CANADIAN PARTICIPATION IN OIML

EDITION UPDATED IN 1985

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LEGAL METROLOGY BRANCH
CONSUMER AND CORPORATE AFFAIRS
CANADA

CANADIAN PARTICIPATION IN THE OIML

1. CANADA'S MEMBERSHIP IN THE OIML

In 1979, Canada signed the Agreement on Technical Barriers to Trade, which was one of the agreements or codes that emerged from the Multilateral Trade Negotiations of the Tokyo Round of GATT. Canada, as a Party to this agreement, agreed to further its objectives, which include:

- ensuring that technical regulations and national standards are not prepared, adopted or applied with a view to creating obstacles to international trade;

- using, as much as possible, international standards or their relevant parts as a basis for drawing up technical regulations and national standards where relevant international standards exist or their completion is imminent; and

- harmonizing technical regulations and national standards as much as possible with those of the other Parties, by playing as full a part as possible in the preparation by appropriate international standardizing bodies of international standards for products for which the Parties either have adopted or expect to adopt technical regulations or national standards.

Following the signing of this agreement, in January 1982, Canada officially joined the International Organisation of Legal Metrology, better known by the acronym OIML, thus becoming the forty-sixth Member State in this organization.

2. PURPOSE OF THE OIML

Established in 1955, the OIML is an intergovernmental organization whose primary purpose is to standardize and co-ordinate at an international level the administrative and technical regulations enacted in the various Member States with respect to measures and measuring instruments. The aim of such harmonization is to facilitate the international exchange not only of measuring instruments but of all commodities and services involving measurements.

The OIML currently has 49 Member States and 25 Corresponding Members. A list of these countries is given in Appendix A.

3. HOW THE OIML OPERATES

The OIML has a general secretariat, called the International Bureau of Legal Metrology (BIML), which is located in Paris. It centralizes the activities carried out by technical secretariats in the Member States. The distribution of these technical secretariats and their work plans are decided upon by mutual agreement in a steering committee called the International Committee of Legal Metrology (CIML), to which each Member State appoints a representative. Appendix B provides an outline of how the OIML operates.

The Member States group together, on the basis of their own particular interests, into technical secretariats in order to deal with matters relating to metrology. One Member State is usually in charge of a given secretariat and assumes responsibility for co-ordinating information and drafting the report on the secretariat's work.

Technical secretariats are made up of Pilot Secretariats (SP), which are responsible overall for a given metrological subject, and Reporting Secretariats (Sr), which are responsible for particular aspects of a subject. For a new secretariat to be formed, a proposal must be submitted to the members of the CIML and a sufficient number of Member States (5, in principle) must indicate their intention to participate actively in the work of the proposed secretariat. A list of Pilot Secretariats and Reporting Secretariats is given in Appendix C.

A Reporting Secretariat usually prepares the preliminary versions of a draft International Recommendation (IR) or International Document (ID). An International Recommendation is a set of provisions drawn up to serve as a model for national legal metrology regulations. Once adopted, it is morally binding on the governments of Member States, which must, as much as possible, apply it. An International Document is a set of guidelines and information dealing with an aspect of legal metrology, whose publication by the OIML is deemed useful, but whose application is left to the discretion of those concerned. A list of International Recommendations adopted at the time of publication of this brochure is given in Appendix D. Similarly, Appendix E provides a list of International Documents.

After an initial preliminary version of a draft IR or ID has been prepared by a Reporting Secretariat, the Member States participating in this Reporting Secretariat may suggest changes to the draft. Thus the preliminary draft is examined, commented on and amended until it is accepted by a majority of the Member States participating in the Reporting Secretariat. The document is then submitted to the group of Member States that make up the corresponding Pilot Secretariat.

The Member States belonging to the Pilot Secretariat then study the document and may in turn comment on it and suggest changes. Not until it has received the approval of a majority of the Pilot Secretariat members may the draft be submitted to the BIML.

When the draft reaches the BIML, it is distributed, in English and French versions, to all members of the CIML so that it may be reviewed and commented and voted on. It is first distributed by mail. The State in charge of the Reporting Secretariat that originated the draft, in consultation with its working group, may then make any final changes in accordance with a synthesis of the comments and votes of all the Member States. Drafts are also discussed at CIML meetings, which take place about every eighteen months. It is at such meetings that draft International Documents are adopted.

