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AUSTRALIA

National Measurement Regulations 1999

Statutory Rules 1999 No. 110

I, WILLIAM PATRICK DEANE, Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, make the following regulations under the *National Measurement Act 1960*.

Dated 09 JUN 1999 1999.

WILLIAM DEANE

Governor-General

By His Excellency's Command,

NICK MINCHIN
Minister for Industry, Science and Resources

National Measurement Regulations 1999

Statutory Rules 1999 No. 1 [1]

110

made under the

National Measurement Act 1960

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Part 1 Preliminary

1 Name of regulations

These regulations are the *National Measurement Regulations 1999*.

2 Commencement

These regulations commence on the date of commencement of the *National Measurement Amendment (Utility Meters) Act 1999*.

3 Definitions

In these regulations, unless the contrary intention appears:

Act means the *National Measurement Act 1960*.

approval, of a pattern of a measuring instrument, means approval of the pattern under regulation 60.

approval holder means the person in whose name a certificate of approval is in force.

approved pattern, of a measuring instrument, means the pattern approved under regulation 60.

approving authority means:

(a) for patterns of measuring instruments generally — the Commission; or

(b) for a particular pattern of a measuring instrument — a body or person appointed under subregulation 76 (1) in relation to patterns of measuring instruments of the same kind as the particular pattern of a measuring instrument.

certificate means:

(a) a certificate of verification; or

(b) a certificate issued under regulation 37 or 48; or

(c) a certificate of approval.

certificate of approval means a certificate issued under regulation 60.

certificate of verification means a certificate issued under regulation 13.

certification means:

(a) for a measuring instrument — certification of the instrument under regulation 37; and

(b) for a reference material — certification of the material under regulation 48.

certified measuring instrument means a measuring instrument certified under regulation 37.

certified reference material means a reference material certified under regulation 48.

certifying authority means:

(a) for measuring instruments generally — the Commission or the Organisation; or

(b) for reference materials generally — the Commission; or

(c) for a particular measuring instrument or reference material — a body or person appointed under regulation 73 in relation to measuring instruments or reference materials of the same kind as the particular measuring instrument or reference material.

defence equipment means equipment used, or intended for use, by the Defence Force.

legal measuring instrument means a measuring instrument used, or intended for use, in the determination of a physical quantity:

(a) for:

(i) law enforcement; or

(ii) demonstrating compliance, or lack of compliance, with a law of the Commonwealth or of a State or Territory; or

(b) that is, or may be, relevant to a proceeding in which the quantity is an issue.

linear interpolation, for a denomination, means a calculation of an amount that is in a linear sequence between the amounts stated for the denominations that are immediately smaller and larger than the denomination.

maximum permissible error, for a measure or measuring instrument, means the maximum limit of error that:

(a) may be tolerated; and

(b) for verification, certification, re-verification or in-service inspection — is mentioned in:

(i) Schedule 12 for the measure or instrument; or

(ii) if the limit mentioned in the certificate for the measure or measuring instrument is different from that mentioned in Schedule 12 — the certificate.

permissible variation, for a standard of measurement, means the amount by which the standard may differ from the denomination indicated by the standard.

SI, for a unit of measurement, means the system of measurement known as the International System of Units.

standard reference conditions means a temperature of 20° Celsius and pressure of 101.325 kilopascals.

time, for a standard of measurement, means time that is not derived from the calendar.

verification, of a standard of measurement, means verification of the standard under regulation 13.

verifying authority means:

(a) for standards of measurement generally — the Organisation; or

(b) for reference standards of measurement — the Commission; or

(c) for a particular reference standard of measurement — a body or person appointed under regulation 73 in relation to reference standards of measurement of the same kind as the particular reference standard of measurement.

Note The following terms used in these regulations are defined in subsection 3 (1) of the Act:

- Australian legal unit of measurement

- Australian primary standard of measurement
- Australian secondary standard of measurement
- measuring instrument
- measuring instrument with an approved pattern
- metric system of measurement
- pattern
- reference material
- reference standard of measurement
- standard of measurement
- State primary standard of measurement
- the Commission
- the Organisation
- unit of measurement
- use for trade
- utility meter.

4 References to appointments, approvals and certificates

(1) In these regulations:

(a) a reference to an appointment as a certifying, verifying or approving authority, or approval of the pattern of a measuring instrument, includes a reference to the appointment or approval as varied; and

(b) a reference to variation or cancellation of the appointment or approval includes a reference to variation or cancellation of the instrument of appointment or certificate of approval; and

(c) a reference to variation of the appointment or approval includes a reference to a variation of a condition of the appointment or approval by addition, omission or substitution.

(2) In these regulations, a reference to a certificate issued by a certifying, verifying or approving authority is a reference to a certificate of that kind that is signed:

(a) if the authority is a body corporate — by an officer or employee of the body authorised in writing by the body to

sign and issue certificates of the same kind as the certificate; or

(b) if the authority is not a body corporate:

(i) by the authority; or

(ii) by a person authorised in writing by the authority in accordance with a permission given under regulation 71.

