, de l'agriculture et des services.

Toutes ces réformes ont conduit à consolider la productivité économique et à augmenter les taux de développement de façon significative. La dernière décennie a vu le PNB augmenter approximativement de 5 % à prix constants et de 6 % dans les secteurs non agricoles; les exportations ont augmenté de 7 % à prix constants.

Ces réformes concernaient également la métrologie légale, dont personne n'oublie l'importance, comme moyen de protéger les consommateurs et de promouvoir le commerce intérieur et extérieur grâce à l'utilisation d'instruments de mesure accrédités pour leur exactitude et à l'utilisation de méthodes scientifiques régies par la loi. Son Excellence le Président de la République a annoncé pendant l'inauguration du deuxième congrès de l'Association Tunisienne des Industriels et des Commerçants (UTICA), le 29 novembre 1995, la mise à jour de la structure de la métrologie légale qui date de plus d'un siècle, ainsi que l'adoption d'une nouvelle loi.

Cette nouvelle loi a été en effet adoptée en mai dernier. Elle a permis une meilleure définition des unités légales de mesure, l'organisation de leur utilisation par l'adoption du système international des unités de mesure dénommé S.I. Ce système est caractérisé par une plus grande harmonie entre les éléments qui le composent et une meilleure définition des unités de mesure, et est aussi à présent adopté par la plupart des États Membres de l'OIML dont la Tunisie. Ce système remplacera le système métrique que les pays développés ont abandonné depuis maintenant quelques années.

Par ailleurs, pour clarifier les conditions préalables de la construction, de la réparation et de la vente des instruments de mesure, cette nouvelle loi a clairement défini les différents types de vérification en métrologie légale tels que la reconnaissance de l'approbation des modèles, la vérification primitive et le contrôle statistique des produits préemballés, en plus de la vérification technique. Le but est de donner au consommateur le droit de réclamer la vérification d'un instrument de mesure dans le cas où il douterait de la capacité de cet instrument à déterminer avec exactitude les quantités mesurées.

Pour compléter ces mesures, un organisme consultatif, le Conseil National de Métrologie Légale, a été mis en place. Il est constitué de représentants de tous les ministères concernés par les activités de mesurage. Sa tâche consiste essentiellement à encourager la recherche et la promotion de la métrologie légale, le développement de la formation, une meilleure diffusion de l'information, l'encouragement de la coopération et l'échange des compétences entre les organisations nationales et internationales.

Nous avons également consolidé les autorités de métrologie légale en leur fournissant un personnel compétent, et avons en plus mis en place un programme de formation par l'apprentissage en créant une branche

technique au sein de l'Institut National des Sciences Appliquées et de la Technologie pour former des techniciens en métrologie. Le premier groupe d'étudiants a atteint la qualification requise cette année et ils contribueront sans nul doute au succès du programme de modernisation mis en place par l'État tunisien, par la volonté du Président BEN ALI d'introduire des systèmes de qualité conformes aux normes ISO 9000 et d'insister sur l'importance de la métrologie dans les entreprises en tant que condition préalable à l'obtention de produits de haute qualité.

De plus, d'autres mesures ont été prises en vue de l'installation de laboratoires pour l'étalonnage d'instruments de mesure et de pesage et de récipients afin de s'assurer de l'exactitude et de la conformité aux normes internationales, des outils de vérification utilisés par les agents métrologues. Cela s'ajoute au travail de préparation entrepris pour la mise en place d'un laboratoire national d'essai des instruments de mesure, en conformité avec la Recommandation Internationale R 76 publiée par votre Organisation.

La Tunisie a été l'un des premiers pays à rejoindre l'OIML et à systématiquement prendre part à ses activités. Elle a fait des efforts pour consolider les orientations de l'OIML car elle croit à la nécessité de coordonner les actions dans ce domaine au niveau international pour faciliter les transactions et éliminer les barrières techniques au commerce. La présidence de la Tunisie au Conseil de Développement de l'OIML est à la fois un honneur accordé à notre pays et une preuve de sa bonne réputation au sein des organisations internationales. Nous ferons tout notre possible pour coordonner les efforts conjoints de tous les pays membres du Conseil de Développement en vue de l'application de son programme faisant en sorte que ces pays puissent suivre le développement dont la métrologie est le témoin, et que le Conseil devienne le meilleur forum pour les responsables en charge de la vérification métrologique en leur donnant l'occasion de prendre part aux programmes de formation.

J'aimerais profiter de cette occasion pour féliciter les délégations des pays méditerranéens qui ont participé à la Table Ronde qui s'est tenue lundi, pour leurs efforts et les résultats qu'ils ont obtenus ainsi que pour les idées avancées. Cette Table Ronde a constitué un forum où ont été étudiées les solutions appropriées aux problèmes relatifs à la métrologie en général, et aux méthodes et moyens de vérification des instruments de mesure depuis leur conception jusqu'à leur commercialisation aux niveaux national et international. Cette initiative constitue également un cadre pour la mise en place d'une cellule de coopération entre les deux rivages de la Méditerranée pour promouvoir les activités de la métrologie et les structures compétentes en métrologie légale dans cette région. Elle constitue sans aucun doute un autre modèle pour la consolidation de la coopération entre les pays qui ont pris part à cette réunion.

Mesdames et Messieurs,

En conclusion, j'aimerais encore une fois rendre hommage à l'OIML pour l'énorme travail qu'elle a accompli pour promouvoir la métrologie légale à tous les niveaux et pour fournir aux experts des informations et des conseils relatifs à ce domaine en général et aux méthodes de vérification des différents instruments de mesure en particulier.

J'aimerais également féliciter le Conseil de Développement pour tous ses efforts et les actions entreprises pour aider les pays en développement, pour la formation des experts, et pour la consolidation des infrastructures des départements chargés de l'application de la législation et des recommandations relatives à la métrologie légale.

J'adresse mes remerciements chaleureux à chacun d'entre vous et je souhaite que votre réunion soit couronnée de succès.

Je souhaite également à tous les participants un séjour plaisant et agréable dans notre pays.

Merci de votre attention. ■

Allocution d'Ouverture par M. Gerard Faber Président du CIML

Monsieur le Ministre du Commerce,
Mesdames et Messieurs,
Chers Collègues,

C'est avec grand plaisir que je vous souhaite la bienvenue à cette 34ème réunion du Comité International de Métrologie Légale. J'aimerais avant tout exprimer mes sincères remerciements à tous ceux qui, ici à Tunis, ont joué un rôle dans les préparatifs de cette réunion. Je suis certain que leurs efforts seront pleinement reconnus et je me ferai à la fin de la semaine un devoir et un plaisir de leur exprimer ma profonde reconnaissance au nom de l'OIML pour une organisation aussi réussie.

Cette réunion présente manifestement un certain nombre de caractéristiques très particulières. L'une d'entre elles est que pour la première fois, le CIML se réunit sur le continent africain et dans un pays arabe.

Jusqu'à maintenant, nous avons organisé des réunions en Europe, en Amérique du Nord ou du Sud, en Asie et en Océanie mais, à l'exception de la participation de l'OIML à des réunions ou des ateliers organisés, par exemple, par l'UNESCO en Égypte ou par l'ARSO au Togo, nous n'avons jamais tenu une réunion importante de l'OIML sur le continent africain.

Je dois dire qu'il existe un certain nombre de signes convergents qui montrent que le continent africain en général, et les pays du Maghreb en particulier, occupent une place de plus en plus significative au niveau de la coopération dans le domaine de la métrologie légale: il y a seulement quelques mois un certain nombre de représentants de l'OIML dont moi-même, participaient à une réunion commémorative en Afrique du Sud; quelque temps auparavant, à la fin de l'année dernière, un atelier sur la Recommandation OIML R 76 était organisé par SADCMEL au Zimbabwe; je constate également que des organismes régionaux ou sous-régionaux se sont développés. J'espère que ce sont là des signes du développement rapide de la métrologie dans cette région.

Les autres traits spécifiques de cette réunion du CIML sont les suivants:

- pour la toute première fois, des organisations régionales de métrologie légale ainsi que des organismes régionaux ayant des activités connexes à la métrologie légale, ont été officiellement invités à participer à une réunion du CIML; bien sûr, jusqu'à présent, un certain nombre de Membres du CIML représentaient en fait également certains organismes régionaux aux réunions du CIML; cependant, cette invitation ne devrait pas être considérée comme une formalisation et une officialisation de la situation; en fait, nous serions heureux que les organismes régionaux considèrent cela comme une occasion de développer leur propre coopération inter-régionale;
- pour la première fois également, les Membres Correspondants de l'OIML ont été officiellement invités à participer à une réunion du CIML; l'OIML manifeste ainsi son intérêt envers les pays et économies en s'assurant que le plus possible bénéficient de ses activités et y participent selon leurs ressources.

Mises à part ces nouvelles caractéristiques, cette réunion du CIML devra - une fois encore - examiner les questions et prendre les décisions primordiales pour la vie de notre Organisation.

Suite au Rapport Birkeland qui a été finalisé il y a un an, le Conseil de la Présidence et le BIML ont défini certaines actions qui devraient être engagées rapidement ou au moins d'ici deux ou trois ans. Des propositions vous ont été envoyées il y a quelques mois et je suis certain que vous les avez examinées attentivement dans le but d'accepter le programme de travail proposé, que nous améliorerons et compléterons en fonction des commentaires que vous pourriez y apporter.

Les questions liées au développement doivent également être sérieusement considérées: hier, une réunion du Conseil de Développement de l'OIML s'est tenue sous la présidence de Mme Annabi, et nous attendons impatiemment le compte rendu de cette réunion et les propositions de travail à venir.

Également à l'ordre du jour figurent les points traditionnels traitant de l'évaluation de conformité, de la reconnaissance mutuelle des résultats d'essais, de la certification, des activités techniques, etc.

Au sujet de la coopération entre l'OIML et les autres organismes internationaux et régionaux, comme nous l'avons déjà mentionné, des discussions auront lieu concernant les activités de métrologie légale au niveau régional. Nous parlerons aussi des liaisons entre l'OIML et l'OMC, avec la participation d'une représentante de cette Organisation, Mme Liu, membre du Comité des Barrières Techniques au Commerce de l'OMC, qui se joindra à nous cet après-midi ou demain matin au plus tard.

Un nouveau point de notre ordre du jour concerne les activités du Conseil de la Présidence. Pour des raisons de transparence, il a été jugé approprié que le

Président du CIML présente un rapport sur le Conseil de la Présidence à chaque réunion du CIML. Il sera alors évident que le Conseil est un organe consultatif et que toutes les décisions demeurent de la responsabilité du CIML, sauf dans des cas urgents où le Président du CIML doit prendre des décisions rapides conformément à la Convention de l'OIML.

Étant donné que cette Réunion du CIML est la dernière avant la Onzième Conférence Internationale de Métrologie Légale, nous devons commencer à préparer cet événement important et à examiner notamment les questions financières afin de permettre à la Conférence de prendre les décisions qui s'imposent.

Une autre question très importante devra être soigneusement étudiée durant ces trois jours: la préparation du recrutement et de la nomination d'un nouveau Directeur pour succéder à M. Athané. Il y a plusieurs mois, je vous ai envoyé une proposition approuvée par le Conseil de la Présidence. Au cours de notre réunion, je vous informerai des réactions que j'ai reçues (peu, à vrai dire), mais n'hésitez pas à me contacter pour me faire part de votre point de vue.

Puisque j'ai soulevé la question des ressources humaines pour les postes clés, je pense qu'il est peut-être approprié d'aborder tout de suite le point 4 de l'ordre du jour, à savoir la question de la Présidence du CIML. Vous aurez ainsi la possibilité de réfléchir à la situation, d'échanger vos points de vue pendant les pauses café, les déjeuners et les dîners, afin de vous préparer à la discussion qui vous permettra de prendre une décision l'an prochain.

J'ai moi-même pris ma retraite à la fin de l'année dernière comme Directeur Général de l'Institut Hollandais de Métrologie, mais je conserve des liens étroits avec la métrologie en général et la métrologie légale en particulier du fait de ma nouvelle position de Conseiller du Gouvernement Hollandais pour ces questions. Mon gouvernement m'a également maintenu dans mon rôle de Membre du CIML pour les Pays-Bas, et je reste en contact avec les experts du NMi responsables des questions relatives à l'OIML, ce qui me permet de ne pas perdre de vue les différents aspects des activités de l'OIML.

Comme conséquence de cette nouvelle situation, je peux désormais consacrer plus de temps à l'OIML que cela n'était possible jusqu'à l'an dernier, et je dois dire que je suis très satisfait de cette situation étant donné l'intérêt personnel que je porte aux affaires de l'OIML.

Comme vous le savez, mon mandat actuel s'achèvera en décembre 2000 et il est donc temps pour le CIML de réfléchir à cette situation. J'en ai discuté avec certains d'entre vous, y compris les deux Vice-Présidents, et j'aimerais en toute simplicité vous informer que, si cela correspond à vos souhaits, je suis d'accord et me porte volontaire pour continuer à assumer mon rôle de Président du CIML.

La reconduction à mon poste maintiendrait également une continuité nécessaire pendant une période durant laquelle se produira un changement significatif au niveau de la Direction du BIML.

Cependant, le Comité peut aussi envisager la possibilité de nommer un nouveau Président qui me remplacera à la fin de l'année prochaine. Dans ce cas, il serait de ma responsabilité de commencer à sélectionner les éventuels candidats et de faire en sorte que vous puissiez faire le choix approprié à la prochaine réunion. Quoiqu'il en soit, vous disposez maintenant de trois jours pour étudier les divers aspects de cette question.

Une question similaire se pose concernant le Vice-Président Chappell, dont le mandat s'achèvera à la fin de l'année prochaine. Au point 4 de l'ordre du jour, je donnerai la parole à Sam afin qu'il puisse s'exprimer sur sa situation.

Avant de conclure, puisque j'ai introduit une question liée à la composition du Comité, je vais maintenant accueillir les nouveaux Membres du CIML qui ont été nommés depuis la réunion de Séoul. Ce sont:

- pour l'Espagne, M. Garcia,
- pour l'Irlande, M. Farragher,
- pour le Japon, M. Sakurai,
- pour le Kazakhstan, M. Turspekov,
- pour la République de Corée, M. Park,
- pour la Roumanie, M. Ocneanu, et
- pour la Slovaquie, M. Orlovski.

En ce qui concerne la Finlande, nous avons été informés que Mme Juntilla a quitté ses fonctions dans le domaine de la métrologie légale mais nous n'avons encore reçu aucune information concernant la nomination d'un nouveau Membre du CIML.

Mesdames et Messieurs,

J'aimerais renouveler mes remerciements à nos hôtes tunisiens et les féliciter pour l'excellent travail de préparation de nos réunions. J'aimerais également exprimer à tous les participants mon souhait que grâce à leur active contribution, cette réunion du CIML soit aussi fructueuse que possible pour l'avenir de l'OIML. Merci de votre attention. ■

Table Ronde

Coopération Euro-Méditerranéenne en Métrologie Légale

Lundi 4 octobre 1999

Une table ronde sur la coopération Euro-Méditerranéenne en métrologie légale s'est tenue en Tunisie le lundi 4 octobre 1999, en conjonction avec les réunions du Conseil de Développement de l'OIML et du 34ème CIML. Cette table ronde était présidée par M. Jean-François Magana (France) et Mme Ghaïet-El-Mouna Annabi (Tunisie).

Le développement économique et social des pays de la Région méditerranéenne exige le développement d'une structure et d'une politique de métrologie légale dans chaque pays: il est clairement important que les pays de cette Région organisent une coopération qui soit spécifique à la Région et qui puisse prolonger au niveau régional les travaux de l'OIML.

Trente-trois délégués en provenance de quatorze pays ont participé à cette table ronde, ainsi que deux organisations régionales de métrologie légale (ORML) et le BIML. Pour commencer la réunion, les délégués sont invités à se présenter et à donner une brève description des activités de métrologie légale dans leurs pays respectifs.