Draft International Recommendations, because they are morally binding on Member States, must be officially approved by the International Conference of Legal Metrology, an organization with diplomatic status, which meets at least once every six years (see Appendix B). For an IR to be adopted, the number of votes cast must be at least four-fifths of the number of Member States present.

4. DEPARTMENT OF CONSUMER AND CORPORATE AFFAIRS

The Federal Department of Consumer and Corporate Affairs, specifically its Legal Metrology Branch, is responsible for organizing and co-ordinating Canada's participation in the OIML. This Branch is also responsible for bringing statutes and regulations concerning measurement of mass, length, volume, electricity and natural gas in line with International Recommendations issued by the OIML. Other government departments will also be involved in this task in areas within their jurisdiction: for example, the Department of National Health and Welfare will be dealing with standards for measuring instruments used in the health-care field and Agriculture Canada, with respect to agri-food standards.

5. DIRECTOR OF LEGAL METROLOGY

The Director of Legal Metrology is both the Canadian Member of the Comité International de Métrologie Légale (international legal metrology committee - CIML) and Chairman of the OIML Steering Committee.

As the Canadian Member of the CIML, the Director is Canada's official representative to the OIML and the only Canadian entitled to vote at CIML meetings, OIML Conferences and on draft IRs and IDs submitted by the BIML.

The Director may take advisors or assistants along to CIML meetings and conferences and may also temporarily delegate the right to vote to another Canadian official if unable to attend one of these meetings.

6. OIML PROGRAM CO-ORDINATOR

One of the functions of the OIML Program Co-ordinator is to inform and assist the Director of Legal Metrology in carrying out the responsibilities arising out of the functions described above.

The Co-ordinator is the principal liaison and information officer between the OIML and its constituents and the various groups, individuals and institutions involved at all levels of Canada's participation in the OIML. The Co-ordinator also acts as Secretary of the OIML Steering Committee.

7. STEERING COMMITTEE (SC/OIML)

The Steering Committee (SC/OIML), chaired by the Director of Legal Metrology, advises the latter on the general direction Canada intends to take with respect to its participation in the OIML and questions affecting more immediate and specific issues.

Its members meet at their own expense, when convened by the Chairman. This happens at least once every eighteen months, usually in the weeks preceding meetings of the CIML. At these meetings the SC/OIML considers the position Canada intends to adopt at CIML meetings with respect to the various draft IRs and IDs submitted, discusses Canada's present and future participation in the Secretariats, the establishment of new Secretariats, and any other aspects of Canada's involvement in the OIML.

Since the OIML is an intergovernmental organization, the SC/OIML is made up primarily of representatives of federal departments and agencies.

Following is a list of institutions currently represented on the SC/OIML:

Agriculture Canada
Canadian Standards Association
Consumer and Corporate Affairs Canada
External Affairs Canada
Health and Welfare Canada
National Defence (QETE)
National Research Council Canada
Revenue Canada, Customs and Excise
Standards Council of Canada
Supply and Services Canada (CGSB)

The number of members on this committee is expected to remain constant, but the chairman has the right to alter its composition whenever he deems this necessary.

Representatives of other Canadian departments, agencies and associations may be allowed, on request, to attend SC/OIML meetings as observers.

8. CANADIAN OIML SECRETARIATS

The most direct way in which Canada can participate in the OIML is by taking charge of an SP or an Sr. This is thus the best means available to Canadians of obtaining international recognition for standards that meet Canadian criteria in respective areas of expertise.

Canadian working groups with extensive knowledge in the topics to be discussed, and who would like to take charge of an SP or an Sr, should apply to the OIML Program Co-ordinator.

The establishment of a Secretariat and its area of work, and the assignment of responsibility for it to a Member State are all matters decided by the CIML. It is thus the responsibility of the Director of Legal Metrology, as a Member of the CIML, to present any Canadian applications in this regard to the CIML. Applications from Canadian working groups wishing to take charge of an SP or an Sr are also reviewed by the Members of the SC/OIML.

In the case of Secretariats assigned to Canadian working groups, the Chairman may, after consultation with the members of the SC/OIML, decide to terminate those found to be inactive, or those whose work does not correspond to the area of work sphere initially adopted and agreed upon.