Part 2 Units of measurement

5 Australian legal units of measurement (Act, s 7A (1))

The Australian legal unit of measurement for a physical quantity mentioned in an item in Schedule 1 is the unit of measurement the name, symbol and definition of which are mentioned in the item.

Note The Commission may issue written guidelines governing the way in which these units of measurement may be combined to produce Australian legal units of measurement — see Act, s 7B (1) (a).

6 Additional legal units of measurement (Act, s 7A (2))

(1) Each unit of measurement for a physical quantity mentioned in column 2 in an item in Part 1 of Schedule 2, the name, symbol and definition of which are mentioned in the item, is an additional legal unit of measurement.

(2) An additional legal unit of measurement may be used:

(a) for a purpose mentioned in Part 2 of Schedule 2; and

(b) if paragraph (a) applies — in an agreement, arrangement or other instrument.

7 Prefixes specifying numerical values (Act, s 7A (3))

A prefix the name and symbol of which are set out in an item in Schedule 3 is prescribed as specifying the numerical value in column 2 in the item.

Note The Commission may issue written guidelines governing the way in which units of measurement or a combination of units of measurement may be combined with these prefixes to produce Australian legal units of measurement — see Act, s 7B (1) (b).

Part 3 Standards of measurement

Division 1 General

8 Definition for Part 3

In this Part:

verify includes reverify.

9 Verification of Australian primary and secondary standards of measurement

The Organisation may verify an Australian primary or secondary standard of measurement.

10 Verification of standards of measurement generally

(1) This regulation does not apply to verification of a State primary standard of measurement.

Note For verification of State primary standards of measurement, see section 9 of the Act.

(2) Verification of a standard of measurement must be conducted in an appropriate way, having regard to the nature of the standard of measurement.

Division 2 Verification of standards of measurement

11 Application of Division 2

This Division does not apply to:

(a) an Australian primary or secondary standard of measurement; or

(b) a State primary standard of measurement.

Note For verification of State primary standards of measurement, see section 9 of the Act.

12 Application for verification of standards of measurement

(1) Application may be made for verification of a standard of measurement.

(2) An application must be:

(a) made in the form provided by the Commission to verifying authorities for issue to applicants; and

(b) accompanied by the standard of measurement; and

(c) given to a relevant verifying authority.

(3) The verifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The verifying authority may refuse to proceed with the application until the applicant complies with the notice.

13 Verification of standards of measurement

(1) On application under regulation 12, the verifying authority:

(a) may verify a standard of measurement; and

(b) if the standard is verified — must issue a certificate of verification to the applicant; and

(c) may issue a copy of the certificate to anyone else the authority considers should be given a copy.

(2) A verifying authority may verify a standard of measurement other than on application.

(3) If the standard of measurement is verified under the supervision of a verifying authority, the authority may verify the standard.

(4) The verifying authority must not verify a standard of measurement mentioned in paragraph (a) of the definition of ***standard of measurement*** in subsection 3 (1) of the Act unless the standard bears a mark that identifies the standard.

(5) If the standard of measurement is verified by the verifying authority, the authority must issue a certificate of verification to the applicant.

14 Decisions not to verify standards of measurement

(1) If the verifying authority decides not to verify a standard of measurement, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

15 Marking of verified standards of measurement

(1) On verification of a standard of measurement, the verifying authority must mark the standard with a statement of:

(a) the date of verification; and

(b) if, under regulation 30, the standard has a value equal to its denomination — that fact.

(2) However, if compliance with subregulation (1) is impracticable because of the nature, shape or size of a standard of measurement, the standard is taken to comply with

subregulation (1) if it is enclosed in a sealed container that is marked in accordance with subregulation (1).

Division 3 Marks and certificates of verification

16 Marks on, or attached to, standards of measurement

(1) An Australian primary or secondary, or a State primary, standard of measurement must bear an identifying mark before it is verified.

(2) Immediately after verifying an Australian primary or secondary, or a State primary, standard of measurement, the Organisation must mark the standard with a statement of:

(a) the date of verification of the standard; and

(b) if, under regulation 30, the standard has a value equal to its denomination — that fact.

(3) A mark mentioned in subregulation (1), (2) or 13 (3) or regulation 15 must be:

(a) legible; and

(b) on, or attached to, the standard:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

(4) However, if compliance with subregulation (3) is impracticable because of the nature, shape or size of a standard of measurement, the standard is taken to comply with subregulation (3) if it is enclosed in a sealed container that is marked in accordance with subregulation (3).

17 Certificates of verification of Australian primary and secondary standards of measurement

(1) The certificate of verification of an Australian primary or secondary standard of measurement must state:

(a) the date of verification; and

(b) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(c) the accuracy with which the standard is verified; and

(d) a description of any mark on, or attached to, the standard or a sealed container in which the standard is enclosed under these regulations; and

(e) the period, from the date of verification, for which the certificate is given.

(2) For paragraph (1) (c), the accuracy of a standard of measurement is ascertained and expressed in a manner determined in writing by the Organisation.