L'Albanie expose le besoin de coordonner les législations sur la métrologie légale, ce qui est confirmé par la délégation Algérienne: une assistance est clairement nécessaire sur un certain nombre de sujets tels que le choix des instruments équipant les laboratoires, la formation de personnel qualifié dans les techniques modernes de communication telles qu'Internet, et la reconnaissance mutuelle d'approbations de modèles avec d'autres pays. La législation en Algérie, continue le délégué Algérien, est très stricte en matière d'approbation de modèles.

Le représentant de l'Autorité Palestinienne explique que des activités de métrologie légale sont déjà conduites dans les cadres successifs des législations jordanienne ou israélienne, ou de la législation égyptienne applicable à Gaza. Ils travaillent à présent à une harmonisation et à une modernisation de la législation sur les poids et mesures et considèreraient utile de recevoir une assistance technique extérieure, par exemple de la part de la coopération Euro-Méditerranéenne.

Le Professeur Kochsiek (Allemagne) envisage une situation idéale dans laquelle un système global de mesure serait effectif dans dix ou vingt ans. Pour parvenir à cette situation, il est nécessaire de mener des discussions au niveau Régional, sur l'harmonisation de la métrologie légale, sur le développement de formations, d'assistance technique, etc.

D'autres pays confirment ces opinions: Chypre et l'Espagne ont déjà des liens avec d'autres pays et espèrent d'autres coopérations. L'Espagne est en outre prête à fournir de l'assistance en formation.

Monsieur Magana souligne que la métrologie légale est en évolution rapide depuis les deux dernières années, tant dans les pays industrialisés que dans les autres. La métrologie est à présent reconnue comme étant d'une importance capitale, bien que l'industrie ne soit pas assez familière avec la métrologie. C'est pourquoi en particulier une École Supérieure de Métrologie a été mise en place à Douai, au nord de la France. Concernant les besoins en assistance technique, il souligne que chaque pays ne peut à lui seul disposer que d'une capacité limitée, d'où l'intérêt d'une coopération Régionale.

La métrologie légale en Israël concerne essentiellement les équipements utilisés dans les commerces et les stations-service, mais Israël a besoin d'assistance dans d'autres domaines où la métrologie légale n'est pas aussi développée. En fait l'essentiel de la réglementation de métrologie légale date de 1947 (bien que de nouveaux textes soient actuellement en préparation). Une assistance dans ces domaines serait par conséquent appréciée. La délégation israélienne propose également à la délégation palestinienne d'établir des contacts bilatéraux.

Le Maroc a très peu de laboratoires d'étalonnage, mais a l'intention d'en établir d'autres.

La Tunisie confirme son besoin d'assistance en ce qui concerne la vérification d'instruments de mesure, particulièrement dans la formation de personnel expérimenté et qualifié. La délégation tunisienne considère que les certificats OIML sont souvent insuffisants pour les services de métrologie légale, et en outre, en raison de la limitation des accès à Internet, il n'est pas aisé pour la Tunisie d'obtenir les informations clés sur l'origine des certificats OIML.

Monsieur Bennett donne une présentation détaillée de WELMEC, Coopération Européenne en Métrologie Légale, exposant en particulier comment évoluent les réglementations de métrologie, quels sont les mécanismes de reconnaissance mutuelle, et évoquant l'assistance technique et la formation, les équipements de laboratoires et la traçabilité des équipements de vérification.

Monsieur Birch présente les coopérations en métrologie légale développées au sein de l'APLMF et de l'IOLMF, soulignant que ces organisations Régionales comprennent à la fois des pays hautement industrialisés

et des pays en développement, ce qui sera le cas de la coopération Euro-Méditerranéenne.

Il est suggéré que des groupes de travail soient formés après que des volontaires aient établi des plans de travail pour ces groupes. Il est suggéré que chaque sujet soit préparé par un groupe de deux experts, l'un d'un pays européen et l'autre d'un pays méditerranéen.

Le principal thème soulevé est la formation. Monsieur Wallerus, de l'Académie Allemande de Métrologie (DAM), présente son institut, qui développe des formations de base et des formations de perfectionnement en métrologie légale. La DAM, basée à Munich, est un organisme sans but lucratif, indépendante de l'industrie et des fabricants. Elle propose des formations à la vérification d'instruments, à l'application des normes ISO 9000 et EN 45000, etc. Elle assure également des actions de formation et d'assistance technique dans les pays destinataires, en langue anglaise, allemande, russe et chinoise.

L'École Supérieure de Métrologie de Douai formait auparavant des ingénieurs spécialisés en métrologie légale. Elle vient de rouvrir avec une formation de spécialisation d'ingénieurs métrologues pour l'industrie, cycle d'une année ouvert à des étudiants disposant déjà d'un diplôme d'ingénieur ou d'un diplôme équivalent. La formation consiste en huit mois de théorie et d'applications pratiques, suivis d'un stage de quatre mois dédié à un projet dans l'industrie. Un diplôme d'ingénieur spécialiste est délivré à l'issue de cette scolarité. Dans les années qui viennent, il est envisagé d'ouvrir une formation d'ingénieurs en métrologie légale, et une formation de techniciens en métrologie légale.

En conclusion des discussions de cette table ronde, Monsieur Magana élabore une série de résolutions (voir ci-dessous).

Les participants à la table ronde sur la Coopération Euro-Méditerranéenne en Métrologie Légale:

1 Attirent l'attention du CIML sur la nécessité de procéder rapidement à la révision du Document International n° 1 *Loi de Métrologie* en prenant en compte les aspects d'organisation administrative des pays, et en prenant également en compte l'utilisation des outils de la qualité: accréditation, certification des systèmes qualité.

2 Attirent l'attention du CIML sur la nécessité d'actualiser les documents relatifs aux moyens dont doivent disposer les services de métrologie légale.

3 Remercient Monsieur Wallerus (Allemagne) et Monsieur Boudissa (Algérie) de bien vouloir étudier ensemble les termes de référence et le programme de travail d'un groupe de travail sur la formation à mettre en place lors de la prochaine réunion de la Coopération Euro-Méditerranéenne.

4 Remercient Monsieur Laamoumri (Maroc) et Monsieur Birdseye (Royaume-Uni) de bien vouloir étudier ensemble les questions que posent les reconnaissances d'approbations de modèles, notamment pour les pays ne disposant pas de tous les moyens d'approbation, et de présenter leurs conclusions en vue de la prochaine réunion de la Coopération.

5 Remercient Madame Dori (Israël) et Monsieur Ben Hassine (Tunisie), de bien vouloir étudier et proposer une méthodologie et un programme de travail sur l'évaluation des besoins en assistance technique en vue de la prochaine réunion de la Coopération. Un expert européen sera proposé par le Secrétariat de la Coopération pour apporter son soutien à cette étude.

6 Remercient Monsieur Magana (France) de bien vouloir étudier avec Madame Annabi (Tunisie) les actions pouvant être proposées pour la prochaine réunion de la Coopération, dans le domaine de l'information mutuelle.

7 Demandent à Madame Annabi et à Monsieur Magana d'exprimer aux pays qui n'étaient pas présents, le souhait de les voir s'associer aux travaux de cette Coopération, et de leur adresser les informations sur les résultats de cette réunion.

8 Demandent à Madame Annabi de bien vouloir assurer la liaison entre cette Coopération et les autres coopérations régionales, notamment avec MENAMET en vue de résoudre conjointement les problèmes de traçabilité.

9 Demandent à Madame Annabi et à Monsieur Magana de poursuivre les contacts avec les organismes d'aide au développement (Commission Européenne, Banque Africaine de Développement, Banque Islamique de Développement, etc.) en vue de leur participation à la prochaine réunion.

10 Conviennent d'organiser la prochaine réunion de cette Coopération à l'occasion de la réunion de la Conférence de l'OIML de 2000. ■

Réunion des Représentants d'Organisations Régionales de Métrologie Légale: *Tunis, 5 octobre 1999*

Dr. Bennett, Président de WELMEC, a saisi l'occasion des réunions de Tunis pour organiser une réunion des représentants de huit RLMO: les Délégués de la Coopération Euro-méditerranéenne, SADCMEL, WELMEC, APLMF, IOLMF, SIM, COOMET et COLAMEL étaient présents.

Il est dit en conclusion qu'en plus du rôle que joue l'OIML dans le monde entier, la coordination entre les RLMO, basée sur les informations mutuelles et le partage de certaines ressources est d'une indéniable utilité; il convient donc de poursuivre la collaboration.

Dr. Bennett se propose d'organiser une réunion à Londres en octobre 2000 pour discuter de façon plus approfondie de ces questions importantes. ■

Réunion du Conseil de Développement de l'OIML

Mardi 5 octobre 1999

La réunion du Conseil de Développement de l'OIML a été ouverte par Mme Ghaïet-El-Mouna Annabi, élue Présidente du Conseil en 1998 à Séoul. Pas moins de trente-cinq pays ont assisté à la réunion ainsi que cinq Membres Correspondants de l'OIML en tant qu'Observateurs, auxquels se sont ajoutées six organisations de métrologie légale, une délégation de l'Autorité Palestinienne et quatre membres du BIML. C'était aussi la première fois que la réunion du Conseil de Développement a duré toute une journée.

Depuis la réunion du Conseil de Développement de 1998 à Séoul, dont le compte rendu a été publié et distribué, et pour lequel un rapport a été inclus dans le Bulletin OIML de janvier 1999, un certain nombre de contacts ont été établis ou maintenus avec des organisations internationales, des organismes régionaux de métrologie légale et des pays en développement; des représentants de l'OIML ont participé à des réunions de l'UN/ECE, de l'ISO DEVCO et du Comité des barrières techniques au commerce de l'OMC et un certain nombre d'autres contacts ont été également établis.

Dans sa lettre de décembre 1998, Mme Annabi a proposé qu'un groupe de stratégie soit créé pour guider les activités du Conseil de Développement, mais ce groupe de stratégie ne sera pas mis en place car, en fait, le Conseil de la Présidence constitue lui-même le groupe de stratégie globale de l'OIML. Cependant, la Présidente du Conseil de Développement est maintenant Membre du Conseil de la Présidence et cela permettra de s'assurer que la cause des pays en développement est prise en compte à ce niveau.

Parmi les questions essentielles discutées pendant cette réunion, il est généralement considéré que la formation et les moyens de financement des pays en développement sont les premières à devoir être examinées par le Conseil de Développement reconstitué. Également, l'application du Système de Certificats OIML aux pays en développement est une priorité et il est décidé qu'autant d'ateliers que possible doivent avoir lieu dans les pays en développement et qu'une aide financière doit être obtenue de façon que les délégués de ces pays puissent participer aux réunions, aux sessions de formation et aux séminaires. À cette fin, la coopération avec les organisations internationales de financement telles que l'UNIDO, la Banque Mondiale, le Fonds Monétaire International et les banques de développement, apparaît d'une importance primordiale pour s'assurer que le financement proposé puisse être obtenu. Il est également important d'élever le profil de la métrologie légale dans les pays industrialisés pour aider au développement des pays moins développés.

Il est donc généralement ressenti que le principal souci des pays en développement est de savoir comment financer leurs activités (formation, équipement, etc.) et cette question doit être réexaminée par le Conseil. Malheureusement, aucune des organisations de financement invitées n'a été en mesure d'assister à la réunion, mais des contacts seront établis avec elles après les réunions de la semaine.

Au sujet des Groupes de Travail du Conseil de Développement, il est indiqué que seul le WG 1 est actuellement encore en activité; ce groupe est dirigé par le Dr. Wallerus, de la DAM, Allemagne. La question est de savoir si les autres Groupes de Travail du Conseil de Développement peuvent ou doivent être réactivés.

Il est décidé que le WG 2, chargé des questions de la coopération de l'OIML avec d'autres organisations et de l'échange d'informations entre des organisations internationales, régionales et nationales sur des sujets divers, doit être supprimé. Le WG 3 dirigé par la Fédération Russe, et chargé des questions sur l'information et la documentation est actuellement inactif du fait de la charge de travail de la Fédération Russe sur d'autres sujets. Prof. Kochsiek propose donc de redéfinir les structures et les objectifs des différents groupes de travail; les conclusions sont résumées dans les Résolutions 2 à 5 ci-dessous.

Au point 3, des rapports sont faits par des représentants d'organisations régionales de métrologie légale: APLMF, COOMET, SADCMEL, WELMEC, COLAMEL, SIM et IOLMF.

Concernant le point 4 *Propositions pour le Programme de Travail de 2000–2001*, les thèmes suivants sont considérés comme prioritaires:

1 La révision de OIML D 1 *Loi de métrologie*, qui est aussi abordée dans le Rapport Birkeland, et qui fait partie du Programme de Travail du Conseil de Développement depuis un certain nombre d'années;

2 L'incitation des TC et SC correspondants, l'association du Conseil de Développement et du BIML ou la création éventuelle de futurs groupes de travail; l'incitation des TC et SC de l'OIML aidera à faire respecter les délais;

3 Un séminaire sur la modernisation de la législation de la métrologie légale: ce séminaire pourra être organisé par le BIML conjointement à la révision du Document D 1, peut-être dans le courant de l'été 2000;

4 La validation de cours de formation, de vidéos et d'autres matériels de formation pourra être effectuée, par exemple par le BIML, pour s'assurer que de tels outils correspondent aux exigences et Recommandations OIML actuelles.

Un sujet abordé lors de la réunion de 1998 à Séoul est également repris, à savoir la constitution d'une liste d'experts techniques en mesure de fournir une assistance technique aux pays en développement en particulier.

Le dernier point discuté concernant le programme de travail de l'année à venir est la possibilité de créer un site Internet consacré au Conseil de Développement: Mme Annabi propose de l'incorporer au site OIML existant. Le BIML travaillera sur ce projet en conjonction avec Mme Annabi.

Pour conclure la réunion, un certain nombre de résolutions ont été rédigées puis adoptées; elles se résument comme suit:

Résolutions de la Réunion du Conseil de Développement de l'OIML

Le Conseil de Développement de l'OIML:

1 prend note d'un rapport présenté par sa Présidente et par le BIML concernant les réactions des Membres du Conseil à une lettre de Mme Annabi et à une enquête réalisée par le BIML, et demande au BIML d'utiliser ces réactions pour la rédaction finale du programme de travail du Conseil pour 2000–2001;

2 prend note d'un rapport du Dr. Wallerus concernant les activités du WG 1 sur la formation (la liste de participation du WG 1 a été mise à jour à cette occasion) et exprime sa satisfaction tant pour le travail accompli que pour le travail en cours; le Conseil prend également note de propositions de M. Birch concernant l'éventuelle certification ou validation de cours de formation et d'équipements et demande au Dr. Wallerus et à M. Birch de réfléchir à cette proposition;

3 dissout le WG 2 sur les liaisons externes du fait d'un manque d'activité de ce groupe de travail et décide de placer ce thème sous la responsabilité directe de sa Présidente;

4 demande au Dr. Issaev d'essayer d'accélérer le travail du WG 3 sur l'information et l'équipement, éventuellement de scinder ce WG en deux WG, l'un pour l'information, l'autre pour l'équipement, et de faire un rapport au Conseil sur ce sujet afin de lui permettre de décider s'il convient de maintenir ce(s) groupe(s) de travail ou d'adopter des solutions de remplacement pour l'accomplissement de ces tâches;

5 demande au BIML de développer des termes de référence et des méthodes de travail pour les WG liés au Conseil;

6 prend note des rapports présentés par les Délégués des organisations régionales et suggère qu'ils prennent systématiquement en compte les objectifs du Conseil de Développement de l'OIML lors de l'élaboration de leurs propres programmes de travail;

7 prend note des informations données par le Prof. Kochsiek et M. Athané concernant un programme UNIDO-OIML-PTB et décide de demander au CIML de soutenir la participation de l'OIML à ce programme; le Conseil reconnaît la nécessité de s'assurer que les consultants employés pour le programme ont des compétences appropriées en métrologie légale (voir aussi point 14 ci-dessous);

8 prend note des informations données par M. Magana concernant une coopération naissante en métrologie légale dans la région Euro-méditerranéenne;

9 prend note d'un rapport de sa Présidente concernant l'utilisation d'Internet pour aider les pays en développement et demande à Mme Annabi et au BIML de développer rapidement les idées présentées à cette occasion, en prenant en considération tous les commentaires soumis par les Membres du Conseil pendant ou après la réunion;