9. CANADIAN SECRETARIAT SUBCOMMITTEES

Where a working group has been given responsibility for a Canadian Secretariat and is at the point of producing its first preliminary draft International Recommendation, the Chairman, in consultation with the members of the SC/OIML, will normally ask one or more individuals with the necessary expertise to review the preliminary draft and report on it to the members of the SC/OIML and the Chairman. A particular subcommittee may be formed to study the work of a Secretariat and will be disbanded when the work of that Secretariat is complete.

10. STATUS OF PARTICIPANT IN A SECRETARIAT

The Canadian CIML Member may ask that Canada be registered as a Participant in an SP or an Sr for which another Member State is responsible. In order to do so, the co-operation of at least one Canadian with expertise in the area in question is required. The role of this Canadian expert is to assist the Canadian CIML Member whenever Canada is asked to act upon matters pertaining to the activities of the Secretariat. He/she therefore serves as a resource person and can take official action only with the agreement of the Canadian CIML Member and on his behalf.

Any individual or group interested in Canada's direct participation to a given Secretariat is asked to communicate with the OIML Program Co-ordinator. The Canadian CIML Member is responsible for adding and withdrawing Canada's name from the list of Participants in a Secretariat. He also reserves the right to choose the Canadian expert(s) who will be asked to co-operate in the activities of a Secretariat.

11. STATUS OF OBSERVER IN A SECRETARIAT

The Canadian CIML Member may ask that Canada be registered as an Observer in an SP or an Sr for which another Member State is responsible. Interested parties will be able to follow the progress of the work of a Secretariat. Here again those interested should apply to the OIML Program Co-ordinator, and the Canadian CIML Member reserves the right to accept or reject such applications.

12. STATUS OF CANADIAN REPRESENTATIVE

Canadian individuals or groups of individuals wishing to participate in or attend a meeting of a Secretariat or an assembly, seminar or symposium organized by the OIML should apply to the OIML Program Co-ordinator. Any Canadian representative in connection with projects, studies or assemblies conducted by the OIML or its constituents bodies must be approved by the Canadian CIML Member.

13. CANADIAN COMMENTATORS

When a draft IR or ID is submitted by the BIML to the members of the CIML so that it may be reviewed, commented and voted upon, the Canadian CIML Member then solicits comments from Canadians with expertise closely related to the topic in question. These comments will help to determine Canada's position with respect to the proposal.