18 Certificates of verification of State primary standards of measurement

(1) When a State primary standard of measurement is verified, a certificate of verification must be issued to the appropriate State authority.

(2) The certificate of verification of a State primary standard of measurement must state:

(a) that it verifies the State primary standard of measurement in an appropriate manner, having regard to the nature of the standard of measurement; and

(b) the date of verification; and

(c) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(d) the accuracy with which the standard is verified; and

(e) the value (stating the range of uncertainty) of any relevant environmental or other influence factors, like temperature and pressure, at the time of the verification; and

(f) a description of any mark on, or attached to, the standard under these regulations; and

(g) the period, from the date of verification, for which the certificate is given.

(3) The value of the standard under paragraph (2) (c) must be ascertained in accordance with subregulation 24 (1).

(4) For paragraph (2) (d), the accuracy of a State primary standard of measurement must be ascertained in a manner determined in writing by the Organisation.

(5) For paragraph (2) (d), the accuracy with which a State primary standard of measurement must be verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 4 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(c) for a standard for the measurement of mass of a denomination not stated in column 1 in Schedule 5 — the amount of permissible uncertainty appropriate to that denomination when linear interpolation is applied to the amount of permissible uncertainty stated for the denominations in column 2 in that Schedule.

19 Certificates of verification of reference standards of measurement

(1) A certificate of verification of a reference standard of measurement must state:

(a) the name and address of the verifying authority; and

(b) that the standard is verified as a reference standard of measurement:

(i) if a verifying authority verified the standard — by the verifying authority; or

(ii) if a verifying authority supervised verification of the standard — under the supervision of the verifying authority; and

(c) the date of verification; and

(d) the value ascertained for the standard on that date in terms of an Australian legal unit of measurement; and

(e) the accuracy with which the standard is verified; and

(f) the value (stating the range of uncertainty) of any relevant environmental or other influence factors, like temperature and pressure, at the time of the verification; and

(g) a description of any mark on or attached to, the standard under these regulations; and

(h) the period, from the date of verification, for which the certificate is given.

(2) For paragraph (1) (e), the accuracy of a reference standard of measurement must be ascertained and expressed in a manner determined in writing by the Commission.

Note For further provisions relating to paragraph (1) (e), see regulations 24, 25, 26, 27 and 28.

20 Notification of determinations

(1) The Organisation must send a copy of a determination made under subregulation 17 (2) or 18 (4) to the Commission and to each verifying authority appointed to verify standards of measurement to which the determination relates.

(2) The Commission must send a copy of a determination made under subregulation 19 (2) to the Organisation and to each verifying authority appointed to verify standards of measurement to which the determination relates.

(3) A determination applies to a verifying authority when the authority is given a copy of the determination under subregulation (1) or (2).

21 Recognition of foreign reference standards of measurement

(1) The Commission may, by instrument under the seal of the Commission, recognise a verification (however described) of a reference standard of measurement in a foreign country as a reference standard of measurement if:

(a) the verified values of the standard of measurement are established by means of, by reference to, by comparison with or by derivation from, the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised reference standard of measurement is taken to be a verified reference standard of measurement.

(3) The instrument of recognition of the reference standard of measurement is taken to be a certificate issued under regulation 19 for the reference standard of measurement.

Division 4 When verifications cease to have effect and may be cancelled

22 When verification ceases to have effect

The verification of a standard of measurement ceases to have effect at the end of the period stated in the certificate of verification for the standard of measurement as the period for which the certificate is given.

23 Grounds for cancellation of verification

The grounds for cancelling the verification of a standard of measurement are that the value ascertained for the standard of measurement is:

(a) incorrect; or

(b) not within the permissible variation for the standard.

Division 5 Accuracy, value and uncertainty of standards of measurement

24 Standard reference conditions

(1) For paragraph 18 (2) (c), the value ascertained for a State primary standard of measurement must be measured:

(a) under standard reference conditions; or

(b) if there is a relevant determination in force under paragraph (2) (a) — in accordance with the determination.

(2) The Commission:

(a) may determine in writing the conditions under which the value is ascertained for a State primary standard of measurement or a reference standard of measurement; and

(b) must give a copy of the determination to:

(i) each other verifying authority; and

(ii) each person who may sign certificates of verification for that authority for standards of measurement of the same kind as the standard to which the determination applies.

(3) Paragraph (1) (b) does not apply to a verifying authority (other than the Commission) until the Commission gives a copy of the determination mentioned in that paragraph to the verifying authority.

25 Accuracy of State secondary standards of measurement

For paragraph 19 (1) (e), the accuracy with which a State secondary standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 4 — the amount of permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the amount of permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(c) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 6 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(d) for a standard for the measurement of mass or volume of a denomination not stated in column 1 in Schedule 5 or 6 — the amount of permissible uncertainty appropriate to the denomination when linear interpolation is applied to the amounts of permissible uncertainty stated:

(i) for a standard for the measurement of mass — in column 3 in Schedule 5; or

(ii) for a standard for the measurement of volume — in column 2 in Schedule 6.