10 demande au CIML de commencer rapidement la révision du D 1 parallèlement à une action pour l'harmonisation de la législation au niveau national sur la métrologie, et demande au BIML de travailler à l'organisation d'un séminaire sur ces sujets, y compris sur des considérations sur l'organisation administrative de la métrologie légale;

11 demande au CIML d'accélérer (ou, le cas échéant, de réactiver) le travail des TC/SC présentant un intérêt spécifique pour les pays en développement et d'envisager la possibilité pour le Conseil de Développement d'être représenté dans ce travail;

12 prend note d'une proposition visant à mettre à la disposition des pays en développement des listes d'instruments de mesure approuvés dans d'autres pays;

13 prend note d'informations fournies par certains membres et par sa Présidente concernant des activités spéciales en liaison avec les objectifs du Conseil et les encourage à poursuivre ces activités;

14 demande à sa Présidente et au BIML de réfléchir à la possibilité d'établir des listes d'experts dont la compétence devra être évaluée de façon appropriée;

15 demande à sa Présidente et au BIML d'établir rapidement un programme de travail détaillé pour la période 2000–2001 et de le soumettre à l'approbation par correspondance des Membres du Conseil avant la fin de 1999;

16 décide de tenir sa prochaine réunion en octobre 2000 conjointement à la Onzième Conférence de l'OIML;

17 demande à sa Présidente et au BIML d'introduire un point relatif au financement dans l'ordre du jour des prochaines réunions du Conseil. ■

Ordre du jour - 34ème Réunion du CIML

34

Allocutions d'ouverture - Appel des Délégués - Quorum - Adoption de l'ordre du jour

1 Adoption du compte rendu de la 33ème réunion du CIML

2 États Membres et Membres Correspondants

2.1 Nouveaux Membres - Adhésions attendues
2.2 Situation de certains Membres
2.3 Mise en application des décisions de la 33ème réunion du CIML en ce qui concerne une participation accrue des Membres Correspondants à certaines activités de l'OIML

3 Questions financières

3.1 Adoption du rapport comptable pour 1998
3.2 Examen de la situation financière pour 1999
3.3 Budget pour l'an 2000

4 Présidence du CIML

5 Directeur du Bureau

6 Politique à long terme de l'OIML: mise en application des décisions de la 33ème réunion du Comité en ce qui concerne les conclusions du Séminaire International de Braunschweig et du Rapport Birkeland

7 Rapport sur les activités du Conseil de la Présidence

8 Conseil de Développement

8.1 Rapport sur la réunion du Conseil de Développement du 5 octobre 1999
8.2 Programme de travail du Conseil de Développement
8.3 Liaisons avec les organisations internationales et régionales concernées

9 Liaisons avec des organisations internationales et régionales

9.1 Organisation Mondiale du Commerce (OMC)
9.2 Organisations de normalisation (en particulier: ISO, CEI, CEE/ONU)
9.3 Organisations d'accréditation (en particulier: ILAC et IAF)
9.4 Organisations régionales de métrologie légale (RLMO)
9.5 Organisations régionales ayant des activités en liaison avec la métrologie légale (en particulier: Commission Européenne et CEN/CENELEC)
9.6 Autres

10 Activités liées à la reconnaissance mutuelle des résultats d'essais, accréditation, etc.

11 Activités techniques

11.1 Programme de travail des TC/SC de l'OIML
11.2 Examen de la situation de certains TC/SC
11.3 Approbation de projets de Recommandations
11.4 Disponibilité des publications OIML sur papier, support électronique et via Internet; utilisation de l'Internet au sein de l'OIML

12 Système de Certificats OIML

12.1 Informations générales
12.2 Nouvelles Recommandations applicables au Système

13 Préparation de la Onzième Conférence

13.1 Informations sur l'organisation de la Conférence
13.2 Proposition d'ordre du jour
13.3 Examen d'une proposition préliminaire pour le budget 2001–2004 en tenant compte des besoins du BIML en personnel pour cette période

14 Rapport sur les activités du BIML

15 Futures réunions

15.1 35ème réunion du CIML (2000)
15.2 36ème réunion du CIML (2001)

16 Autres questions

17 Adoption des décisions

Clôture

34ème Réunion du Comité International de Métrologie Légale

Mercredi 6 – Vendredi 8 octobre 1999

34

La 34ème Réunion du CIML s'est tenue à l'Hôtel Abou Nawas, à Tunis, du mercredi 6 au vendredi 8 octobre 1999. 45 États Membres de l'OIML y participaient (trois autres États Membres étant de plus représentés) ainsi que cinq Membres Correspondants de l'OIML, sept institutions en liaison avec l'OIML, le précédent Président du CIML et quatre membres du personnel du BIML dont le Directeur.

Le compte rendu de la 33ème Réunion du CIML est approuvé sans commentaire (**Point 1**), et au **Point 2** *États Membres et Membres Correspondants*, M. Athané informe les Délégués que depuis la dernière Réunion du CIML, aucun nouvel État Membre n'avait rejoint l'Organisation; cependant trois pays envisagent de changer leur statut de Membre Correspondant pour celui d'État Membre, et un nouveau pays (l'Ouzbékistan) désire rejoindre l'OIML.

Deux Membres Correspondants ont été réadmis pendant l'année. Deux ou trois pays connaissent actuellement des difficultés pour payer leurs contributions annuelles; cependant aucune décision n'est à envisager pour le moment; de plus, la situation de pays placés dans une classe de contributions inférieure sera examinée durant la Onzième Conférence de l'an 2000.

Concernant le Point 2.3 *Mise en application des décisions prises par le Comité lors de sa 33ème Réunion concernant la participation accrue des Membres Correspondants à certaines activités de l'OIML*, le Comité avait pris deux décisions concernant les Membres Correspondants; premièrement, ils pouvaient être admis en tant qu'observateurs aux réunions du CIML. Cinq Membres Correspondants sont effectivement présents à cette 34ème Réunion; d'autres Membres Correspondants rencontrent malheureusement des problèmes budgétaires, et il est clair que l'OIML ne peut pas financer leurs voyages. Par ailleurs il est confirmé que tous les Membres Correspondants de l'OIML seront invités à la Onzième Conférence. Deuxièmement, en 1998, les Membres Correspondants de l'OIML ont été invités à participer au travail technique des TC et SC de l'OIML. En fait, depuis un an, un petit nombre de Membres Correspondants a participé effectivement à deux ou trois de ces réunions, notamment à la réunion du TC 3 qui s'est tenue à Paris en juin dernier. Le fait que l'accroissement de la participation des Membres Correspondants se fasse graduellement facilite la gestion de cette augmentation.

Au **Point 3** *Questions financières*, le rapport comptable pour 1998 est adopté sans commentaire, et

Mme Ghaïet-El-Mouna Annabi et M. Mohsen Laroui, Directeur Général de la Concurrence et du Commerce Intérieur

M. Athané informe les participants, sous le Point 3.2, *Examen de la situation financière pour 1999,* qu'il n'y a pas de changements dans l'évaluation du budget bien qu'il constate que les contributions des États Membres sont maintenant payées en moyenne plus tard qu'elles ne l'ont été l'an dernier. Il reconnaît que certains pays et certaines régions ont rencontré des difficultés économiques depuis quelques mois, mais de nombreux pays lui ont confirmé qu'ils paieront leurs contributions avant la fin de 1999.

L'ensemble des comptes, ainsi que le tableau financier de 1999, seront envoyés au début de l'an 2000 avec des explications appropriées. Au Point 3.3, *Budget de l'an 2000,* un document a été distribué aux Délégués, et ce sujet donne lieu à un certain nombre de commentaires. Certains pays pensent que les contributions de l'an 2000 ne doivent pas augmenter étant donné certaines restrictions budgétaires nationales. M. Faber répond que même si le taux d'inflation en France est actuellement très bas, nous avons quoi qu'il en soit un budget à équilibrer. L'Organisation aura à traiter de nombreuses propositions de nouveaux projets de travail, une charge de travail croissante et peut-être même des dépenses supplémentaires imprévisibles. La façon la plus sûre, selon lui, d'aborder le budget de l'an 2000, est donc de s'en tenir à celui initialement proposé. Il ajoute que si nous acceptons de réduire le budget de l'an 2000 et adoptons la croissance zéro, la base des discussions budgétaires de la Onzième Conférence sera telle que toute augmentation du budget sera plus difficile à accepter.

On fait également remarquer que le Bureau et l'Organisation dans leur ensemble ont réellement besoin d'un sérieux engagement des gouvernements pour continuer leurs activités avec succès; ce qui inclut le paiement annuel des contributions. M. Magana fait remarquer que le maintien du budget à une croissance zéro ne laissera de toute évidence aucune liberté pour l'adoption de projets supplémentaires, et que de plus le BIML est déjà sous pression pour mener à bien les tâches déjà en cours. M. Issaev (Fédération de Russie) soutient la proposition de la Conférence mais conseille de prendre en compte les besoins des pays en développement qui peuvent rencontrer certaines difficultés à régler leurs contributions. De toute façon, la Convention de l'OIML ne prévoit pas deux procédures parallèles pour le calcul de la part contributive de base, destinées l'une aux pays en développement et l'autre aux pays industrialisés. La base de calcul doit être la même pour tous les États Membres. Pour conclure ces discussions, et suite à un vote formel, le budget est maintenu tel qu'il avait été fixé par la Dixième Conférence.

Des discussions ont eu lieu sur le **Point 4** *Présidence du CIML* et le **Point 5** *Directeur du Bureau*; les décisions prises par le Comité ont été communiquées aux États Membres de L'OIML. Un Comité de Sélection est constitué pour organiser le recrutement d'un nouveau Directeur.

Un document rédigé par le BIML et approuvé par le Présidium du CIML fut distribué concernant le **Point 6**, *Politique à long terme, et mise en application des décisions prises par le Comité lors de sa 33ème Réunion concernant les retombées du Séminaire International de Braunschweig et du Rapport Birkeland.*

M. Faber déclare que la rédaction de ce document constitue un grand pas en avant pour l'Organisation et qu'il est encourageant de constater combien sa future stratégie a été si bien identifiée. Il ouvre la discussion pour toutes questions et suggestions sur ce sujet.

Concernant la première section de ce Rapport, sur *l'amélioration et l'accélération de l'activité technique des TC et SC de l'OIML et la participation croissante des Membres de l'OIML,* M. Athané signale que ce point ne doit pas exclure les pays en développement; au contraire, ces pays doivent être encouragés à participer activement aux activités techniques à l'avenir. M. Birch trouve le document très instructif et convient qu'il faut étendre le domaine d'application de la métrologie légale.

Au point B du Rapport, *Développement de procédures pour une reconnaissance mutuelle ou des accords d'équivalence,* Sam Chappell (USA) informe les participants qu'un document est en cours d'élaboration concernant les déclarations de conformité des instruments, par les fabricants, aux exigences de vérification primitive d'un instrument lorsqu'il existe un système de qualité.

Seton Bennett (Royaume-Uni) ajoute qu'il faudrait peut-être faire référence à IAF ainsi qu'à lLAC lors des discussions sur les aspects de l'accréditation des laboratoires de métrologie légale.

M. Vaucher (Suisse) convient qu'une reconnaissance mutuelle des résultats et des procédures est un point très important de ce chapitre du Rapport et mentionne l'accord de reconnaissance mutuelle qui doit être signé à Paris à la CGPM dans la semaine suivant la Réunion du CIML.

S'agissant du *développement d'un système OIML de marquage des produits préemballés satisfaisant aux exigences de l'OIML,* un thème qui concerne le Conseil de la Présidence et le TC 6 de l'OIML, M. Faber souligne l'importance de ce sujet, commentaire repris par M. Gögge (Allemagne), qui remercie le BIML d'inclure ce Point, ce que lui-même et M. Birch (Australie) avaient suggéré à la Réunion CIML de Séoul.

M. Kildal (Norvège) rappelle aux Délégués la Directive Européenne sur les produits préemballés; il pense que peut-être le travail de l'OIML sur ce sujet est superflu puisque les Directives Européennes font force de loi. Sam Chappell répond qu'une réunion de groupe de travail se tient actuellement à ce sujet et qu'il rendra compte au Comité du résultat.

Au point C traitant de *l'importance de la métrologie légale et identifiant les bases de la métrologie légale parmi d'autres aspects de la métrologie et d'activités connexes,* M. Birch attire l'attention des Délégués sur le degré

d'urgence qui doit être attribué pour la révision de OIML D 1 *Loi de métrologie* et aux publications connexes. Ce commentaire a été fait à plusieurs reprises au cours des réunions de la semaine et sera traité en priorité par le BIML.

Sur le thème: *faciliter et améliorer le travail des Membres du CIML, du Conseil de la Présidence et du BIML, sans oublier la coopération de l'OIML avec les ORML,* M. Issaev pense que le *Guide à l'intention des Membres du CIML* est une priorité et demande s'il peut être republié avant la date limite précédemment fixée de juillet 2000. M. Athané répond qu'un projet de révision a déjà été rédigé et qu'il attend la date limite de réception des commentaires des Membres du Conseil de la Présidence avant d'engager une autre action. Il indique que jusqu'à présent, il a reçu une seule réponse écrite; il demande, par conséquent, aux membres du Conseil de la Présidence d'émettre au plus vite un avis sur ce document.

M. Klenovský (République Tchèque) pense que le Site Internet de l'OIML pourrait servir à réduire la charge de travail du BIML en rendant les communications plus efficaces. M. Athané répond que ce sujet sera traité en détail au Point 11, bien qu'il recommande un certain degré de prudence puisqu'un certain nombre d'États Membres et de Membres Correspondants de l'OIML n'ont pas encore accès à Internet, mais il reconnaît que cela représente une importante étape en avant pour faciliter la communication entre les divers États Membres et autres organismes.

Seton Bennett réaffirme également la nécessité d'améliorer la communication entre les diverses organisations régionales et le BIML, et note que la coopération dans ce domaine est positive et doit absolument continuer.

Au Point D.5 du document Politique à long terme de l'OIML, *Amélioration de la coopération entre l'OIML et les autres organismes internationaux et régionaux,* M. Faber convient que la coopération dans ce domaine est d'une importance capitale et qu'elle rendra notre Organisation plus efficace. C'est l'une des conclusions les plus importantes de l'Étude Birkeland.

Un autre objectif du Document de Politique à long terme est d'identifier les associations de consommateurs aux niveaux international et régional susceptibles de s'engager dans une coopération avec L'OIML.

M. Nyström (Suède) déclare que ce type de coopération n'est pas toujours facile à mettre en place.

M. Athané indique que le BIML a récemment contacté de nombreux groupes d'utilisateurs d'instruments de mesure, d'associations de constructeurs, etc. et a reçu des réponses favorables que le BIML va traiter prochainement. Ceci met un point final aux discussions sur le Point 6.

Au **Point 7**, *Rapport sur les activités du Conseil de la Présidence,* M. Faber résume les discussions du dernier Conseil qui ont inclus certaines idées concernant le budget 2001–2004 et le réexamen des activités techniques de l'OIML. L'application de la décision du CIML concernant la participation croissante des Membres Correspondants a été confirmée et des discussions approfondies se sont tenues au sujet des actions devant être entreprises suite à la finalisation de l'Étude Birkeland. Il s'en est suivi un échange d'informations concernant le Séminaire sur les Logiciels tenu à Paris la semaine précédant les réunions de Tunis; des informations ont été données concernant la Directive sur les Instruments de Mesure (MID), sur le Séminaire tenu récemment en Afrique du Sud, et sur le développement spécifique de la métrologie en France.

Pendant la Réunion du Conseil de la Présidence de cette semaine, tenue conjointement à la 34ème Réunion du CIML, seront débattus les sujets concernant le nouveau Directeur du BIML, le budget, et la Conférence de 2000 à Londres.

Mme Annabi et M. Dunmill présentent ensuite un rapport concernant le **Point 8** *Activités du Conseil de Développement* et la réunion du Conseil qui s'est tenue avant cette Réunion du CIML. Un compte rendu détaillé est publié dans ce Bulletin.