14. PERSONS TO CONTACT

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APPENDIX A

OIML MEMBER STATES

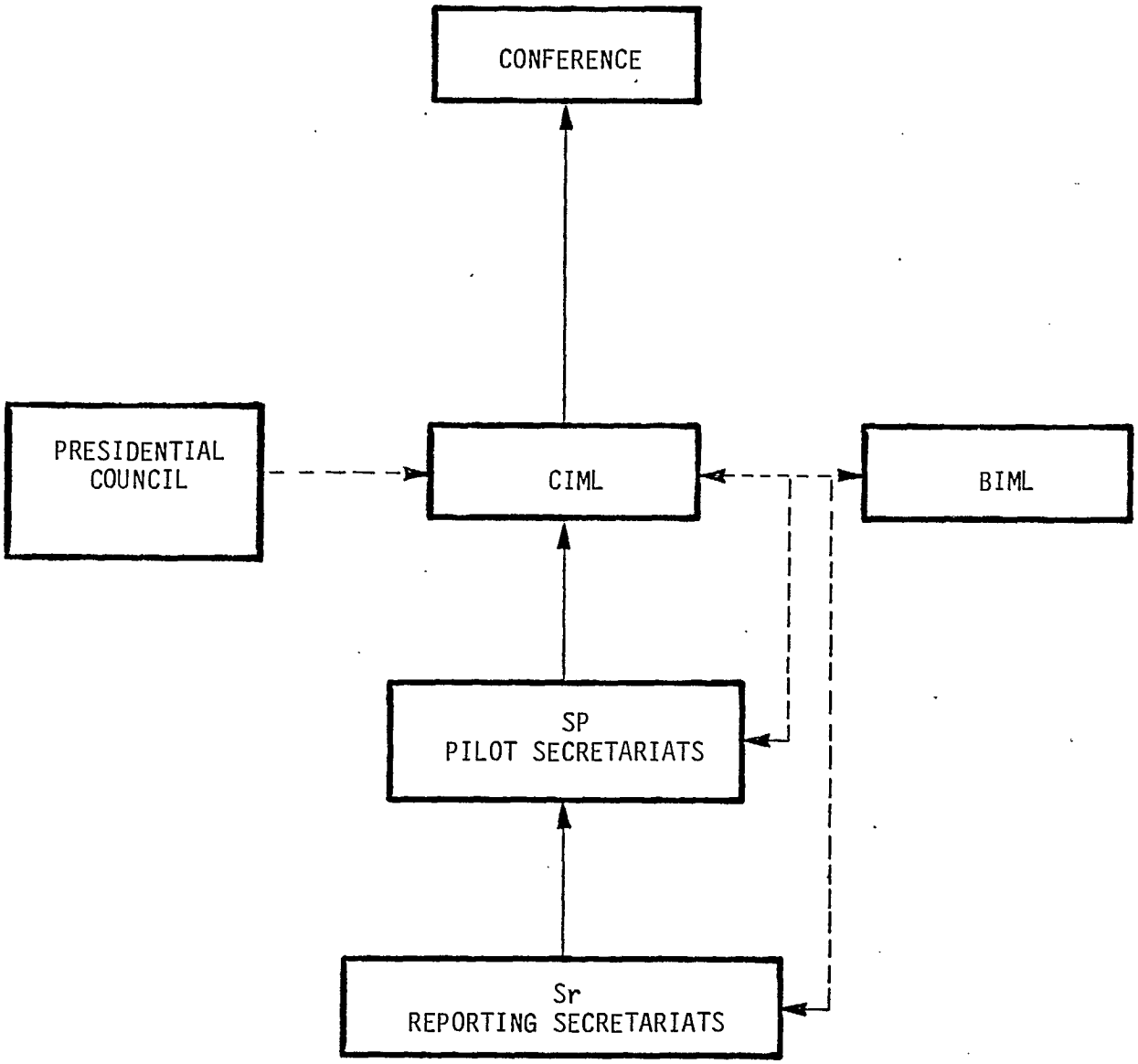
ALGERIA
AUSTRALIA
AUSTRIA
BELGIUM
BRAZIL
BULGARIA
CAMEROON
CANADA
CUBA
CYPRUS
CZECHOSLOVAKIA
DENMARK
EGYPT
ETHIOPIA
FINLAND
FRANCE
FED. REP. GERMANY
GERMANY DEM. REP.
GREECE
GUINEA
HUNGARY
INDIA
INDONESIA
IRELAND
ISRAEL
ITALY
JAPAN
KENYA
REP. OF KOREA
DEM. REP. OF KOREA
LEBANON
MONACO
MOROCCO
NETHERLANDS
NORWAY
PAKISTAN
POLAND
ROUMANIA
SPAIN
SRI LANKA
SWEDEN
SWITZERLAND
TANZANIA
TUNISIA
UNITED KINGDOM
U.S.A.
U.S.S.R.
VENEZUELA
YOUGOSLAVIA

CORRESPONDING MEMBERS

ALBANIA, BAHRAIN, BOTSWANA, COLOMBIA, EQUADOR, FIJI, HONG KONG, IRAQ, ICELAND, JAMAICA, JORDAN, KUWAIT, LUXEMBOURG, MALI, MAURITIUS, NEPAL, NEW ZEALAND, PANAMA, PERU, PHILIPPINES, PORTUGAL, SYRIA, TRINIDAD AND TOBAGO, TURKEY, UPPER VOLTA.

APPENDIX B

WORK ORGANIZATION OF OIML



SP 1	Terminology	Poland
Sr 1	Vocabulary of legal metrology	Poland
Sr 2	Vocabularies of various measurement fields	Poland
Sr 3	Conformity of terminology in OIML documents	Poland
SP 2	Legal metrology - General	B.I.M.L.
Sr 1	Basic laws and regulations	B.I.M.L.
Sr 2	Units of measurement	Austria
Sr 3	Legal qualification of measuring instruments	B.I.M.L.
Sr 4	International recognition of controls and of verification marks	B.I.M.L.
Sr 5	Control by sampling	Switzerland
Sr 6	Electronic instruments	Netherlands
SP 4	Measurement of length, area, angle	Hungary
Sr 1	End measures of length	U.S.S.R.
Sr 2	Material measures of length	Belgium
Sr 3	Instruments for measuring the length of textiles, cables, wires and threads	France
Sr 4	Hierarchy schemes for length measuring instruments	U.S.S.R.
Sr 5	Measurement of angle	Poland
Sr 6	Instruments for measuring the area of hides	Hungary
Sr 7	Terminology (length, area, angle)	Poland