26 Accuracy of State tertiary standards of measurement

For paragraph 19 (1) (e), the accuracy with which a State tertiary standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 5 — the amount of permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(b) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 6 — the amount of permissible uncertainty stated for the denomination in column 3 in that Schedule; or

(c) for a standard for the measurement of mass or volume of a denomination not stated in column 1 in Schedule 5 or 6 — the amount of permissible uncertainty appropriate to the denomination when linear interpolation is applied to the amounts of permissible uncertainty stated:

(i) for a standard for the measurement of mass — in column 4 in Schedule 5; or

(ii) for a standard for the measurement of volume — in column 3 in Schedule 6.

27 Accuracy of Inspectors' Class 1 standards of measurement

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 1 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 7 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(b) for a standard for the measurement of area of a denomination stated in column 1 in Schedule 8 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(c) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(d) for a standard for the measurement of volume of a denomination stated in column 1 in Schedule 10 — the amount of permissible uncertainty stated for the denomination in column 2 in that Schedule; or

(e) for a standard for the measurement of area, mass or volume of a denomination not stated in column 1 in Schedule 8, 9 or 10 — the amount of permissible uncertainty appropriate to the denomination when linear interpolation is applied to the amounts of uncertainty stated:

(i) for a standard for the measurement of area — in column 2 in Schedule 8; or

(ii) for a standard for the measurement of mass — in column 2 in Schedule 9; or

(iii) for a standard for the measurement of volume — in column 2 in Schedule 10.

28 Accuracy of Inspectors' Class 2 standards of measurement

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 2 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of length of a denomination stated in column 1 in Schedule 7 — the amount of permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(b) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the amount of permissible uncertainty stated for the denomination in column 4 in that Schedule; or

(c) for a standard for the measurement of mass of any other denomination — the amount of permissible uncertainty appropriate to the denomination when it is applied to the amounts of permissible uncertainty stated in column 4 in Schedule 9.

29 Accuracy of Inspectors' Class 3 standards of measurement

For paragraph 19 (1) (e), the accuracy with which an Inspectors' Class 3 standard of measurement is verified must be expressed as an uncertainty that does not exceed:

(a) for a standard for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the amount of permissible uncertainty stated for the denomination in column 6 in that Schedule; or

(b) for a standard for the measurement of mass of any other denomination — the amount of permissible uncertainty appropriate to the denomination when linear interpolation is applied to the amounts of permissible uncertainty stated in column 6 in Schedule 9.

30 Equivalent values — permissible variation

(1) This regulation applies subject to regulation 31.

(2) For paragraph 19 (1) (d), each of the following standards of measurement has a value equal to the value of its denomination of length, area, mass or volume, unless the value ascertained for the standard varies by an amount exceeding the permissible variation applicable to the denomination:

(a) an Inspectors' Class 1 standard of measurement;

(b) an Inspectors' Class 2 standard of measurement;

(c) an Inspectors' Class 3 standard of measurement.

Note The permissible variation for the 3 classes of inspectors' standards of measurement are stated in regulations 32, 33 and 34.

31 Equivalent values — permissible uncertainty

(1) Each of the following standards of measurement has a value equal to the value of its denomination of length, area, mass or volume, unless the accuracy with which the standard is verified exceeds the permissible uncertainty stated in subregulation (2):

(a) an Inspectors' Class 1 standard of measurement;

(b) an Inspectors' Class 2 standard of measurement;

(c) an Inspectors' Class 3 standard of measurement.

(2) The permissible uncertainty is:

(a) for a denomination mentioned in regulation 32 — stated in column 2 for the denomination in the relevant Schedule; and

(b) for a denomination mentioned in regulation 33 — stated in column 4 for the denomination in the relevant Schedule; and

(c) for a denomination mentioned in regulation 34 — stated in column 6 for the denomination in the relevant Schedule.

32 Permissible variation — Inspectors' Class 1 standards

For regulation 30, the permissible variation for an Inspectors' Class 1 standard of measurement is:

(a) for the measurement of length, area, mass or volume of a denomination stated in column 1 in Schedule 7, 8, 9 or 10 — the amount stated in column 3 for the denomination in the relevant Schedule; and

(b) for the measurement of area, mass or volume of a denomination not stated in column 1 in Schedule 8, 9 or 10 — the amount appropriate to the denomination when linear interpolation is applied to the amounts of permissible variation stated in column 3 for the denomination in the relevant Schedule.

33 Permissible variation — Inspectors' Class 2 standards

For regulation 30, the permissible variation for an Inspectors' Class 2 standard of measurement is:

(a) for the measurement of length or mass of a denomination stated in column 1 in Schedule 7 or 9 — the amount stated in column 5 for the denomination in the relevant Schedule; and

(b) for the measurement of mass of a denomination not stated in column 1 in Schedule 9 — the amount appropriate to the denomination when linear interpolation is applied to the amounts of permissible variation stated in column 5 in that Schedule.