Au **Point 9**, *Liaisons avec les organisations internationales et régionales,* des informations sont communiquées concernant l'Organisation Mondiale du Commerce: Mme Vivien Liu, conviée à la réunion en tant qu'invitée spéciale, rappelle aux Délégués que l'OIML a été admise comme Membre Observateur au Comité des barrières techniques au commerce de l'OMC en novembre 1997, et les deux Organisations entretiennent de très bonnes relations de travail. L'OIML a participé à plusieurs événements importants, échangé des idées et informé les membres sur le travail accompli. Mme Liu donne une présentation détaillée des activités de l'OMC et confirme l'objectif du Comité des barrières techniques au commerce de l'OMC de s'assurer que les activités liées aux réglementations techniques obligatoires et aux normes d'application volontaire ne créent pas de barrières au

commerce. La coopération de l'OIML dans ce domaine se développe bien et doit se poursuivre.

L'OIML entretient également d'excellentes relations avec le Secrétariat Central de l'ISO: M. Athané résume le cas particulier de l'élaboration conjointe de ISO 3930/OIML R 99 sur les gaz d'échappement des véhicules en cours d'adoption par les deux Organisations. Cependant, deux pays au sein de l'ISO ont voté "non", ce qui a eu pour conséquence d'obliger à soumettre le projet de Norme à tous les Pays Membres de l'ISO. Le texte doit être publié bientôt comme publication commune. Après les dernières modifications rédactionnelles par le secrétariat ISO, un rapport d'essai sera élaboré par les Pays-Bas dans le courant de l'an 2000. L'ISO fera savoir à l'OIML si elle souhaite produire également un rapport d'essai commun; si cela n'est pas le cas, ce document restera une publication OIML.

L'OIML prépare aussi des documents d'application en rapport avec ISO 17025 et le Guide 65 de l'ISO; le TC 3/SC 5 est responsable de cette question. Ces documents d'application seront publiés soit en tant que documents OIML soit en tant que textes communs ISO/OIML. M. Athané a demandé à l'ISO de désigner des experts compétents de l'ISO désireux de coopérer avec l'OIML pour l'élaboration de ces documents d'application.

En ce qui concerne la coopération avec la CEI, le travail n'est pas terminé pour les Recommandations OIML R 58 et R 88 sur les sonomètres pour lesquels le Comité Technique OIML correspondant reste vacant. La CEI élabore actuellement des normes à ce sujet et des publications communes CEI/OIML sont envisagées.

Au sujet de la CEE/ONU, un Atelier s'est tenu (le BIML y a assisté) sur l'utilisation et l'application de Normes Internationales. L'OIML est la seule organisation à avoir suivi l'application de ses Recommandations Internationales. Des rapports sont également présentés sur la coopération avec ILAC concernant l'accréditation ainsi qu'un bref résumé concernant la coopération avec les ORML dont les représentants font une présentation détaillée.

Le BIML établira des contacts plus étroits avec l'Organisation Mondiale de la Santé ainsi qu'avec la Commission Européenne et délivrera un rapport à ce sujet l'an prochain. Concernant le BIPM, aucune réunion n'a été organisée pendant l'année passée, mais M. Faber doit participer à la CGPM à Paris la semaine prochaine et s'entretiendra avec M. Kovalevsky et M. Quinn dans le but d'activer la coopération avec le BIPM.

Sam Chappell donne un compte rendu sur le **Point 10**, *Activités liées à la reconnaissance mutuelle des résultats d'essai, de l'accréditation, etc*.

L'année passée, M. Chappell avait présenté un rapport sur le projet de document OIML sur l'acceptation mutuelle des essais de modèles OIML. Ce projet avait démarré en avril 1998 pour répertorier les moyens permettant d'établir des accords multilatéraux en vue d'une telle acceptation. Des progrès ont été réalisés, en particulier à l'occasion d'une réunion tenue en février 1999. Il avait été décidé d'inclure ce projet au programme de travail de l'OIML. Ainsi, une réunion du TC 3 de l'OIML fut tenue au BIML en juin 1999, pour examiner tous les programmes de travail du TC 3. Un nouveau sous-comité TC 3/SC 5 sur *l'évaluation de conformité* est constitué et un document expliquant en détail la façon dont cette décision a été prise, est distribué.

Il est décidé de dissoudre le TAG_{cert} et la révision du document sur le Système de Certificats OIML est confiée au nouveau sous-comité dont le secrétariat sera tenu à la fois par les États-Unis et par le BIML.

L'objectif et le domaine du nouveau TC 3/SC 5 sera donc d'établir, conformément aux exigences de l'OIML, les règles et les procédures d'entretien de la confiance mutuelle dans les résultats d'essais des instruments de mesure et d'un contrôle de métrologie légale parmi les États Membres de l'OIML.

Trois principaux projets de travail sont identifiés comme prioritaires pour le TC 3/SC 5: premièrement, le document sur le Système de Certificats OIML pour les Instruments de Mesure; deuxièmement, le projet de document sur l'accord d'acceptation mutuelle des essais de modèle OIML; troisièmement, le projet de document de travail sur l'expression de l'incertitude de mesure dans les applications de métrologie légale.

Sam Chappell fait ensuite une présentation détaillée à l'aide de transparents de ces aspects du programme de travail, accompagnée des commentaires sur la révision de OIML R 87 *Contenu net des préemballages*, concluant ainsi les discussions sur le Point 10.

Le **Point 11**, *Activités techniques* est ensuite abordé. Le BIML distribue un *Rapport sur les activités techniques* dans lequel il est indiqué que des rapports annuels ont été reçus par le BIML de tous les TC et SC (18 TC et 42 SC) et envoyés aux Membres du CIML au début de 1999. Sur la base de ces rapports, il est constaté une augmentation globale de l'activité des organes tech-

niques de l'OIML en 1998 par rapport aux années précédentes.

Cette activité a eu pour résultat quatre projets de Recommandations qui doivent être présentés pour approbation au Point 11.3 et d'autres projets qui seront soumis par le BIML au vote par correspondance des Membres du CIML d'ici la fin de l'année.

En ce qui concerne le programme de travail des TC et SC OIML, deux nouveaux sous-comités sont établis avec leurs programmes de travail ainsi que cela avait été proposé au cours de la 33ème Réunion du CIML: le TC 15/SC 1 *Instruments de mesure pour rayonnements ionisants utilisés dans les applications médicales* (Fédération Russe) et le TC 15/SC 2 *Instruments de mesure pour rayonnements ionisants utilisés dans les processus industriels* (U.S.A.).

Lors de la réunion du TC 3 en juin 1999, il a été décidé d'établir un nouveau SC, avec son programme de travail constitué de cinq projets, y compris celui du TAG_{cert} et simultanément de dissoudre le TAG_{cert}. Le TC 3/SC 5 *Evaluation de conformité* est établi comme décrit ci-dessus. L'établissement officiel de ces trois sous-comités avec leurs programmes de travail est approuvé par le CIML.

Concernant les révisions et les nouveaux projets de travail proposés par les TC et SC, un certain nombre de nouveaux projets sont présentés par les TC 8, 9, 11, 17 et 18.

Au sujet des R 101 et R 109, suite à des consultations répétées entre le secrétariat russe et le BIML, il est jugé inapproprié de publier leurs annexes en même temps que les textes originaux des Recommandations, mais plutôt d'entamer leur révision sur la base des commentaires et propositions fournis par les membres du sous-comité. Le CIML approuve les projets de travail proposés.

L'activité du TC 3/SC 4 a recommencé sous la responsabilité de l'Allemagne, et un rapport de situation a été présenté en juin à la réunion du TC 3.

Deux TC/SC de l'OIML sont actuellement vacants: le TC 13 et le TC 8/SC 1. Le BIML a reçu une télécopie de Dr. Leitner (Autriche) indiquant que l'Autriche désire assumer la responsabilité du TC 8/SC 1 *Mesurage statique volumique*. Le Royaume-Uni envisage d'assumer la responsabilité du TC 13.

Il est également demandé des volontaires pour assumer la responsabilité de certains projets de travail au sein du TC 16/SC 1 car les Pays-Bas sont seulement en mesure de poursuivre le travail sur la R 99.

Au sujet du transfert de responsabilité, la responsabilité pour le réexamen et la révision de la R 35 *Mesures matérialisées de longueur pour usages généraux* sera transférée du TC 7/SC 1 (Fédération Russe) au TC 7 (Royaume-Uni) comme proposé par le Royaume-Uni et approuvé par la Russie. Le CIML approuve cette requête.

Il est également décidé d'établir un nouveau sous-comité TC 5/SC 2 sur les *Logiciels*, pour lequel la France et l'Allemagne assumeront le secrétariat conjoint. D'autres grandes priorités déjà abordées dans ce compte rendu ont été identifiées: par exemple la révision du D 1, la rédaction du Document *Expression de l'incertitude de mesure dans les applications de métrologie légale* et le sujet des *Préemballages*. Ces trois projets seront pris en charge par les États-Unis et il est précisé qu'il incombe à l'OIML d'accélérer le travail sur l'incertitude en métrologie légale, faute de quoi WELMEC se sentira obligé d'élaborer son propre document.

Concernant l'approbation des Projets de Recommandations OIML, les quatre Projets soumis sont approuvés par le Comité:

- Révision de la R 60 *Cellules de pesée*, qui sera publiée dès que possible par le BIML aussitôt que les commentaires finaux auront été reçus du secrétariat;
- *Instruments de mesure multidimensionnels*, pour lequel le secrétariat a pris note des commentaires reçus et modifié le document en conséquence. Un rapport d'essai a aussi été élaboré par l'Australie, et est prêt à être envoyé pour vote par correspondance. Ce document a été retardé pour s'assurer d'abord que la Recommandation elle-même était approuvée par le Comité. La Recommandation, avec son rapport d'essai, sera publiée en un document unique;
- La révision de la R 49 *Compteurs d'eau* et la révision de la R 65 *Machines d'essai des matériaux* sont également approuvées.

En ce qui concerne la R 49, deux projets avaient initialement été envoyés au BIML: l'un concernant les compteurs d'eau mécaniques et l'autre concernant les compteurs mécaniques et électroniques. Ce dernier est approuvé par le Comité.

Le point 11.4 traite de la disponibilité des publications OIML sur papier, sur support électronique et via Internet.

Chris Pulham informe le Comité qu'une enquête a été menée par le BIML au début de 1999 pour évaluer dans quelle proportion les Membres de l'OIML ont accès à Internet; les résultats ont été publiés dans le numéro d'avril 1999 du Bulletin OIML. Le site Internet de l'OIML est maintenant en place depuis presque trois ans; ce site a été créé par le personnel du BIML avec des coûts minimes. Le site comprend maintenant environ 25 pages incluant des informations de caractère général sur la métrologie légale, le rôle du BIML et de son personnel, les adresses des Membres, des annonces, le calendrier des réunions OIML, les comités techniques ainsi que l'état d'avancement des travaux, le Système de Certificats OIML (avec la liste complète des certificats OIML enregistrés), les publications et les liens avec les sites d'organisations en liaison avec l'OIML. Il a été tenu compte dans le développement du site, des idées et des suggestions émises par les Membres du CIML durant l'enquête.

Depuis le début de l'année, quelques 8000 connexions ont été comptées. Il y a actuellement environ 1000 connexions par mois - en provenance du monde entier - et le site est référencé sur quatre ou cinq moteurs de recherche. Depuis la fin de septembre 1999, un nouveau système de menu a été rendu opérationnel; le site est bilingue français-anglais et sera bientôt trilingue avec l'ajout de la langue espagnole; le Membre du CIML pour l'Espagne a très aimablement proposé de traduire en Espagnol les pages concernées.

Au sujet de la disponibilité des publications OIML sur différents supports, aucune décision n'est prise concernant "l'abandon" de l'impression sur papier des publications OIML; ce sujet sera abordé plus en profondeur au cours de la Onzième Conférence à Londres l'an prochain. Cependant, le BIML accroît ses efforts pour rendre ses publications disponibles dans un format électronique d'accès universel (Adobe Acrobat PDF) et actuellement 43 Recommandations sont disponibles en français et en anglais, soit sur disque, soit directement téléchargeables depuis notre Site pour les Membres du CIML, y compris notamment toutes les Recommandations applicables dans le cadre du Système de Certificats OIML.

Un formulaire de commande en ligne a récemment été incorporé au site de telle sorte que des parties extérieures (autres que les Membres du CIML) puissent passer directement commande en ligne.

Est ensuite abordé le **Point 12** *Le Système de Certificats OIML* incluant des informations générales sur le Système et les Recommandations applicables au Système. Un document distribué par le BIML donne le contexte de la création et des détails de l'évolution du Système créé le 1er janvier 1991 afin de faciliter, d'accélérer et d'harmoniser le travail des organismes nationaux ou régionaux qui approuvent des modèles d'instruments de mesure. A ce jour, quelques 540 certificats ont été délivrés, 28 Recommandations OIML ont été rendues applicables au Système et 21 Autorités de Délivrance dans 19 États Membres ont été établies. Plus de 120 demandeurs et fabricants d'instruments de mesure de 25 pays différents ont bénéficié de certificats OIML délivrés par les Autorités de Délivrance de 13 États Membres.

Au Point 12.1, la question d'un développement plus avancé du Système de Certificats est soulevée: certaines actions seront exécutées au sein du nouveau TC 3/SC 5, y compris la définition des principes de protection juridique des certificats OIML, la coordination du développement de ce système avec des activités connexes menées par les organisations internationales et régionales concernées par les essais, la certification, l'évaluation de conformité et l'accréditation, ainsi que l'organisation d'intercomparaisons visant à harmoniser les exigences nationales et les procédures d'essai de modèles, ou l'utilisation d'intercomparaisons entreprises au sein d'autres organismes internationaux ou régionaux et la publication des résultats, et l'augmentation de la confiance des Autorités de Délivrance et autres organismes, et enfin l'application des procédures d'accréditation à la certification OIML.

Les Membres du CIML et le BIML sont activement encouragés à poursuivre la promotion du Système aux niveaux national, international et régional. Le statut d'Observateur de l'OIML au sein du Comité des barrières techniques au commerce de l'OMC peut être utilisé avantageusement pour promouvoir les activités de certification de l'OIML fondées sur la grande priorité attribuée par l'Accord sur les barrières techniques au commerce à l'évaluation de conformité basée sur des normes harmonisées au niveau international.

Une enquête sera également menée parmi les fabricants d'instruments de mesure portant un intérêt potentiel au Système afin de mieux comprendre leurs demandes et par-là de les encourager à mieux utiliser le Système; par ailleurs, les organisations internationales et régionales en liaison avec l'OIML seront tenues

Martin Birdseye et Seton Bennett (NWML, Royaume-Uni) rendent compte des préparatifs pour la Onzième Conférence à Londres en octobre 2000

informées des avantages et des développements ultérieurs du Système.

Il est aussi ajouté au point 12.2 que trois des Recommandations approuvées par le Comité deviendront applicables au Système dès leur publication.

M. Athané soulève le cas spécifique de la R 60 *Cellules de pesée*. Une décision est prise par le Comité sur ce point, notamment concernant les essais additionnels demandés pour l'édition 1999 de la R 60 comparée à l'édition 1991, et la période pendant laquelle les certificats peuvent être délivrés selon l'édition 1991.

Au **Point 13** *Préparation de la Onzième Conférence*, il est rapporté que les préparatifs des réunions de Londres sont bien avancés; le NWML est certain que l'événement sera un succès. Il est également suggéré qu'une Table Ronde sur un sujet intéressant l'Organisation, puisse être organisée conjointement à la Onzième Conférence et à la 35ème Réunion du CIML; il est demandé aux Membres du CIML de faire des propositions de thèmes pour cette Table Ronde et de les soumettre au BIML avant la fin de 1999.