SP 5S	Static measurement of volume of liquids	France
Sr 1	Terminology (liquids and gases)	U. Kingdom
Sr 2	Hierarchy schemes for volume standards	U. Kingdom
Sr 3	Laboratory volume measures	U. Kingdom
Sr 4	Medical syringes	Austria
Sr 5	Bottles considered as measuring containers	France
Sr 6	Drinking glassware	Switzerland
Sr 7	Casks and barrels	Austria
Sr 8	Storage tanks	Rumania
Sr 9	Road and rail tanks	France and Rumania
Sr 10	Barge and ship tanks	Rumania
Sr 11	Devices for gauging the level of liquids in tanks	Netherlands
SP 5D	Dynamic measurement of volume of liquids	F.R. Germany
Sr 1	Meters and measuring systems for liquids other than water with measuring chambers or with turbines	F.R. Germany and France
Sr 2	Meters and measuring systems for cryogenic liquids	U.S.A.
Sr 3	Water meters	U. Kingdom
Sr 4	Drum meters for alcohol and their complementary devices	F.R. Germany
Sr 5	Data for the calculation of quantities of liquids	U.S.A.
Sr 6	Electronic devices applied to the measurement of volume of liquids	France
Sr 7	Methods and devices for verification of measuring instruments for liquids	Japan

SP 6	Measurement of gas	France
Sr 1	Diaphragm gas meters	Netherlands
Sr 2	Gas meters with rotating pistons. Non-volumetric gas meters	F.R. Germany
Sr 3	Differential pressure gas meters	F.R. Germany
Sr 4	Measurement of hydrocarbon gases distributed by pipe-line	Czechoslovakia
Sr 5	Methods and means of calibration of gas meters	U.S.A.
Sr 6	Methods of in-service verification of domestic and industrial gas meters	U.S.A.
Sr 7	Measurement of calculation of compressibility factors of gases	France
Sr 9	Correctors of gas volumes	France
Sr 10	Gas flow rectifiers	France
Sr 11	Calculators intergrated in gas measuring systems	U.S.A.
Sr 12	Gas calorimetry	F.R. Germany
	NOTE: For terminology common to SP 5D, SP 5S and SP 6, see SP 5S-Sr1	

SP 7	Measurement of mass	U.S.A.
Sr 1	Terminology (mass)	U.S.A.
Sr 2	Measurement of mass. General problems. Electronic devices	U.S.A.
Sr 3	Standard and verification weighing instruments	U.S.A.
Sr 4	Non-automatic weighing instruments	France and F.R. Germany
Sr 5	Automatic weighing instruments	U. Kingdom
Sr 6	Price-computing weighing instruments	France and F.R. Germany

SP 7	Measurement of mass (Cont'd)	U.S.A.
Sr 7	In-service control of weighing instruments	U.S.A.
Sr 8	Load Cells	U.S.A.
SP 8	Weights	U.S.A.
Sr 1	Metrological specifications for weights	U.S.A.
Sr 2	Verification of weights	Belgium
Sr 3	Conventional value of the result of weighing in air	B.I.M.L.
Sr 4	Standard test weights for high capacity weighing machines	F.R. Germany and France
Sr 5	Weights used in trade and industry	Belgium and U. Kingdom
Sr 6	Weights of high accuracy	Belgium
SP 9	Measurement of density	France
Sr 1	International alcoholometric tables	France
Sr 2	Alcoholometers and alcohol hydrometers	France
Sr 3	Hydrometers for specific uses	Poland
Sr 5	Pycnometers	France
Sr 9	Terminology (density)	Rumania