34 Permissible variation — Inspectors' Class 3 standards

For regulation 30, the permissible variation for an Inspectors' Class 3 standard of measurement is:

(a) for the measurement of mass of a denomination stated in column 1 in Schedule 9 — the amount stated in column 7 for the denomination in that Schedule; and

(b) for the measurement of mass of a denomination not stated in column 1 in Schedule 9 — the amount appropriate to the denomination when linear interpolation is applied to the amounts of permissible variation stated in column 7 in that Schedule.

Part 4 Measuring instruments

Division 1 Preliminary

35 Definitions for Part 4

In this Part:

certify includes recertify.

measuring instrument does not include a measuring instrument in use for trade.

Division 2 Certification of measuring instruments

36 Application for certification of measuring instruments

(1) Application may be made for certification of a measuring instrument.

(2) An application must be:

(a) made in the form provided by the Commission to certifying authorities for issue to applicants; and

(b) accompanied by the measuring instrument; and

(c) given to a relevant certifying authority.

(3) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

37 Certification of measuring instruments

(1) On application under regulation 36, the certifying authority:

(a) may examine the measuring instrument; and

(b) may certify the measuring instrument; and

(c) if the instrument is certified — must issue a certificate for the instrument to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given a copy.

(2) The certifying authority may refuse to examine a measuring instrument if the examination would create a significant risk of personal injury or death, or damage to property.

(3) A certifying authority may certify a measuring instrument other than on application.

(4) If the measuring instrument is certified under the supervision of a certifying authority, the authority may certify the instrument.

(5) For a measuring instrument to be certified, it must:

(a) have an approved pattern; and

(b) bear a mark that identifies the particular instrument.

(6) The certifying authority must mark a certified measuring instrument with the date of certification.

38 Decisions not to certify measuring instruments

(1) If the certifying authority decides not to certify a measuring instrument, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

39 Determinations — accuracy of measuring instruments

(1) The Commission may determine the manner in which the accuracy of measuring instruments of a particular kind must be ascertained by a certifying authority for these regulations.

(2) The accuracy of a measuring instrument of a kind to which a determination under subregulation (3) applies must be ascertained for these regulations in accordance with the determination.

(3) The Commission must give a copy of a determination made under subregulation (3) to the Organisation and each other certifying authority appointed in relation to a measuring instrument to which the determination applies.

(4) A determination applies to a certifying authority when the certifying authority is given a copy of the determination under subregulation (3).

40 Recognition of foreign certification of measuring instruments

(1) The Commission may, by instrument under the seal of the Commission, recognise a certification (however described) of a measuring instrument in a foreign country as a certified measuring instrument if:

(a) the certified values of the measuring instrument are established by means of, by reference to, by comparison with or by derivation from, the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised measuring instrument is taken to be a certified measuring instrument.

(3) The instrument of recognition of the measuring instrument is taken to be a certificate issued under regulation 36 for the measuring instrument.

Division 3 Marks and certificates

41 Marking of measuring instruments

For paragraph 37 (5) (b) and subregulation 37 (6), a mark on a measuring instrument must be:

(a) legible; and

(b) on, or attached to, the instrument:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

42 Matters to be stated in certificates

A certificate must state:

(a) the name and address of the certifying authority; and

(b) that the measuring instrument is certified:

(i) if a certifying authority certified the instrument — by the certifying authority; or

(ii) if a certifying authority supervised certification of the instrument — under the supervision of the certifying authority; and

(c) the identity of the certified measuring instrument by reference to the identifying mark on, or attached to, the instrument; and

(d) the number of the certificate; and

(e) the date of certification; and

(f) that the measuring instrument is found to operate within the maximum permissible errors for that type of measuring instrument; and

(g) the accuracy with which the instrument is certified; and

(h) the period, from the date of verification, for which the certificate is given.

Division 4 When certification ceases to have effect and may be cancelled

43 When certification ceases to have effect

The certification of a measuring instrument ceases to have effect at the end of the period stated in the certificate for the measuring instrument as the period for which the certificate is given.

44 Grounds for cancellation of certification

The grounds for cancelling the certification of a measuring instrument are:

(a) that the measuring instrument does not operate within the maximum permissible error for the instrument; or

(b) that the metrological performance of the measuring instrument has been significantly affected since the instrument was last certified.

Part 5 Reference materials

Division 1 Preliminary

45 Definition for Part 5

In this Part:

certify includes recertify.

Division 2 Certification of reference materials

46 Application for certification of reference materials

(1) Application may be made for certification of a reference material.

(2) An application must be:

(a) made in the form provided by the Commission to certifying authorities for issue to applicants; and

(b) accompanied by the reference material, or a sample of the material; and

(c) given to a relevant certifying authority.

(3) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(4) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

47 Application to vary certification of reference materials

(1) The holder of a certificate issued by the certifying authority may apply for variation of the certificate by lodging with the authority:

(a) a written application; and

(b) the certificate, or a copy of the certificate; and

(c) the certified reference material, or a sample of the material.

(2) The certifying authority may, by written notice given to the applicant, require the applicant to lodge with the authority any additional information that the authority needs to consider the application properly.