M. Athané a établi une proposition préliminaire pour le budget 2001-2004, prenant en compte les besoins en personnel du BIML pour cette période. A propos de ce document, M. Athané signale que le Conseil de la Présidence se réunira au début de l'an 2000 pour discuter cette proposition de budget; les suggestions des Membres du CIML sont toujours bienvenues et leur date limite est le 31 décembre 1999. Il ajoute que la situation économique de certains pays l'amène à conclure qu'une augmentation du nombre d'agents permanents du personnel du BIML ne peut être envisagée. Cependant, il sera toujours possible de considérer le concours d'experts pour des périodes spécifiques et pour l'accomplissement de tâches spécifiques. Les rétributions seraient prélevées sur le fonds de réserve, pour ne pas rendre nécessaire une augmentation du budget. Il suggère qu'il n'y ait pas d'augmentation des contributions des États Membres, mais que si de nouveaux États Membres rejoignent l'Organisation, leurs contributions s'ajoutent simplement au budget, augmentant ainsi le montant total disponible.

Le BIML distribue un *Rapport sur ses activités* au **Point 14**. Ce document est reproduit dans sa totalité au chapitre *Informations* de ce Bulletin OIML.

Sur la question des *Futures réunions*, **Point 15**, pour l'année 2001 (c'est-à-dire pour la 36ème Réunion du CIML), des invitations ont été reçues, dans l'ordre de priorité, de la Fédération Russe, de l'Australie et d'Israël. Une décision sera prise en temps utile, mais il a été noté que l'invitation d'Israël pourrait également s'appliquer à la réunion du Comité de 2002.

Finalement, en ce qui concerne les *Autres questions* au **Point 16**, le Comité prend note d'informations données par M. Magana en ce qui concerne un discours prononcé récemment par le Ministre français de l'Industrie au sujet du développement de la métrologie en France, distribué à tous les participants (ce discours a été distribué à tous les participants).

M. Faber conclut la Réunion en remerciant chaleureusement nos hôtes tunisiens pour leur excellente organisation des Réunions et pour l'incomparable hospitalité qu'ils ont manifestée tant aux Délégués qu'aux personnes qui les accompagnent. Il remercie également M. Mondher Zenaïdi d'avoir honoré les Membres du Comité de sa présence à l'ouverture de la Réunion et pour ses paroles d'encouragement non seulement pour l'Organisation mais pour la métrologie dans son ensemble. La Réunion a été un succès complet, et M. Faber est particulièrement heureux qu'elle se soit tenue pour la première fois dans un pays du Maghreb. Ceci, il l'espère, conduira à une excellente future coopération entre les pays en développement et industrialisés qui sont Membres de l'Organisation, et peut-être encouragera d'autres États non encore Membres à se joindre à nous. ■

Réunion du Conseil de la Présidence

A l'issue de la 34ème Réunion du CIML, une brève réunion du Conseil de la Présidence est organisée par le Président Faber afin de réexaminer les Décisions du CIML et d'initier leur mise en œuvre. Il est également décidé de tenir la prochaine Réunion du Conseil à Paris durant la semaine du 21 au 25 février 2000, si possible conjointement à une réunion commune de la Convention du Mètre et de l'OIML, et à une réunion technique de TC ou SC de l'OIML. ■

Software Seminar

A Seminar on Software was held in Paris from 30 September – 1 October 1999, jointly organized by the French Sous-Direction de la Métrologie / BIML. As a result of this event, the CIML has decided to establish a new Subcommittee TC 5/SC 2 Software under the joint responsibility of France / Germany (see CIML Meeting report).

It is expected that some of the lectures delivered will be published in future editions of the Bulletin.

Lectures

REPORT

Workshop on Weights

Borås, Sweden (13–15 October 1999)

Debbie Ripley, NIST, USA

The Swedish National Laboratory for Mass, under the Swedish National Testing and Research Institute (SP) and in cooperation with the NIST Secretariat of OIML TC 9/SC 3*, the TC 9 Nordic Task Group and the BIML, held a workshop to disseminate information on the 1st Committee Draft of R 111 *Weights of classes E_1, E_2, F_1, F_2, M_1, M_2 and M_3* to specialists from national standards laboratories. The objective was to ascertain the effectiveness, value and proper functioning of the *Test procedures and test report format* in this 1st CD of R 111, which involves the accuracy classification of weights.

The workshop took place at SP over three days, 13–15 October 1999, and included 35 participants from 19 different countries.

Lectures

On Wednesday morning, Håkan Nilsson (SP Project Leader of Metrology) welcomed participants to SP and made opening remarks.

Ian Dunmill (BIML Assistant Director) presented an overview of the OIML; he addressed what legal metrology is, its impact on society, governmental roles in legal metrology, the International Conference and Committee, Presidential Council, role of the BIML, TC's/SC's, Development Council and certification - including an update on the number of certificates issued to date.

Håkan Källgren (SP) provided a background to the Nordic Task Group, its developments and contributions to the revision of R 111, and explained how the workshop would be arranged. Debbie Ripley, on behalf of the Secretariat, gave a presentation on the Secretariat's plans for the revision of R 111, and a projected time schedule for finalizing the Recommendation.

Dr. Peter Lau (SP) spoke on density determination: his presentation centered on the methods conventionally used for measuring the density of artifacts. In addition, he described a newly developed method suitable for larger weights whereby a weight is inserted into a container of known volume, and the container is then filled with a well-defined amount of water.

An overview of mass calibration was presented by Dr. Lars Nielsen (Dansk Institut for Fundamental Metrologi, DFM, Denmark). He addressed the equilibrium equation of the balance, the calibration of a test weight by direct comparison with a reference weight, the difference between true mass and conventional mass, weighing schemes for the elimination of drift, and the use of check standards.

On Thursday, Dr. Michael Gläser (PTB) spoke about uncertainty calculations in mass calibrations including the terminology, the reporting of the results of a measurement and conventional mass as used in R 111.

Dr. Leslie Pendrill (SP) addressed magnetic measurements in mass calibrations. His presentation included topics on the sources of magnetic fields such as the mass comparator and the mass standard, the magnetic quantities and the magnetism requirements of R 111.

Mr. Ulf Jacobsson (SP) gave the final presentation on Friday: he addressed inverted subdivision, or the multiplication of the kilogram. This is a method used by SP, PTB and others where the weighing design consists of ten sets of a double substitution weighing using seven ABBA series in each set. One advantage of this method is that it offers greater confidence in the results due to increased redundancy of the procedure.

Exercises

The participants were divided into four groups, which visited four laboratories to determine calibration parameters and perform tests in magnetism, density and surface roughness on various sets of weights according

* *TC 9: "Instruments for measuring mass and density". TC 9/SC 3: "Weights"*

to the requirements of the 1st CD of R 111. Each laboratory exercise was conducted and guided by an assigned Leader from SP.

During the exercises, the groups listened to additional presentations. In the surface roughness exercise, Lars Sandin and Lisbeth Neugebauer (SP) and Debbie Ripley gave an overview of how to complete the application form and the checklists, and how to determine the surface roughness of a specimen using various tools available. Dr. Daniel Lindqvist gave a presentation on his work in surface roughness covering profiling techniques versus light scattering techniques. In addition, participants were able to observe a stylus profiling system used at SP.

In the magnetism section, Dr. Leslie Pendrill and Esten Koren (Norwegian Metrology and Accreditation Service) and Jan-Erik Thor (SP) gave an overview of how to determine the magnetic properties of a specimen, citing the advantages and disadvantages of the various methods, as well as the potential dangers of magnetizing a specimen.

The density exercise was led by Dr. Peter Lau, Jukka IsoPahkala and Dan Waltersson, all of SP. This exercise gave an overview of the methodologies and tools available, what the preferred methods were as well as which would give the most accurate results. The participants were able to break up into smaller groups to test out or observe each of the six different methods cited in the 1st CD of R 111.

Dr. Lars Nielsen and Karsten Simonsen (DFM) and Joel Vogler and Fredrik Langmead (SP) conducted the calibration exercises. Participants were given an overview of how to proceed with the calibration and verification of a specimen, perform the uncertainty calculations and complete the test forms.

On Thursday evening, all participants and SP staff visited Torpa Stenhus, a very old castle, for a guided tour and lecture on the history of Sweden during the middle ages. Then two invited speakers gave talks: Dr. Masaaki Ueki (NRLM, Japan) presented a method for determining the density of a weight using an acoustic volumeter, and Mr. Jan Björkman (LKAB, Sweden) spoke about problems encountered when weighing in heavy industry. These were followed by an OIML sponsored traditional Swedish dinner.

After completion of the laboratory sessions on Friday, there was a discussion on the workshop and the 1st CD of R 111. The respective Leaders presented the results of all the laboratory exercises, including comments from the participants on the test procedures, test forms, and any general comments on the exercises.

Conclusions

The workshop was an opportunity to test out the procedures and the test report format before publication of R 111 and comments and questions raised by the participants on how to verify the quality of weights were important contributions to the ongoing effort in revising this Recommendation.

Both the USA Secretariat and the Nordic Task Group received very useful comments and constructive criticism of the 1st CD of R 111. Many of the test procedures continue to need further clarification as well as the addition, deletion and clarification of certain text within the document.

All the participants agreed that the draft should be divided up into modules according to accuracy class requirements. Several of the countries represented at the workshop still use hexagonal weights; it was their opinion (and that of some other participants) that the hexagonal weight sections be removed from R 111 but retained as a separate OIML Recommendation.

Discussions also included the necessity for more or less theoretical text on uncertainty and magnetism sections and there was a suggestion that the theoretical portions could be published in an International Document. ■

REPORT

15th WELMEC Committee Meeting

Warsaw, Poland (23–24 September 1999)

Dr. Bennett opened the 15th WELMEC Committee Meeting by welcoming the Committee as well as Dr. Skubic from the new WELMEC Associate Member country of Slovenia. Speaking on behalf of GUM, Dr. Mordzinski welcomed the Committee to Poland and reiterated the importance of participation in WELMEC. Dr. Bennett added that he was glad to see John Birch represent APLMF at a WELMEC Committee Meeting for the second time and also expressed his thanks to GUM for organizing it.

He continued by informing participants that all the actions resulting from the Resolutions of the 14th Meeting had been achieved, with the exception of one.

Dr. Bennett said that, in fulfillment of Resolution 13, he had written a letter to the European Commission concerning the relationship between conformity assessment activities and market surveillance, but had not received any reply.

WELMEC has made significant progress and achieved much since its last Meeting. The Chairman's report contained 6 main points:

i) Draft Memorandum of Understanding - all 18 signatories have indicated to the secretariat their consent to the proposed amendments.

ii) MID - With Ms. Buckley's departure from the European Commission it was not clear when progress would be made with the MID. WELMEC could most usefully contribute to progress with the technical annexes through WG 8.

iii) Notified Bodies - (a) on the issue of coordination, Dr. Bennett had discussed with Ms. Buckley the possibility of the Commission appointing WELMEC to coordinate Notified Bodies for EC verification. However Dr. Bennett indicated that he would be looking to re-open this discussion with DG III.

(b) With regards to EN 45000 series, EA are preparing guidance notes on the application of EN 45004, EN 45011 and EN 45012. Mr. Koch attended all three EA meetings on this matter this year. Dr. Bennett said that the application of standards was of interest to WG 2 and WG 4. From Mr. Koch's report it was clear that the guidance on EN 45011 was near completion. Dr. Bennett suggested that WELMEC take a closer look at these guides, concentrating on legal metrology for notified bodies carrying out type approval and whether WELMEC ought to produce guides on the EN 45000 series applicable to legal metrology.

iv) WELMEC Working Groups - Dr. Bennett showed the Committee that there was potentially some overlap in the work carried out by the working groups by citing the examples of WG 2 and WG 4, and of WG 5 and WG 6 on (market surveillance and pre-packages). One such way to avoid duplication of work was good communication, which could be aided by Working Groups having their own pages on the Internet. Dr. Bennett said that it would be possible for Working Groups to have their own secure pages on the WELMEC web site, otherwise Working Group chairmen could create their own web site provided they observed the following criteria:

- home page should follow common WELMEC format;
- links to be established to and from the main WELMEC web site;
- no links to non-metrology web sites;
- no advertising on WELMEC pages.

v) WELMEC and OIML - Dr. Bennett said that much of WELMEC's work recently could be of interest to the OIML. For instance, WG 10's proposal to prepare interpretation documents of OIML Recommendations, and the possible work on uncertainty by WG 4, as well as WG 7's software guide and the guides on automatic weighing instruments being prepared by WG 2. He stressed that it is therefore essential to maintain good communication between WELMEC and the OIML.

vi) EQUIP - replaces TCU and brings together training and qualifications in legal metrology. Dr. Bennett said that WELMEC was not in a position to make a financial contribution to EQUIP but could perhaps produce a register of experts in WELMEC who could participate in the EQUIP program. Dr. Bennett circu-

lated an invitation he received from PRAQ III for a PEFIM Conference (*See account later in this issue of the Bulletin*) which might be of special interest to Central and Eastern European countries.

There was a general discussion concerning a possible WELMEC submission on the draft guide to EA and it was decided that WG 4 would draft some comments and send them to EA.

Dr. Bennett said that the final version of the Memorandum of Understanding had been circulated to the Committee and that in making changes to it, he had relied on the MoU's own power. Changes within WELMEC had been reflected in the MoU, although Dr. Bennett had not felt it appropriate to include clauses on financial commitments and majority voting. Dr. Bennett reiterated the fact that all 18 WELMEC members had given their consent to the amended version of the MoU and that the amendments were approved unanimously by the signatories.

Dr. Bennett told the Committee that he understood that work on the Measuring Instruments Directive (MID) had stopped and it is likely to be early 2000 before the Draft Directive will be published. In response to discussions from the floor, Dr. Bennett hoped that the Commission regains momentum and includes WELMEC in future discussions on the MID.

There was some discussion over WELMEC guides possibly having an input into OIML documents on the subject of the WELMEC Type Approval Agreement, after which the Committee charged the Secretariat with republishing Annexes 2 and 3 of the Agreement.

Reports were then given by the various WELMEC Working Groups. On the subject of WG 4, Mr. Lindløv said that WELMEC 3 (*Guide for the assessing and operation of Notified Bodies performing conformity assessment according to the Directive 90/384/EEC*) was now published. On the issue of uncertainty in legal metrology, Mr. Lindløv suggested that WG 4 ought to establish a sub-group to tackle the matter: Bernard Athané supported such a sub-group, which could represent European views at an international level, thus enabling OIML to progress its work on uncertainties throughout the world.

Dr. Bennett suggested that WG 4 be the main focus for input from WELMEC into EA discussions and on EA guidance documents on standards. The Committee invited WG 4 to develop a work program and revise its Terms of Reference to incorporate this relationship with EA.

Mr. Klenovský informed the Committee that Euromet met in Prague last May, where it approved a change to its MoU and widened its membership. Euromet is in the process of preparing guidance on inter-comparisons and might seek to obtain legal status in future to help in European assistance programs. The next meeting in 2000 is due to take place in Turkey. Mr. Birch spoke on behalf of the APLMF and Mr. Athané on behalf of the OIML.

Mr. Magana said that he would like to discuss the issue of programmes of technical assistance at the next WELMEC Committee meeting. He said that the Commission and CEN were looking to set up a legal entity to manage all the technical assistance programmes and that perhaps WELMEC ought to take stock of the program and possibly set up a database of experts. Mr. Magana said he would try to circulate some proposals for possible actions to the Committee.

There was some discussion on the merit of holding a WELMEC conference - possibly on the globalization of trade. Dr. Bennett re-affirmed that he would seek to hold a meeting with the chairmen of all the RLMO's and that this might identify a need for a global conference. Dr. Bennett said that he hoped to discuss this further in the next Chairman's Group meeting.

Mr. Lindløv re-confirmed his offer on behalf of the Norwegian Metrology and Accreditation Service to host the 16th WELMEC Committee meeting in Norway. The meeting would take place on 8–9 June 2000 to coincide with the 10th anniversary of the signing of the WELMEC Memorandum of Understanding.

Dr. Bennett thanked Mr. Lindløv for his offer and the Committee accepted the invitation.