SP 10	Measuring instruments for vehicles	France
Sr 1	Measurement of the speed of vehicles	Switzerland
Sr 2	Speed and distance measuring instruments fitted in vehicles	Poland
Sr 3	Taximeters	F.R. Germany
SP 11	Measurement of pressure	Austria
Sr 2	Hierarchy schemes of pressure measuring instruments	Poland
Sr 3	Pressure balances	Czechoslovakia
Sr 4	Pressure gauges with elastic sensing elements	U.S.S.R.
Sr 5	Manometers for blood pressure	Austria
Sr 7	Barometers	U. Kingdom
SP 12	Measurement of temperature and heat	F.R. Germany
Sr 1	Terminology (temperature)	U. Kingdom
Sr 2	Liquid-in-glass thermometers	F.R. Germany
Sr 3	Metallic electrical resistance thermometers	U.S.S.R.
Sr 5	Thermocouples	U.S.A.
Sr 6	Optical pyrometers	U.S.S.R.
Sr 7	Clinical thermometers	F.R. Germany
Sr 8	Thermal energy meters	F.R. Germany
Sr 9	Methods of verification of standard thermocouples	Czechoslovakia

SP 13	Measurement of electrical and magnetic quantities	U.S.A.
Sr 2	Wattmeters	Switzerland
Sr 3	Electrical energy meters for direct connection	France
Sr 4	Measurement transformers and electrical energy meters used with measurement transformers	F.R. Germany
Sr 5	Indicating instruments for voltage, current and frequency	German D.R.
Sr 7	Terminology (electricity)	German D.R.
SP 14	Acoustics and vibration	F.R. Germany
Sr 1	Sound level meters	Switzerland
Sr 2	Audiometers	F.R. Germany
Sr 3	Mechanical vibration and shock	Denmark
SP 15	Optics	X
Sr 1	Dioptrimeters	Hungary
SP 16	Ionizing radiation	U. Kingdom
Sr 1	Dosimeters	Switzerland
Sr 2	Secondary standard dosimetry laboratories	Hungary

SP 17	Measurement of pollution	U.S.A.
Sr 1	Measurement of air pollution	F.R. Germany
Sr 2	Measurement of water pollution	U.S.A.
Sr 3	Measurement of radionuclide radiation	U. Kingdom
Sr 4	Measurement of pesticide and toxic substance pollution	U.S.A.

Note: OIML activities in the field of pollution measurement also include the following subjects, under the responsibility of other Pilot Secretariats:

Measurement of noise (SP 14)

Measurement of certain characteristics of air or water (SP 30)

SP 18	Measurement of characteristics of food products	France
Sr 1	Moisture meters for cereal grains and oilseeds	France
Sr 2	Instruments for measuring the hectolitre mass of cereal grains	F.R. Germany
Sr 3	Polarimetric saccharimeters	F.R. Germany
Sr 4	Automatic saccharimeters for measuring the sugar content of beets	France
Sr 6	Refractometers for measuring the sugar content of natural grape must	France
Sr 7	Refractometers for measuring the sugar content of fruit juices or other food products	F.R. Germany
Sr 8	Milk butyrometers	Belgium

SP 19	Measurement of characteristics of materials	Austria
Sr 2	Machines for testing materials (other than hardness)	U.S.A.
Sr 3	Hardness (reference blocks and testing machines)	Austria
Sr 4	International hardness reference base	Czechoslovakia
Sr 5	Strain gauges	U.S.A.
Sr 6	Terminology (characteristics of materials)	Hungary
SP 20	Prepackaged products	U.S.A.
Sr 1	Information on package labels	U.S.A.
Sr 2	Verification of net content in packages	Switzerland
SP 21	Standardization of the metrological characteristics of measuring instruments	U.S.S.R.
Sr 1	Standardized metrological characteristics of measuring instruments whilst measuring quantities constant in time	U.S.S.R.
Sr 2	Standardized metrological characteristics of measuring instruments whilst measuring quantities varying with time	U.S.S.R.
Sr 3	Classes of accuracy of measuring instruments	U.S.S.R.
Sr 4	Standardized metrological characteristics of measuring systems	U.S.S.R.
Sr 5	Methods of control of metrological characteristics of measuring instruments	U.S.S.R.
Sr 6	Experimental determination of metrological characteristics of measuring systems. Basic principles	U.S.S.R.