(3) The certifying authority may refuse to proceed with the application until the applicant complies with the notice.

48 Certification of reference materials

(1) On application under regulation 46, the certifying authority:

(a) may examine the reference material; and

(b) may certify the reference material; and

(c) if the material is certified — must issue a certificate for the material to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) A certifying authority may certify a reference material other than on application.

(3) If the reference material is certified under the supervision of a certifying authority, the authority may certify the material.

(4) Certification of the reference material is subject to a condition stated in the certificate.

(5) The certifying authority must not certify the reference material unless the material bears a mark that identifies the particular material.

(6) Certification of the reference material must be conducted in an appropriate manner, having regard to the nature of the material to be certified.

(7) The certifying authority must mark the certified reference material with the date of certification.

49 Variation of certification of reference materials

(1) On application under regulation 47, a certifying authority:

(a) may examine the reference material; and

(b) may vary the certification of a reference material certified by the authority; and

(c) if the certification is varied — must give the certificate for the reference material, as varied by the authority, to the applicant; and

(d) may give a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The certifying authority must not examine a reference material if the examination would create a significant risk of personal injury or death, or damage to property.

(3) Variation of the certification of a reference material is subject to a condition stated in the certificate in relation to the variation.

50 Decisions not to certify reference materials

(1) If the certifying authority decides not to certify a reference material, or to vary the certificate in a way not sought by the applicant, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

51 Notice of variation

(1) This regulation applies to variation of the certification of a reference material under regulation 49.

(2) If the certificate is varied by a certifying authority other than the Commission, the authority must notify the Commission in writing of the variation.

(3) The certifying authority must, as soon as practicable and to the extent that is practicable, give written notice of the variation and the reasons for the variation:

(a) if the applicant is not the manufacturer of the certified reference material:

(i) for material manufactured in Australia — to the manufacturer; or

(ii) for material manufactured outside Australia — to the agent of the manufacturer in Australia; and

(b) to purchasers and users of the certified reference material who are known to the authority.

52 Determinations by Commission

(1) The Commission may determine:

(a) the manner, methods or characteristics of methods by which the property values of reference materials of a stated kind must be established for certification for these regulations; and

(b) a matter about a particular reference material, or reference materials of a particular kind, that is relevant to the proper use of the material or materials that must be stated in a certificate under paragraph 55 (j).

(2) The property values of a reference material of a kind to which a determination by the Commission applies must be established in the manner set out in that determination.

(3) The Commission must give a copy of a determination to a certifying authority who is appointed in relation to a reference material to which the determination relates.

(4) A determination applies to a certifying authority when the certifying authority is given a copy of the determination under subregulation (3).

53 Recognition of certain foreign reference materials as certified reference materials

(1) The Commission may, by instrument under the seal of the Commission, recognise a reference material, or a reference material of a stated kind, that is certified (however described) in a foreign country as a certified reference material if:

(a) the certified values of the reference material, or of reference materials of that kind, are established by means of, by reference to, by comparison with or by derivation from, the primary standards of measurement of the foreign country; and

(b) appropriate comparability is established between:

(i) the relevant primary standards of measurement of the foreign country; and

(ii) one or more Australian primary standards of measurement.

(2) A recognised reference material is taken to be a certified reference material.

(3) The instrument of recognition of the reference material is taken to be a certificate issued under regulation 48 for the reference material.

Division 3 Marks and certificates

54 Marking of reference materials

(1) For subregulations 48 (5) and (7), a mark on a reference material must be:

(a) legible; and

(b) on, or attached to, the material:

(i) permanently; or

(ii) in such a way that the mark cannot be obliterated or removed without being destroyed.

(2) However, if compliance with subregulation (1) is impracticable because of the nature, shape or size of the reference material, the reference material is taken to comply with subregulation (1) if it is enclosed in a sealed container that is marked in accordance with subregulation (1).

55 Matters to be stated in certificates

A certificate must state:

(a) the name and address of the certifying authority; and

(b) that the reference material is certified:

(i) if a certifying authority certified the material — by the certifying authority; or

(ii) if a certifying authority supervised certification of the material — under the supervision of the certifying authority; and

(c) the date of certification; and

(d) the name or description of the reference material; and

(e) the certified property values of the reference material and their uncertainties and confidence limits; and

(f) the date on which the property values of the reference material were established for certification of the material; and

(g) a description of the reference material by reference to:

(i) the identifying mark on, or attached to, the material under regulation 48; and

(ii) the batch number (if that number is not the same as the number mentioned in that regulation); and

(h) information about the storage and transportation of the reference material including, if appropriate, their effect on the stability of the material and on the validity of:

(i) the certification; and

(ii) the certified property values and the uncertainties of those values; and

(i) the period, from the date of verification, for which the certificate is given; and

(j) any other matter about the reference material that the Commission determines under paragraph 52 (1) (b) should be stated in certificates of the same kind as the certificate.