The Committee approved the Resolutions (see insert) and Dr. Bennett thanked Dr. Mordzinski, Mrs Klarner-Sniadowska and the staff from GUM for organizing the meeting and their kind hospitality; he looked forward to meeting in Oslo next year. ■

Resolutions of the 15th WELMEC Committee Meeting overleaf ▶

Resolutions of the 15th WELMEC Committee Meeting

The WELMEC Committee, meeting in Warsaw on 23 and 24 September 1999

Welcomes	Slovenia, the new Associate Member;
Approves	unanimously the amended Memorandum of Understanding;
Instructs	the Secretariat to republish the Type Approval Agreement with annexes amended to reflect information provided by Members;
Instructs	the Chairman to seek ways to improve communication and cooperation with other regional legal metrology groups;
Recognizes	the importance of working closely with OIML Technical Committees and with the BIML on matters of international interest;
Approves	the Terms of Reference and Work Programme of WG 2;
Requests	WG 4 to discuss its Terms of Reference again in the light of discussion at the meeting, prepare a new Work Programme and circulate comments on the EA guidance document(s);
Approves	the operation of WG 5 under a joint LACOTS/SWEDAC Secretariat and requests WG 5 to amend its Terms of Reference, taking account of comments made by the Committee, and to complete its Work Programme proposals;
Approves	the Terms of Reference of WG 6 and requests the WG to publish the remaining draft guides as quickly as possible;
Approves	the Terms of Reference and Work Programme of WG 7 and approves the publication of WELMEC Guide 7.1 on software requirements;
Approves	the Terms of Reference and Work Programme of WG 8 and agrees that the work should not proceed too quickly until some progress has been made with the MID in the Council;
Instructs	the Chairman to request a meeting with DG III to discuss WELMEC's role in proposing amendments to the MID's technical annexes as well as the co-ordination of notified bodies;
Decides	to close WG 9 and thanks Mr. Johansen for his work as Chairman of this WG;
Approves	the Terms of Reference and Work Programme of WG 10;
Instructs	the Secretariat to circulate a questionnaire on the coordination of EC verification;
Thanks	the Polish Central Office of Measures for organizing the 15th WELMEC Committee Meeting;
Accepts	the invitation from Norway to hold the 16th meeting in Oslo on 8 and 9 June 2000.

REPORT

6th Meeting of the Asia-Pacific Legal Metrology Forum

Nusa Dua, Bali, Indonesia (7–9 September 1999)

Loon Hooi, APLMF Secretariat

The Sixth meeting of the Asia-Pacific Legal Metrology Forum (APLMF) was held at the Hotel Putri Bali, Nusa Dua, in Bali (Indonesia) from 7–9 September 1999. Forum Working Groups on mutual acceptance arrangements, training, goods packed by measure, utility meters and rice moisture measurement were held prior to the Forum meetings.

The Forum meeting was hosted by the Indonesian Directorate of Metrology and chaired by Mr. Bambang Hadiwiardjo, Deputy Director General for Accreditation and International Cooperation, National Standardization Agency of Indonesia - BSN.

The Forum and Working Group meetings were attended by over forty delegates and observers from Australia, Canada, People's Republic of China, Hong Kong China, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, New Zealand, Papua New Guinea, Philippines, Russian Federation, Chinese Taipei, Thailand, USA and Vietnam. In addition Mr. Bernard Athané, BIML Director and Dr. Knut Birkeland, CIML Immediate Past President, attended the Forum meetings.

Mr. Athané informed participants that the APLMF had been accepted as an associate member of the International Committee of Legal Metrology (CIML) and had been invited to attend the Tunis OIML Development Council and CIML meetings in October this year.

The Forum adopted a Memorandum of Understanding and fee structure for 2000 and the Foundation Convenor, Mr. John Birch, will continue as President of the Forum.

Mr. Hari Prawoko of the Directorate of Metrology, Indonesia, presented a paper on *Measuring Bulk Materials in Trade by Draft Survey, Problems and Implementation* and this stimulated a lively discussion on this important topic.

Prior to the Sixth Forum meeting a competency-based Train-the-trainer course on verification and in service inspection of nonautomatic weighing instruments

L to R: B. Hardiwiardjo, National Standardization Agency, Indonesia – J. Birch, APLMF President – Dr. K. Birkeland, Consultant – R. Simanullang, Directorate Metrology, Indonesia – B. Athané, BIML Director – H. Ruba'i, Directorate Metrology

according to OIML R 76 was presented in Bandung from 23 August – 2 September by Mrs. Kerry Marston and Mr. David Larkin of Australia to twenty-three officials from Indonesia, Japan, Chinese Taipei and Vietnam; this course and proposed future courses on flow measurement were discussed at the Working Group meeting in Nusa Dua.

The Forum agreed that the Seventh Forum meeting would be hosted by Chinese Taipei in 2000.

Arising out of the discussion at the Working Groups and Forum meeting, the 1999–2000 Work Program below was adopted.

1999–2000 Work Program

- Establish a Working Group on Medical Measurements with a project on Sphygmomanometers (blood pressure meters).
- Monitor the need to translate measurement legislation into English for those economies where their legislation is currently not in English.
- Consider ways to involve consumers in Forum activities.
- Finalize and publish the resource document on modernization of legislative and administration systems.
- Finalize the reports of the intercomparisons on non-automatic weighing instruments and load cells.
- Commence the intercomparison on mass standards and master meters.
- APLMF to support the need to harmonize International Standards in relation to Goods Packed by Measure, including;
  (a) standard sizes;
  (b) permitted deficiencies due to dehydration; and
  (c) drained weights.
- APLMF to provide input into the development of harmonized International Standards on Goods Packed by Measure to ensure the Asia-Pacific Region's views and requirements are fully considered by those developing such international standards.
- The survey on prepacked goods requirements in other regions to be continued.
- APLMF to continue to discuss with OIML the need for priority to be given to extending the OIML Recommendation on net contents to include metrological control of packing facilities involving quality systems, accreditation of test facilities, statistical sampling of output and certification by the legal metrology authority.
- APLMF to continue to discuss with OIML the development of an international system of marking of labeled measurement to facilitate international trade in prepacked goods (an extension of the European e-mark system).

Delegates attending the 6th Meeting of the Asia-Pacific Legal Metrology Forum
J. Birch, APLMF President is pictured sixth from the left and B. Hardiwiardjo, Chairman of Meeting, seventh from the left

- The secretariat to survey Member Economies to provide the contact details of the organization/s within each Member Economy who have responsibility for administration of their economy's legal provisions in relation to Goods Packed by Measure.
- Following the adoption by the CIML of a Recommendation on water meters (OIML R 49), survey the application of this Recommendation by Member Economies.
- Support OIML Technical Committees on:
  (a) electricity meters; and
  (b) statistical sampling.
- The Train-the-trainer modules for the pattern approval and for the verification and in-service inspection of nonautomatic weighing instruments to be promoted and presented as required.
- Train-the-trainer modules for the pattern approval and verification of petroleum and LPG dispensers to be developed and training courses presented before the end of 2000.
- A Regional Directory of Training and a regional network of trainers to be developed.
- Discussions to be held with the BIML on the development of an international legal metrology training network and international accreditation of legal metrology training courses.
- Consideration to be given to developing training courses on:
  (a) standards laboratory officers' training;
  (b) goods packed by measure;
  (c) high capacity weighing and high capacity flow measurement as an extension of the introductory courses;
  (d) compressed natural gas dispenser pattern approval and verification;
  (e) vehicle speed measuring devices and evidential breath analysis devices;
  (f) automotive emission measurements and other environmental measurements;
  (g) measurement uncertainty in legal metrology; and
  (h) application of accreditation and quality certification in legal metrology.
- Progress the Rice Moisture project by investigating the:
  (a) variation in the measurement results using different instruments with the same sample. This is probably due to the lack of a program of pattern approval of the prototype, and then regular verification and in-service inspection of instruments used in the field to maintain an acceptable level of consistency;
  (b) poor quality of the instruments being used and their inability to stay in calibration for a reasonable period of time. This is related to the lack of pattern approval;
  (c) variation in the samples used. This could be due to the way in which the samples are taken from the bulk grain, how it is stored and handled after being taken;
  (d) quality and consistency of the standard reference materials used in calibrating the moisture meters, and lack of traceability back to a national standard; and
  (e) no metrological control system in place to control fraud and ensure the integrity and transparency of the measurements.
- Accept PTB's offer to pattern evaluate a number of rice moisture measuring instruments.
- Support the work of OIML TC 3/SC 5 *Conformity assessment* in developing a Mutual Acceptance Agreement on test reports.
- Survey action being taken by Member Economies to ensure compliance of production instruments with type.
- Establish a Working Group on application of weighing in bulk commodity shipping measurement in place of draft surveys.
- Establish a Working Group on Legislation and Administration to promote regional harmonization of legislation and administration and prepare an analysis of coordination structures in legal metrology.
- Develop a project on economic analysis of legal metrology with the aim of setting priorities based on economic and social impacts.
- Circulate information to Member Economies on Measurement Canada's Marketplace Intervention Model and New Zealand's economic analysis of trade measurement.

Forum contact information

J. Birch, APLMF President
National Standards Commission (NSC)
PO Box 282, North Ryde 1670, Australia

E-mail: jbirch@nsc.gov.au
Web site: http://www.aplmf.org

APLMF Training Activities in 1999 overleaf ▶

APLMF Training Activities in 1999

During 1999, the second APLMF Train-the-trainer module covering the *Verification and In-service Inspection of Nonautomatic Weighing Instruments* based on OIML R 76 was completed. This module complements the first Train-the-trainer module on the *Pattern Approval of Nonautomatic Weighing Instruments* according to OIML R 76 completed in 1998. Each of these training modules consists of a procedure manual, trainer's manual, training video and student's workbook. The training videos are available in a number of different languages used within the Asia-Pacific region.

The first Train-the-trainer workshop for verification and in-service inspection was hosted by the Indonesian Directorate of Metrology in Bandung from 24 August to 1 September; twenty-one participants from Indonesia, Chinese Taipei, Japan and Vietnam attended. During the workshop each participant was given the opportunity to:

- practise and discuss the test procedures for verification and in-service inspection (see Fig. 1);
- practise and discuss suitable training techniques to be used when the participants conduct their own training courses;
- take part in the in-service inspection of a weighbridge using substitution materials (see Fig. 2); and
- visit the Directorate of Metrology's facilities in Bandung (see Fig. 3)

The APLMF was also invited to conduct a workshop for the US Weighing Industry, NIST, US State Weights and Measures Authorities and Measurement Canada on the OIML R 76 requirements for pattern approval. Some twenty participants took part in the workshop hosted by Measurement Canada in Ottawa from 6–8 October following a Weighing Sector meeting of NCWM.

Work has commenced on the development of the second series of Train-the-trainer modules, which will be based on OIML R 117 and R 118 for the pattern approval and verification of motor vehicle fuel dispensers including LPG. These modules will be developed by the NSC, Australia, in conjunction with Australian Trade Measurement Authorities. The first Train-the-trainer workshop will be jointly hosted by the China State Bureau of Quality and Technical Supervision and NSC in Shanghai, China in 2000. ■

For more details about the APLMF Training Program, contact:

Kerry Marston - Regional Training Coordinator - NSC - Australia - E-mail: kmarston@nsc.gov.au - Fax: +61 2 9888 3033

Fig. 1 Practising the test procedures to verify nonautomatic weighing instruments

Fig. 2 Using substitution materials during the in-service inspection of a weighbridge (factory visit)

Fig. 3 Visit to some of the facilities available at the Directorate of Metrology in Bandung

REPORT

33rd ISO DEVCO Meeting

Beijing (18–19 October 1999)

http://www.iso.ch

The 33rd meeting of the ISO Committee on Developing Country Matters (DEVCO) was held at the Beijing International Convention Centre, Beijing from 18–19 October 1999. Key points are summarized below.

Chairman's Virtual Advisory Group (CVAG):

This was established following the last meeting, and discussion topics had been posted on the ISO web site. Representatives from Africa, the Caribbean, Europe, India, Pacific and South America have taken part in the CVAG; it was felt that the group could now begin to play a more active role.

Development manuals:

Development Manual 10, *Environmental Management and ISO 14000*, was published last year. A programme for systematically reviewing all the manuals was considered necessary.

Regional training seminars:

Ten regional training seminars on three separate topics had been held since the last DEVCO meeting, enabling over 750 individuals to be trained.

Funding:

The continuing problems caused by a low level of funding were identified, including a lack of continuity in the work programme, which hampers good planning and gives rise to continuous appeals. It was therefore decided that DEVCO would recommend to the ISO Council that 1 % of subscriptions should be allocated to the Funds-in-Trust.

Use of the Internet by developing countries:

The joint ISO DEVPRO/UNCTAD project which promotes Internet for ISO Members from developing countries was discussed: a 1998 survey had shown that less than half of developing country members had e-mail, but this percentage has now increased significantly. There has also been the UNCTAD *Mediterranean 2000* project, established in partnership with ILO, ISO, UNIDO and WIPO, with funding from the Italian Government, which aims to assist in establishing and/or upgrading the information technology and telecommunications infrastructure in beneficiary countries in the Mediterranean basin and in the Horn of Africa.

CASCO activities:

There was some discussion about the proposed joint CASCO/DEVCO workshop, *Facilitating Recognition of Conformity Assessment Activities in the 21st Century*, which will take place on 25 September 2000 in Milan.

COPOLCO activities:

The Chairman of COPOLCO reported on its activities over the last year, and expressed his wish for the increased participation of developing countries (even if only by correspondence) since there is generally less consumer protection legislation in these countries.

Cooperation between DEVCO and REMCO:

During the last year, a further project to upgrade analytical laboratories had been undertaken in three Latin American countries.

UNIDO pre-peer evaluation project:

Dr. Octavio Maizzo-Neto, UNIDO Director, reported on the results of evaluations which had been carried out in the Philippines and in Columbia. He reiterated the need for developing countries to follow ISO Guide 61 when establishing accreditation bodies.

Collaboration with the WTO TBT:

Mrs. Vivien Liu gave a presentation on developments on technical barriers to trade, which provoked much discussion on technical assistance and on the role which conformity assessment bodies and trade associations should play in the WTO TBT process.

The next ISO DEVCO meeting will be held on 28 September 2000 in Milan, Italy, preceded by the joint CACSO/DEVCO workshop mentioned above. ■

REPORT

Third ILAC General Assembly

Rio de Janeiro (19–20 October 1999)

http://www.ilac.org

ILAC, the international cooperation between various laboratory accreditation schemes operated throughout the world, was founded over twenty years ago and formalized as a cooperation when 44 national bodies signed the MoU in 1996 in Amsterdam.

In her report to the General Assembly, Mrs. Collins (Chair) gave a summary of activities since the previous GA and focused on key issues such as the permanent secretariat, closer liaison with IAF, facilitation of a global MRA of accreditation body competence and the admission of new Members.

An important item on the agenda was the ILAC Multilateral Recognition Arrangement. Four supporting documents had been developed and it was decided that following the positive postal ballot on the documents, applications for membership of the ILAC Arrangement could be accepted immediately. The GA encouraged EA and APLAC to apply to be signatories to the Arrangement since the mutual evaluation conducted by them had been accepted by the GA.

Reports from ILAC Committees

- *Accreditation Policy Committee* (which deals with the approach of accreditation bodies to the assessment and accreditation of laboratories, the establishment of agreements between accreditation bodies and related policy areas) has developed the above-mentioned documents for the MRA and prepared a work program including continuation of the liaison with IAF, consideration of the legal aspects of ILAC work and development of further documents and guides.
- *Technical Accreditation Issues Committee* (which is involved in the investigation of technical issues related to accreditation, and the development of technical documentation related to ILAC activities) has finalized three documents and advanced with the draft application guidance for the ISO/IEC 17025 Standard. The GA has adopted these documents and accepted the recommendation of the Committee to use the EAL R2 *Expression of the Uncertainty of Measurements in Calibration* for a maximum of two years as a requirements document for the Arrangement signatories. This Committee has undertaken the revision of OIML D 10 and a draft will be circulated soon.
- *Laboratory Liaison Committee* (which provides a means of interaction and exchange of ideas between ILAC and the laboratory community) reported advances in most items of the 1998–2000 Work Program.
- *Public Affairs Committee* (which is involved in the publication of ILAC documents, newsletters and other information) reported on significant developments of the ILAC web site, wide-ranging distribution of information on ILAC and plans for development of an inter-linked series of databases on accredited facilities and accreditation bodies.