SP 22	Principles of metrological control	U.S.A.
Sr 1	Fields of use and nomenclature of instruments subject to mandatory verification	F.R. Germany
Sr 2	Principles of the choice of parameters and characteristics to be verified	German D.R.
Sr 3	Principles of pattern evaluation	U.S.A.
Sr 4	Principles of initial and subsequent verification and calibration of instruments	U.S.A.
Sr 5	Principles of metrological supervision	Czechoslovakia
Sr 6	Principles ensuring the effectiveness of metrological control	U.S.A.
SP 23	Methods and means used for certification of verification devices	Czechoslovakia
Sr 1	Metrological characteristics of measurement standards and of calibration devices, and terminology	Czechoslovakia
Sr 2	Rules for the recognition, conservation and use of measurement standards and calibration devices	Czechoslovakia
Sr 3	Documentation for measurement standards and calibration devices	Czechoslovakia
Sr 4	Methods of certification of verification devices	F.R. Germany
Sr 5	Principles for establishing hierarchy schemes	France

SP 26	Measuring instruments used in the field of health	F.R. Germany
Sr 1	Instruments for counting of blood cells	F.R. Germany
Sr 2	Pipettes for mixing blood	F.R. Germany
Sr 3	Westergren pipettes for measuring blood	F.R. Germany
Sr 4	Bio-electrical measuring instruments	U.S.S.R.
Sr 5	Reference materials for medical instruments	U.S.A.

Note: OIML activities in the health field also include the following subjects, under the responsibility of other Pilot Secretariats:

Medical syringes (SP 5S)
Laboratory volume measures (SP 5S)
Medical weighing instruments (SP 7)
Manometers for blood pressure (SP 11)
Tonometers (SP 11)
Clinical thermometers (SP 12)
Thermometers for use in clinical laboratories (SP 12)
Audiometers (SP 14)
Dioptrometers (SP 15)
Dosimeters for ionizing radiation (SP 16)

SP 27	General principles for the use of reference materials in legal metrology	U.S.S.R.
Sr 1	Terminology (reference materials)	U.S.S.R.
Sr 2	Classification of reference materials	U.S.A.
Sr 3	Metrological properties of reference materials	U.S.S.R.
Sr 4	Principles for the determination of certified values of reference materials	U.S.S.R.
Sr 5	Principles for the use of reference materials	U.S.S.R.
Sr 6	Prescriptions concerning the contents of reference material certificates	U.S.S.R.

SP 27	General principles ....(cont'd)	U.S.S.R.
Sr 7	Methods of comparison of reference materials	Poland
Sr 8	Information concerning reference materials	U.S.S.R.
SP 30	Physico-chemical measurements	U.S.S.R.
Sr 1	pH-measurement and ionometry	U.S.S.R.
Sr 2	Measurement of electrical conductivity	U.S.S.R.
Sr 3	General questions relating to hygrometry	Poland
Sr 4	Hygrometry of solids	U.S.S.R.
Sr 6	Hygrometry of air and gases	Czechoslovakia
Sr 9	Viscometry	U.S.s.R.
Sr 10	Gas analysers	U.S.S.R.
Sr 12	Explosimeters	France
SP 31	Teaching of metrology	U.S.S.R.
Sr 1	Training of metrology engineers	U.S.S.R.
Sr 2	Training of metrology technicians and verification officers	France
Working Group attached to the Development Council until completion of its work		
Equipment necessary for the operation of a National Service of Legal Metrology		U.S.S.R.

APPENDIX D

LIST OF INTERNATIONAL RECOMMENDATIONS

NOTE: An International Recommendation is a group of provisions established to serve as a model of a national regulation on legal metrology.

Recommendations from SP and Sr Secretariats are studied, discussed and adopted by the CIML, then sanctionned by the Conférence Internationale de Métrologie Légale (international legal metrology conference). They are morally binding on the governments of Member States, which must implement them insofar as possible.