Division 4 When certification ceases to have effect or may be cancelled or varied

56 When certification ceases to have effect

The certification of a reference material ceases to have effect at the end of the period stated:

(a) in the certificate for the reference material as the period for which the certificate is given; or

(b) by the manufacturer of the material as the period within which the material should be used to obtain the results specified by the manufacturer.

57 Grounds for cancellation or variation of certification

(1) The grounds for cancelling the certification of a reference material are that the reference material does not conform to the property values for the material, or their uncertainties and confidence limits, stated in the certificate.

(2) The grounds for varying the certification of a reference material, other than on application, are:

(a) the grounds stated in subregulation (1); and

(b) that it is not appropriate to cancel the approval.

Part 6 Patterns of measuring instruments

Division 1 Examinations for pattern approval

58 Application for approval of patterns of measuring instruments

(1) Application may be made for approval of the pattern of a measuring instrument.

(2) An application must be:

(a) made in the form provided by the Commission to approving authorities for issue to applicants; and

(b) accompanied by detailed drawings and specifications of the pattern of the measuring instrument; and

(c) given to a relevant approving authority.

(3) The approving authority may, by written notice given to the applicant, require the applicant to lodge with the authority:

(a) the whole or a part of the pattern of a measuring instrument that is the subject of the application; and

(b) the whole or a part of a measuring instrument constructed in accordance with the pattern; and

(c) any additional information that the authority needs to consider the application properly.

(4) The approving authority may refuse to proceed with the application until the applicant complies with the notice.

59 Application to vary approval of approved patterns

(1) An approval holder may apply for variation of the pattern approved by an approving authority by lodging:

(a) a written application with the authority; and

(b) the certificate of approval of the pattern or a copy of the certificate; and

(c) detailed drawings and specifications showing the variation.

(2) The approving authority may, by written notice given to the applicant, require the applicant to lodge with the authority:

(a) the whole or a part of the pattern of a measuring instrument as proposed to be varied; and

(b) the whole or a part of the measuring instrument constructed in accordance with the pattern as proposed to be varied; and

(c) any additional information that the authority needs to consider the application properly.

(3) The approving authority may refuse to proceed with the application until the applicant complies with the notice.

60 Approval of patterns of measuring instruments

(1) On application under regulation 58, the approving authority:

(a) may, on payment of any relevant fee, examine the pattern of a measuring instrument; and

(b) may approve the pattern of a measuring instrument by certifying that the instrument is suitable for use for trade or as a legal measuring instrument; and

(c) if the pattern of the measuring instrument is approved — must issue a certificate of approval to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The certifying authority must not examine a measuring instrument lodged with the application if the examination would create a significant risk of personal injury or death, or damage to property.

(3) Approval of the pattern of a measuring instrument lodged with the application may be given subject to retention by the Commission of the whole or a part of the measuring instrument.

(4) Approval of the pattern of a measuring instrument is subject to:

(a) a condition that a measuring instrument on which the number of the approved pattern is marked must comply with the pattern and any other condition to which the approval is subject; and

(b) any other condition stated in the certificate of approval.

61 Variation of approval of patterns of measuring instruments

(1) On application under regulation 59, the approving authority:

(a) may, on payment of any relevant fee, examine the approved pattern as proposed to be varied; and

(b) may vary the approval of the pattern of a measuring instrument approved by the authority; and

(c) if the approval is varied — must issue the certificate as varied by the authority to the applicant; and

(d) may issue a copy of the certificate to anyone else whom the authority considers should be given the copy.

(2) The certifying authority must not examine a measuring instrument lodged with the application if the examination would create a significant risk of personal injury or death, or damage to property.

(3) If the approval is varied by an approving authority that is not the Commission, the authority must notify the Commission in writing of the variation.

(4) Variation of the approval of the pattern of a measuring instrument lodged with the application may be given subject to retention by the Commission of the whole or a part of the measuring instrument.

62 Decisions not to approve patterns of measuring instruments

(1) If the approving authority decides not to approve an application, or to vary an approval in a way not sought by the applicant, the authority must give written notice of the reasons for its decision to the applicant as soon as practicable.

(2) If the authority has not granted an application or given notice to the applicant under subregulation (1) within 3 months after receiving the application, the authority must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

63 Certificates of approval

A certificate of approval must:

(a) state the name and address of the approving authority; and

(b) describe the pattern of the measuring instrument to which the certificate relates; and

(c) state the number of the approved pattern; and

(d) state the date of issue of the certificate; and

(e) state that the pattern of the measuring instrument is approved under these regulations as suitable for use for trade or as a legal measuring instrument; and

(f) state any condition to which approval of the pattern is subject.

Division 2 Other examinations

64 Examination of instruments for compliance with approved patterns

(1) This regulation applies if:

(a) the pattern of a measuring instrument is approved under regulation 60; and

(b) the Commission has in its possession a measuring instrument that is, or purports to be, in accordance with the approved pattern.

(2) The Commission may examine the measuring instrument to ascertain whether the instrument is in accordance with the approved pattern.