Reports from other international organizations in liaison with ILAC

- The IAF representative gave an outline of recent activities, including intensification of cooperation with ILAC. It was stressed that both bodies are interested in harmonized and globally consistent conformity assessment and that will be the first area of cooperation.
- The OIML representative gave information on OIML activities that can be of interest to ILAC and on the recent establishment of an SC on *Conformity Assessment*. The OIML is interested in closer cooperation with ILAC on conformity assessment and accreditation issues and in a trilateral BIPM/ILAC/OIML cooperation on issues such as terminology and uncertainty.
- On behalf of the BIPM Mr. Kaarls gave a report on the recent CGPM session and the signing of the agreement on *Mutual recognition of national measurement standards and calibration certificates issued by national metrology institutes*. Representatives of the *Convention du Mètre*, ILAC and the OIML will meet at the BIPM in February 2000 to discuss matters of common interest and to identify possible joint actions.

The next ILAC General Assembly together with a 3-day Technical Conference will be held in Washington, DC from 29 October to 3 November 2000. ■

REPORT

PEFIM Preparatory Workshop at the PTB, Braunschweig, Germany (14–16 September 1999)

Dr. Hans-Dieter Velfe, PTB, Germany

As a result of an EC assessment of the status of the metrology systems currently in force in Central European Countries (CEC), there is clearly a need to further transform these systems according to the requirements of industry. Bearing in mind the ultimate goal of full EU membership, the recommendations of EUROMET were:

- to reformulate the basic requirements, as seen from the point of view of EUROMET; and
- to help CEC's formulate "Strategic Planning in Metrology" with the aim of adhering to a coherent approach, despite changes in political structures and economic pressures.

To assist the CEC's in providing a national metrology system capable of coping with the needs of national industry, thus assigning to metrology a role comparable to the one it has in the Union, a project called PEFIM, the *Pan European Forum on Industrial Metrology*, has been launched. PEFIM is financed by the PHARE program PRAQIII and hosted by EUROMET. It is centered on a Working Conference which addresses government officials in the ministries responsible for industry, managers of industrial companies and the heads of national metrology institutes; it will be held in Brussels on November 3 and 4 1999.

Before this conference, preparatory workshops will take place under the general heading "Needs for industrial metrology in the Union", and after the conference follow-up workshops dealing with the formulation of strategic planning will be held.

The three preparatory workshops are being hosted by the national metrology institutes of France (BNM-LCIE), Sweden (SP) and Germany (PTB) and address experts and managers from different CEC regions (north, middle and south).

From September 14 to 16, the first of these preparatory workshops took place at the PTB with 15 participants from the PHARE countries Albania, Bosnia-Herzegovina, Bulgaria, FYROM (Macedonia) and Romania.

The subjects (which are identical for all three workshops) dealt with are:

- *essential requirements;*
- *calibration versus verification;*
- *traceability and uncertainty;*
- *quality management and accreditation;*
- *inter-laboratory comparisons;*
- *international collaboration; and*
- *the need for strategy planning.*

The topics which attracted most attention and which were most intensively discussed were *Traceability, Measurement uncertainty* and *Quality management*. In the lecture on *Strategy planning* the audience was especially interested in the economic aspects of metrology, both due to its impact on the development of the national economy and as a chance for employers to provide the necessary services to society. ■

REPORT

2nd South American Congress of Metrology - METROSUL '99 (9–11 August 1999)

The Second METROSUL '99 South American Metrology Congress took place from 9–11 August 1999 near the Iquazu Falls, Brazil, jointly organized by the metrology organizations of the South Cone and promoted by the Brazilian Society of Metrology, a technical metrology organization comprising some 1300 Brazilian metrologists and major companies dedicated to metrology in Brazil.

The event was attended by some 320 experts from 12 countries, particularly South Cone countries, and was organized in conjunction with manufacturers of measuring instruments. The agenda covered 18 metrological topics of special interest and discussions dealt with the current problems of metrology throughout the world. An exhibition was also organized.

The main goal of METROSUL '99 was to bring together scientific and business communities to discuss the impact of metrology on social and economic developments, thus promoting and spreading the metrological culture. Other goals were:

- to promote the establishment of an organized link between the business community and the institutions of testing, calibration, quality and technological development;
- to bring together business people and technicians in order to develop and disseminate knowledge of metrology;
- to promote contacts between Brazilian and foreign specialists.

Within the framework of a panel discussion together with Brazilian metrologists, CIML President Mr. Gerard Faber and Vice-president Dr. Manfred Kochsiek discussed legal metrology questions of worldwide interest, emphasizing the significance of directives and OIML Recommendations for manufacturers and technicians from Brazilian inspection and verification laboratories. They presented a joint lecture on the *Conditions and Potential of Legal Metrology at the Dawn of the 21st Century*, consisting of three parts:

- an overview of metrology in general, its development and its challenges;
- a description of the OIML, its structure, aims and development; and
- an analysis of the main challenges for legal metrology at the dawn of the next century, in line with the Birkeland Study and discussions within and outside the OIML.

Members of the Inter-American Metrology System (SIM) Council, representing the five SIM sub-regions (covering 34 national metrology institutes) and including its President and Vice-president, joined in a round table to discuss the new challenges and consequences of the MRA for commerce in the Americas; this MRA is due to be signed* on the occasion of the 21st CGPM in Paris in October. By the Agreement, the equivalence of national standards and calibration certificates issued by national metrology laboratories will be documented. Ms. Maguelonne Chambon (BNM, France, and executive secretary of EUROMET) also took part in the panel to include the viewpoint of European national metrology organizations.

Other important meetings were held in conjunction with the annual Brazil Congress:

(i) General Assembly of the Brazilian Society of Metrology;
(ii) Special courses related to ISO Guide 25 and the Expression of Uncertainty in Chemical Measurements; and
(iii) Presentation of the book *Standards and Units of Measurement...*

In order to express the recognition of the Brazilian metrology community for the personal contributions of Dr. Manfred Kochsiek and the PTB to the development and strengthening of Brazilian metrology, the Brazilian Society of Metrology presented him with a commemorative plaque in a public plenary session (see photo).

An initial meeting for the implementation of the National Metrology Plan, recently approved by eight ministries of the Brazilian Government, was also held. On the basis of this plan a new metrological policy for Brazil will be initiated.

Conditions and Potential of Legal Metrology at the Dawn of the 21st Century

Summary of the presentation given by G. Faber and M. Kochsiek

No other period has brought about so many changes in technical and economical development as the last 20 years. In this development communication and metrology play a significant role.

Legal metrology is confronted with a wide range of changes in technology and trade, with the tremendous impact of globalization and the role governments are playing in this development.

Metrology - and legal metrology in particular - is as old as mankind and its development is closely related to the development of the standard of living, culture, science, technology and trade.

Today's development began with the signing of the Metre Convention in May 1875 and now the aim of metrology is a global measurement system with the same units of measurement, requirements, measuring procedures including uncertainty budget, and certificates which are accepted throughout the world.

New challenges for metrology and its infrastructure in general were discussed (analytical chemistry, nanotechnology, quality management principles, information technology, the social role of metrology, medical measuring techniques, mutual acceptance of standards, key comparisons, accreditation, self-declaration, etc.).

After discussions in 1937 concerning the foundation of an International Conference of Practical and Legal Metrology, the OIML was set up in 1955. Up to now, legal metrology especially covers the areas of trade, health, safety issues, environmental protection and official controls.

To summarize the role of legal metrology, one may say that legal metrology remains the most efficient tool to protect individuals and society as a whole whenever incorrect measurement results may effect their economic or social status or when conflicting interests are associated with measurements.

The structure, aims and development of the OIML were described; in recent years all the international, regional and national metrology organizations have discussed and planned their strategies for the next century.

Following the discussions of the OIML Presidential Council in February 1999 and the Birkeland Study of 1998 nine items are of special importance in legal metrology at the dawn of the 21st century:

- Globalization, harmonization;
- OIML Certificate System;
- Mutual confidence in legal metrology;
- Regionalization;
- Training;
- Modernization of legislation and administration systems;
- Deregulation, privatization;
- Requirements for software and its testing; and
- Social role of metrology. ■

---

* *At the time of writing this account, the CGPM had not yet taken place*

Prof. Dr. Kochsiek is presented with an award by the President of the Brazilian Society of Metrology, Prof. Mauricio Frota

In this Bulletin: OIML certificates registered

Dans ce Bulletin: certificats OIML enregistrés

1999.08 – 1999.10

OIML Certificate System

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 pattern 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 patterns certified.

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 pattern approval process for manufacturers and metrology authorities by eliminating costly duplication of application and test procedures. ■

Système de Certificats OIML

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 modèle 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 modèles d'instruments.

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 modèle pour les constructeurs et les autorités métrologiques par l'élimination des répétitions coûteuses dans les procédures de demande et d'essai. ■

This list is classified by Issuing Authority; updated information on these Authorities may be obtained from the BIML.

Cette liste est classée par Autorité de délivrance; les informations à jour relatives à ces Autorités sont disponibles auprès du BIML.

▶ Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

For each Member State, certificates are numbered in the order of their issue (renumbered annually).

Pour chaque État Membre, les certificats sont numérotés par ordre de délivrance (cette numérotation est annuelle).

R51/1996 - DE - 98.03

Type GS ... (Classes X(1) and Y(a))

Bizerba GmbH & Co. KG, Wilhelm-Kraut-Straße 65, D-72336 Balingen, Germany

OIML Recommendation applicable within the System / Year of publication

Recommandation OIML applicable dans le cadre du Système / Année d'édition

Year of issue

Année de délivrance

The code (ISO) of the Member State in which the certificate was issued.

Le code (ISO) indicatif de l'État Membre ayant délivré le certificat.

Certified pattern(s)

Modèle(s) certifié(s)

Applicant

Demandeur

For up to date information on OIML certificates:

Pour des informations à jour sur les certificats OIML:

http://www.oiml.org

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Diaphragm gas meters
Compteurs de gaz à parois déformables

R 31 (1995)

Issuing Authority / *Autorité de délivrance*

Sous-direction de la Métrologie, France

R31/1995-FR-99.01
Modèle GALLUS 1000 - G1,6 (Schlumberger)
Schlumberger Industries, rue Chrétien de Troyes - BP 327 - 51061 Reims cedex, France

R31/1995-FR-99.02
Modèle GALLUS 1000 - G1,6 (Schlumberger)
Schlumberger Industries, rue Chrétien de Troyes - BP 327 - 51061 Reims cedex, France

R31/1995-FR-99.03
Modèle GALLUS 1000 - G1,6 (Schlumberger)
Schlumberger Industries, rue Chrétien de Troyes - BP 327 - 51061 Reims cedex, France

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Continuous totalizing automatic weighing instruments (belt weighers)
Instruments de pesage totalisateurs continus à fonctionnement automatique (peseuses sur bande)

R 50 (1997)

Issuing Authority / *Autorité de délivrance*

Danish Agency for Development of Trade and Industry, Division of Metrology, Denmark

R50/1997-DK-99.02 Rev. 1
Type VAB/EE with electronics Weightcontrol WC9604 (Class 0.5)
Jesma Vejeteknik A/S, Niels Bohrsvej 2, DK-7100 Vejle, Denmark

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

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

R 51 (1996)

Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R51/1996-DE-99.03
Checkweigher for static weighing type CS... (Class X(1))
Optima Maschinenfabrik, Steinbeisweg 20, 74523 Schwäbisch Hall, Germany

Issuing Authority / *Autorité de délivrance*

Netherlands Measurement Institute (NMi) Certin B.V., The Netherlands

R51/1996-NL-99.05
Type LA-46 .. (Class Y(a))
Digi Nederland bv, Voltastraat 21, 1446 VA Purmerend, The Netherlands

R51/1996-NL-99.06
In Motion, Min >= 10 kg for Class X(1), Min >= 500 g for Class Y(a)
Garvens Automation GmbH, Hasede, Kampstraße 7, D-31180 Giesen, Germany

R51/1996-NL-99.07
Ecoline SD40, Min >= 500 g for Class X(1), Min >= 25 g for Class Y(a)
Garvens Automation GmbH, Hasede, Kampstraße 7, D-31180 Giesen, Germany

R51/1996-NL-99.08
Type Eclipse CS series (Class X(1))
Cintex Ltd., Trindent Industrial Estate, Blackhorne Road, Colnbrook, Slough, Berkshire SL3 OAX, United Kingdom

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Load cells
Cellules de pesée

R 60 (1991), Annex A (1993)

▶ Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R60/1991-DE-99.01
Type CSP-M (Class C)

Revere Transducers Europe BV, Ramshoorn 7, P.O. Box 6909, 4802 HX Breda, The Netherlands

R60/1991-DE-99.02
Type SCC (Class C)

Revere Transducers Europe BV, Ramshoorn 7, P.O. Box 6909, 4802 HX Breda, The Netherlands

▶ Issuing Authority / *Autorité de délivrance*

Sous-direction de la Métrologie, France

R60/1991-FR-99.02
*Cellules de pesée à jauges de contrainte SCAIME types SB30X * C3 CH 5e et SB30X * C3 CH 10e (Class C)*

Scaime S.A., Z.I. de Juvigny, B.P. 501, 74105 Annemasse cedex, France

▶ Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R60/1991-GB-99.02
Load Cell Model No. Global MP 46 (Class C3)

GLOBAL Weighing Technologies GmbH, Meiendorfer Str. 205, D-22145 Hamburg, Germany

R60/1991-GB-99.03
Load Cell Model No. Global MP 48 (Class C3)

GLOBAL Weighing Technologies GmbH, Meiendorfer Str. 205, D-22145 Hamburg, Germany

▶ Issuing Authority / *Autorité de délivrance*

Netherlands Measurement Institute (NMi) Certin B.V., The Netherlands

R60/1991-NL-99.13
Type PW16../.. (Classes C and D)

Hottinger Baldwin Messtechnic Wägetechnik GmbH, Im Tiefen See 45, D-64293 Darmstadt, Germany

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Automatic gravimetric filling instruments
Doseuses pondérales à fonctionnement automatique

R 61 (1996)

▶ Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R61/1996-DE-99.02
Type MEC II-20 (Class ref (0.2))

Behn + Bates Maschinenfabrik, Robert-Bosch-Straße 6, D-48153 Münster, Germany

R61/1996-DE-99.03
Type Libratronik 20 (Accuracy class Ref (0.2))

Librawerk Maschinenfabrik GmbH, Vossenkamp 1, D-38104 Braunschweig, Germany

▶ Issuing Authority / *Autorité de délivrance*

Netherlands Measurement Institute (NMi) Certin B.V., The Netherlands

R61/1996-NL-99.03
Max <= 6 000 kg, Class X(1)

Maram Machinefabriek B.V., Minervum 1508, 4800 DG Breda, The Netherlands

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*

OIML Chinese Secretariat, State Bureau of Technical Supervision, China

R76/1992-CN-99.01
Electronic Price Computing Scale types SUP-6S, SUP-15S and SUP-30S (Class III)
Shang Juen Weighing Machine Co., Ltd, No. 53, Liao-Yang 4th, Taichung City, Taiwan

R76/1992-CN-99.02
Electronic Price Computing Scale types SRM-6S, SRM-15S and SRM-30S (Class III)
Shang Juen Weighing Machine Co., Ltd, No. 53, Liao-Yang 4th, Taichung City, Taiwan

R76/1992-CN-99.03
Electronic Price Computing Scale types SC-3B, SC-6B, SC-15B and SC-30B (Class III)
Shang Juen (Xiamen) Electronic Scale Co. Ltd, 5F, Sinopec Building, Huli Road, Xiamen, Fujian, China

Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R76/1992-DE-95.01 Rev. 2
Types DI BC 200, DI BE 211 and DI BC 210 (Class II)
Sartorius A.G., Postfach 32 43, D-37070 Göttingen, Germany

R76/1992-DE-98.02 Rev. 1
Nonautomatic electromechanical weighing instrument, types: DS BH 300, DN BH 300 and DQ BH 300 (Class III)
Sartorius A.G., Weender Landstraße 94-108, D-37075 Göttingen, Germany