1. Cylindrical weights from 1 gram to 10 kilograms of medium accuracy class

2. Rectangular bar weights from 5 kilograms to 50 kilograms of medium accuracy class

3. Metrological regulations for non-automatic weighing machines

4. Volumetric flasks (one mark) in glass

5. Meters for liquids other than water with measuring chambers

6. General specifications for volumetric gas meters

7. Clinical thermometers (mercury-in-glass, with maximum device)

8. See RI 59

9. Verification and calibration of Brinell hardness standardized blocks

10. Verification and calibration of Vickers hardness standardized blocks

11. Verification and calibration of Rockwell B hardness standardized blocks

12. Verification and calibration of Rockwell C hardness standardized blocks

14. Polarimetric saccharimeters

15. Instruments for measuring the hectolitre mass of cereals

16. Manometers for instruments for measuring blood pressure (sphygmomanometers)

17. Indicating pressure gauges, vacuum gauges, and pressure-vacuum gauges (ordinary instruments)

18. Optical pyrometers of the disappearing filament type

19. Recording pressure gauges, vacuum gauges, and pressure-vacuum gauges (ordinary instruments)

20. Weights of accuracy classes E_1 E_2 F_1 F_2 M_1 from 50 kg to 1 mg

21. Taximeters

22. International alcoholometric tables

23. Tyre pressure gauges for motor vehicles

24. Standard one meter bar for verification officers

25. Standard weights for verification officers

26. Medical syringes

27. Volume meters for liquids (other than water). Ancillary equipment

28. Technical regulations for non-automatic weighing machines

29. Capacity serving measures

30. End standards of length (gauge blocks)

31. Diaphragm gas meters

32. Rotary piston gas meters and turbine gas meters

33. Conventional value of the result of weighing in air

34. Accuracy classes of measuring instruments

35. Material measures of length for general use

36. Verification of indenters for hardness testing machines

37. Verification of hardness testing machines (Brinell system)

38. id. (Vickers system)

39. id. (Rockwell B, F, T - C, A, N)

40. Standard graduated pipettes for verification officers

41. Standard burettes for verification officers

42. Metal stamps for verification officers

43. Standard graduated glass flasks for verification officers

44. Alcoholometers and alcohol hydrometers

45. Casks and barrels

46. Active electrical energy meters for direct connection (class 2)

47. Standard weights for testing of high capacity weighing machines

48. Tungsten ribbon lamps for calibration of optical pyrometers

49. Water meters (intended for the metering of cold water)

50. Continuous totalising automatic weighing machines

51. Checkweighing and weight grading machines

52. Hexagonal weights. Ordinary accuracy class, from 100 g to 50 kg

53. Metrological characteristics of elastic sensing elements used for measurement of pressure. Determination methods

54. pH scale for aqueous solutions

55. Speedometers, mechanical odometers and chronotachographs for motor vehicles. Metrological regulations

56. Standard solutions reproducing the conductivity of electrolytes

57. Measuring assemblies for liquids other than water fitted with volume meters. General provisions

58. Sound level meters

59. Moisture meters for cereal grains and oilseeds

60. Metrological regulations for load cells

61. Automatic gravimetric filling machines

62. Performance characteristics of metallic resistance strain gauges

63. Petroleum measurement tables

64. General requirements for materials testing machines

65. Requirements for machines for tension and compression testing of materials

66. Length measuring instruments

67. Measuring assemblies for liquids other than water fitted with volume meters. Metrological controls

68. Calibration method for conductivity cells

69. Glass capillary viscometers for the measurement of kinematic viscosity. Verification method

70. Method for the determination of intrinsic and hysteresis errors of gas analysers

71. Fixed storage tanks at atmospheric pressure or under pressure. General requirements

72. Hot-water meters

73. Requirements concerning CO, CO_2, CH_4, H_2, O_2, N_2 and Ar pure gases intended for the preparation of reference gas mixtures

Copies of any of these International Recommendations are available upon request to the OIML Program Co-ordinator.

APPENDIX E

LIST OF INTERNATIONAL DOCUMENTS

NOTE: An International Document consists of information and advice on some aspects of legal metrology, publication of which by the OIML has been deemed appropriate. Use of International Document is left to the discretion of interested Member States.

1. Law on metrology
2. Legal units of measurement
3. Legal qualification of measuring instruments
4. Installation and storage conditions for cold water meters
5. Principles for the establishment of hierarchy schemes for measuring instruments
6. Documentation for measurement standards and calibration devices
7. The evaluation of flow standards and facilities used for testing water meters
8. Principles concerning choices, official recognition, use and conservation of measurement standards
9. Principles of metrological supervision
10. Guidelines for the determination of recalibration intervals of measuring equipment used in testing laboratories

Copies of any of these International Documents are available upon request to the OIML Program Co-ordinator.