R76/1992-DE-98.04 Rev. 1
Nonautomatic electromechanical weighing instrument, types: DT BH 210 (Class II), DS BH 310 and DT BH 310 (Class III)
Sartorius A.G., Postfach 32 43, D-37070 Göttingen, Germany

R76/1992-DE-99.04
Type DX BI 500 (Classes II, III and IIII)
Sartorius A.G., Postfach 32 43, D-37070 Göttingen, Germany

Issuing Authority / *Autorité de délivrance*

National Weights and Measures Laboratory (NWML), United Kingdom

R76/1992-GB-99.02
Ultima 2000 (Class III)
Hobart Corporation, World Headquarters, 701 Ridge Avenue, Troy, Ohio 45374-0001, USA

R76/1992-GB-99.04
Avery Berkel MP 1xx series
GEC Avery Limited, Foundry Lane, Smethwick, Warley, West Midlands B66 2LP, United Kingdom

Issuing Authority / *Autorité de délivrance*

Netherlands Measurement Institute (NMi) Certin B.V., The Netherlands

R76/1992-NL-99.05
Type 8270 (Class III or IIII)
Mettler-Toledo Inc., 1150 Dearborn Drive, Worthington, OH 43085-6712, USA

R76/1992-NL-99.11
Kits compact, global ou global plus (Class III)
DIBAL S.A., Astintze Kalea, 24 - Poligono Industrial Neinver, 48016 Derio (Bilbao-Vizcaya), Spain

R76/1992-NL-99.12
Type TWII (Class III)
Mettler-Toledo Inc., 1150 Dearborn Drive, Worthington, OH 43085-6712, USA

R76/1992-NL-99.13
Type TP-1 (Class III)
CAS Corporation, CAS Factory # 19 Kanap-ri, Kwangjeok-myon, Yangju-kun, Kyungki-do, South Korea

R76/1992-NL-99.14
Types FX, MC B, G and BK-series (Class III)
Avery Berkel Weighing, Foundry Lane, Smethwick, Warley, West Midlands B66 2LP, United Kingdom

R76/1992-NL-99.15
Type DS-470.. (Class III)
Teraoka Seiko Co., Ltd., 13-12 Kugahara, 5-Chome, Ohta-ku, Tokyo 146-8580, Japan

R76/1992-NL-99.16
Type DS-450.. (Class III)
Teraoka Seiko Co., Ltd., 13-12 Kugahara, 5-Chome, Ohta-ku, Tokyo 146-8580, Japan

R76/1992-NL-99.17
Type SW-1 (Class III)
CAS Corporation, CAS Factory # 19 Kanap-ri, Kwangjeok-myon, Yangju-kun, Kyungki-do, South Korea

INSTRUMENT CATEGORY
CATÉGORIE D'INSTRUMENT

Discontinuous totalizing automatic weighing instruments (Totalizing hopper weighers)
Instruments de pesage totalisateurs discontinus à fonctionnement automatique (Peseuses totalisatrices à trémie)

R 107 (1997)

Issuing Authority / *Autorité de délivrance*

Physikalisch-Technische Bundesanstalt (PTB), Germany

R107/1997-DE-98.01 Rev. 1
Discontinuous totalizing automatic weighing instrument type Dialog 165 (Class 0.2)

Weber-Waagenbau u. Wägeelektronik GmbH, Boschstraße 7, 68753 Waghäusel 1, 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*

Netherlands Measurement Institute (NMi) Certin B.V., The Netherlands

R117/1995-NL-99.05
Fuel Dispensers for Motor Vehicles, model Quantium 45 l/min (Class 0.5)

Tokheim, Koppens Automatic Fabrieken B.V. Industrieweg 5, 5531 AD Bladel, The Netherlands

R117/1995-NL-99.06
Fuel Dispensers for Motor Vehicles, model Quantium 80 l/min (Class 0.5)

Tokheim, Koppens Automatic Fabrieken B.V. Industrieweg 5, 5531 AD Bladel, The Netherlands

R117/1995-NL-99.07
Fuel Dispensers for Motor Vehicles, model Quantium 130 l/min (Class 0.5)

Tokheim, Koppens Automatic Fabrieken B.V. Industrieweg 5, 5531 AD Bladel, The Netherlands

REPORT

BIML Activities

November 1998 – September 1999

Subject	*Activities*
Follow-up to the 33rd CIML meeting	• Editing and distribution of the Decisions • Editing and distribution of the minutes, including a full transcript of the discussions concerning the Birkeland Report • Implementation of the Decisions (see detailed information below under the various headings)
Presidential Council	• Organization of a meeting in Paris (February 1999); preparation of reports on the various aspects of OIML activities of interest to the Council; publication of the Council meeting report in the OIML Bulletin • Multiple contacts with the CIML President and Vice-Presidents; organization of two meetings of the Presidium in Paris (January and June 1999)
Preparations for the 34th CIML meeting	• Papers and arrangements for the meeting in liaison with the Tunisian CIML Member (see detailed information below under the various headings)
Preparations for the Eleventh Conference and the 35th CIML meeting	• Discussions with NWML Representative to define general features of the meeting; visit to meeting venue; most arrangements already agreed upon • Preparation of a preliminary draft budget for the period 2001–2004
Development Council	• Editing and distribution of the minutes of the Seoul meeting • Working meetings with the Chairperson of the Development Council (December 1998, February, March, May and September 1999) • Preparations for the Tunis meeting (agenda, summary of inquiries, proposals for new work) • Liaisons with ISO/DEVCO, UNIDO, WTO, etc. • Contacts with national bodies specializing in assistance to developing countries (DAM-Germany, NSC-Australia, ESM-France) • Advertising concerning the "Train-the-Trainer" video on R 76; assistance to developing countries unable to purchase the video by themselves
OIML policy	• Assessment report for 1998 • Distribution of the final version of the Birkeland Report • Development of an implementation document of the Birkeland Report and OIML long-term policy for discussion at the 34th CIML meeting • Preparation of a first draft revision of the *Guide for CIML Members*
Technical committees and subcommittees	• Inquiries for annual reports; information of the Presidential Council; report in the OIML Bulletin • Examination of the situation of and contacts with certain TC's/SC's • Participation in the work of certain TC's/SC's (see participation in meetings below)

- Liaison between certain TC's/SC's and international and regional bodies with related activities
- Multiple contacts with the CIML Vice-President responsible for OIML technical activities (in particular to prepare a report for the Tunis CIML Meeting)
- Postal inquiries concerning a number of draft Recommendations or Annexes (test report formats); distribution of four drafts for approval by the CIML at its Tunis Meeting
- Updating of the documents (*State of Progress*, *Responsibility*, etc.) related to TC/SC activities (certain of these documents now being accessible on the OIML Web Site)

Participation in OIML technical meetings

- TC 8/SC 5 (organized by the BIML in Paris, November 1998)
- TC 1 (Warsaw, November 1998)
- TC 13 (Frankfurt, March 1999)
- TC 3 (organized by the BIML in Paris, June 1999)
- Participation in the preparations for the Software Seminar (Paris, 30 September – 1 October 1999) and Weights Workshop (Boras, 13–15 October 1999)

Certification

- Organization of a meeting of the OIML working group on accreditation and certification at the BIML in February 1999
- Registration of OIML certificates; information for Members
- Follow-up on conformity assessment, quality management, certification, accreditation and other activities within IAF, ILAC, ISO/IEC, WTO, UN/ECE, EA, etc.
- Restart of the revision of the document on the OIML Certificate System

Technical publications

- Editing, translating and printing of D 26, R 127, R 93 (plus French version of R 126)
- Editing and translating of R 81 (Annex D) and R 122 (Annex C) before printing
- Editing R 60 for immediate printing following CIML Meeting in Tunis
- Editing draft revision of *Vocabulary of Legal Metrology* for distribution to CIML Members in October 1999
- Improvement of BIML technical facilities and training of staff

OIML Bulletin

- Production of four issues (approx. 220 pages)
- Proof-reading and author approval of all articles before publication

Communication

- Regular update of information annexed to the Blue Brochure
- Regular update and extension of OIML transparency presentation (French version being prepared by Mr. Magana)
- Regular update and significant improvement of the OIML web site; availability in Adobe Acrobat of all Recommendations applicable within the OIML Certificate System; preliminary work on an OIML Development Council web site, initiated by Mrs. Annabi
- BIML survey on the use of the OIML web site by CIML Members
- Update of OIML posters

Liaisons with other institutions (including participation in meetings)

- JCGM/WG 2 (BIPM, November 1998)
- WTO TBT Committee and Session on good practice of international standards (Geneva, November 1998)
- DAM seminars and training courses (Munich, November 1998 and April 1999)
- WELMEC Committee Meetings (Budapest, January 1999 and Warsaw, September 1999)
- 75-year anniversary of trade metrology in South Africa (Pretoria, February 1999)
- European Commission meetings on the "Measuring Instruments Directive" (Brussels, March and May 1999)
- 75-year anniversary of BEV (Vienna, March 1999)
- First meeting of COLAMEL (Montevideo, March 1999)

- UN/ECE Working Party and Seminar on implementation of international standards (Geneva, May 1999)
- IMEKO World Congress (Osaka, June 1999)
- WTO TBT Committee and Symposium on conformity assessment procedures (Geneva, June 1999)
- APLMF Committee Meeting (Bali, September 1999)
- IAF General Assembly (Vienna, September 1999)
- Contacts with ISO (R 99, ISO 17025, etc.), IEC (revision of R 58 and R 88)
- Re-organization of the participation of international and regional bodies in OIML TC/SC activities (to be finalized in October 1999)

Visits to and from OIML Members

- Algeria, Argentina, Australia, Belgium, China, Cuba, France, Germany, Indonesia, R. of Korea, Netherlands, Poland, Russia, Spain, South Africa, Switzerland, Thailand, Tunisia, United Kingdom, Uruguay, USA and Yugoslavia

Miscellaneous

- Contacts with the Embassy of Uzbekistan
- Preparations for a Euro-Mediterranean Round-Table (Tunis, 4 October) in cooperation with Mrs. Annabi and Mr. Magana
- Development of a pattern for OIML Normative Documents supplementing the future European Measuring Instruments Directive ■

Committee draft received by the BIML, 1999.09.01 – 1999.10.31

Title	Language	CD n°	TC/SC	Country
Revision of R 75: Heat meters	E	1 CD	TC 11	Germany

The BIML seeks to appoint its new Director

The International Organization of Legal Metrology (OIML) is seeking to recruit the future Director of its permanent secretariat, the International Bureau of Legal Metrology (BIML) located in Paris, France.

Profile required:

- Excellent leader and manager, dynamic and flexible, good negotiator, willing to concentrate on external relations and able to speak at a senior level with Governments and Administrations about metrology, willing to accept the authority of the International Committee of Legal Metrology and its President.
- In-depth knowledge of metrology, legal metrology and related activities (including standardization, certification and accreditation).
- Fluent spoken French and English, with a perfect spoken and written knowledge of at least one (though preferably both) of these languages.
- Able and in principle prepared to commit to staying at the BIML for at least ten years (i.e. at the time of his or her appointment, the age of the new Director should preferably be between 40-50 years, though this is not a decisive criterion).

Financial package:

Net salary (i.e. after deductions for social security and retirement pension) in the range 420–540 kFRF (64–82 kEuros) p.a. according to experience plus, if applicable, family allowance for dependant children, housing allowance for non-French resident, seniority bonus. Salary and allowances exempt from French income tax.

Recruitment procedure:

End of February 2000: examination and pre-selection of candidacies; mid 2000: interview of pre-selected candidates by an international Selection Committee; October 2000: appointment. The newly appointed Director will join the BIML in 2001 and will work with the current Director during a transition period to be specified at the time of appointment; after the transition, the current Director will stay at the BIML as a Consultant up to the end of 2002 to assist the new Director.

Candidacies:

To be sent to the BIML (see address below) with full curriculum vitae and any other appropriate information. To ensure strict confidentiality, either mark "CONFIDENTIAL" on the envelope or use the e-mail address indicated below. Candidacies must reach the BIML before 2000.02.15.

Bureau International de Métrologie Légale
11, rue Turgot
F-75009 Paris
France
E-mail: candidates@oiml.org

Le BIML recrute son nouveau Directeur

L'Organisation Internationale de Métrologie Légale (OIML) recrute le futur Directeur de son secrétariat permanent, le Bureau International de Métrologie Légale (BIML), situé à Paris, France.

Profil exigé:

- Excellent leader et gestionnaire, dynamique et flexible, désireux de se concentrer sur les relations extérieures et capable de discuter de métrologie, à un niveau élevé, avec les Gouvernements et Administrations, acceptant l'autorité du Comité International de Métrologie Légale et de son Président.
- Connaissance approfondie de la métrologie, de la métrologie légale et des activités connexes (y compris normalisation, certification et accréditation).
- Français et anglais parlés couramment, avec une excellente connaissance parlée et écrite d'au moins une de ces langues, et préférablement des deux.
- En mesure et en principe prêt à s'engager à rester au BIML pendant au moins dix années (cela signifie que, au moment de la nomination, le nouveau Directeur devrait avoir entre 40 et 50 ans bien que cela ne soit pas un critère décisif).

Conditions financières:

Salaire annuel net (c'est-à-dire après déductions pour sécurité social et retraite) dans l'étendue 420–540 kFRF (64–82 kEuros) en fonction de l'expérience plus, selon le cas, allocation pour enfants à charge, indemnité de logement pour non-résident français, prime d'ancienneté. Salaire et indemnités non soumis à l'impôt sur le revenu français.

Procédure de recrutement:

Fin février 2000: examen des candidatures et pré-sélection; milieu 2000: interview des candidats pré-sélectionnés par un Comité de Sélection international; octobre 2000: nomination. Le Directeur nouvellement nommé rejoindra le BIML en 2001 et travaillera avec l'actuel Directeur pendant une période de transition spécifiée au moment de la nomination; après la transition, le Directeur actuel restera au BIML comme Consultant jusqu'à la fin de 2002 afin d'aider le nouveau Directeur.

Candidatures:

À envoyer au BIML (voir adresse ci-dessous) avec curriculum vitae détaillé et autres informations appropriées. Afin d'assurer une stricte confidentialité, soit marquer "CONFIDENTIEL" sur l'enveloppe, soit utiliser l'adresse électronique indiquée ci-dessous. Les candidatures doivent arriver au BIML avant 2000.02.15.

Bureau International de Métrologie Légale
11, rue Turgot
F-75009 Paris
France
E-mail: candidates@oiml.org

meetings OIML réunions

October 2000

9–13	11th International Conference of Legal Metrology	LONDON, UK
	35th CIML Meeting	
	Development Council Meeting	

International Conference on Metrology:

Trends and Applications in Calibration and Testing Laboratories, *Jerusalem, Israel (16 – 18 May, 2000)*

Today, as we approach the millenium, we are witnessing dramatic developments in science, technology, industry and trade in which metrology plays a crucial role. At the same time, requirements in the areas of environment, health and safety are increasing and metrology must assist in providing the needed answers.

To what trends in metrology does this lead? What strategies will allow us to satisfy contemporary requirements in calibration and testing laboratories? How can laboratories optimize their business? These topics will be presented and discussed in an International Conference on Metrology. The idea of a joint forum for physicists, engineers and analytical chemists working in metrology originated from the understanding that their fields have much in common; each profession has made advances in metrology and there is much to be gained by combining these achievements.

Conference Secretariat:

ISAS International Seminars,
P.O. Box 34001, Jerusalem 91340, Israel.
Tel: 972-2-6520574 - Fax: 972-2-6520558
E-mail: conference@isas.co.il
URL: www.isas.co.il/metrology

info

Organized by:

- the National Conference of Standards Laboratories (NCSL),
- the Cooperation on International Traceability in Analytical Chemistry (CITAC), and
- the Israeli Metrological Society (IMS)

The OIML is pleased to welcome the following new:

MEMBER STATE: Croatia

CIML MEMBERS:

Algeria	Mr. Boudissa
Republic of Korea	Mr. Shin
Spain	Mr. Garcia