(3) In examining the measuring instrument, the Commission must:

(a) if practicable, use substantially the same test procedures as were used by the Commission in testing the pattern of the measuring instrument for approval; or

(b) if paragraph (a) does not apply — ensure that the result of the examination is not affected by the fact that those procedures are not used to examine the measuring instrument.

(4) If, after examining the measuring instrument, the Commission considers that the instrument is not in accordance with the approved pattern, the Commission may, in accordance with regulation 82, withdraw or decide to cancel approval of the pattern of the measuring instrument.

(5) If the non-compliance of a measuring instrument with the approved pattern of the instrument is sufficiently serious to justify further action being taken, the Commission may report the non-compliance in writing to:

(a) the Director of Public Prosecutions; and

(b) the corresponding authority of a State or Territory.

65 Re-examination of approved patterns

(1) This regulation applies if:

(a) the pattern of a measuring instrument is approved under regulation 60; and

(b) the Commission is provided with a measuring instrument by an authorised person acting in the performance of his or her duty; and

(c) the Commission is told by the authorised person that:

(i) the measuring instrument is in accordance with the approved pattern; and

(ii) the instrument is not suitable for trade or as a legal measuring instrument.

(2) The Commission may re-examine the pattern of the measuring instrument.

(3) If, after re-examining the pattern of the measuring instrument, there are reasonable grounds for considering that the pattern is not suitable for use for trade or as a legal measuring instrument, the Commission:

(a) may, in accordance with regulation 82, withdraw or decide to cancel approval of the pattern of the measuring instrument; and

(b) must give a written statement of the results of the tests conducted by the Commission in its re-examination of the pattern of the measuring instrument:

(i) if the measuring instrument was manufactured in Australia — to the manufacturer; or

(ii) if the measuring instrument was manufactured outside Australia — to the agent of the manufacturer in Australia.

(4) In this regulation:

authorised person means a person who is authorised (however described) under a Commonwealth, State or Territory law for trade measurement, or weights and measures, in relation to the administration of the law.

Division 3 Cancellation, variation and withdrawal of approvals

66 Cancellation of approvals on application

(1) An approval holder may apply to an approving authority for cancellation of the approval of the pattern of a measuring instrument approved by the authority.

(2) The application may be made by lodging with the approving authority:

(a) a written application; and

(b) the relevant certificate of approval.

(3) As soon as practicable, the approving authority must:

(a) cancel approval of the pattern of the measuring instrument; and

(b) give written notice of the cancellation to:

(i) the applicant; and

(ii) anyone else the authority considers should be given notice of the cancellation.

67 Grounds for cancelling and varying approvals other than on application

(1) The grounds for cancelling the approval of the pattern of a measuring instrument, other than on application, are:

(a) that a measuring instrument constructed in accordance with the approved pattern is not suitable:

(i) for use for trade or as a legal measuring instrument; or

(ii) for the particular use for trade or as a legal measuring instrument stated in the certificate of approval; or

(b) that an approving authority makes a decision under subregulation 64 (4) or paragraph 65 (3) (a).

(2) The grounds for varying the approval of the pattern of a measuring instrument, other than on application, are:

(a) the grounds stated in subregulation (1); and

(b) that it is not appropriate to cancel the approval.

68 Effect of variation and cancellation of approvals

If an approved pattern is varied under regulation 66 or cancelled under paragraph 82 (3) (c), a measuring instrument manufactured in accordance with the pattern before the variation or cancellation has effect is taken to continue to be in accordance with a pattern approved under section 19A of the Act.

69 Effect of withdrawal of approvals

If approval of the pattern of a measuring instrument is withdrawn under paragraph 82 (3) (c), the instrument is not a measuring instrument with an approved pattern.

Part 7 Authorities

Division 1 General

70 Definition for Part 7

In this Part:

authority means a verifying, certifying or approving authority.

71 Application for permission for person to sign certificates

(1) An authority may apply in writing to the Commission to permit a stated person to sign certificates of a stated kind for the authority.

(2) The Commission may give written permission to the authority to permit the person to sign the certificates.

Division 2 Appointment of authorities

72 Application for appointment of verifying or certifying authority

(1) An application for appointment as a verifying or certifying authority must be:

(a) made in the form provided by the Commission to applicants; and

(b) be given to the Commission.

(2) The Commission may vary the appointment on written application by the authority to which the appointment relates.

(3) If the Commission decides not to approve an application, or to vary an approval in a way not sought by the applicant, the Commission must give written notice of the reasons for its decision to the applicant as soon as practicable.

(4) If the Commission has not granted an application or given notice to the applicant under subregulation (3) within 3 months after receiving the application, the Commission must, at the request of the applicant, give written notice to the applicant of the reasons for the delay.

73 Verifying and certifying authorities

(1) On application under regulation 72, the Commission may appoint as a verifying or certifying authority an applicant who is capable, or has direct control of staff who are capable, of verifying a standard of measurement, or certifying a measuring instrument or reference material, to which the application relates.

(2) The appointment:

(a) must be in writing; and

(b) may be made subject to a condition stated in the instrument of appointment.

(3) The appointment has effect when the Commission gives the instrument of appointment to the appointee.

74 Verifying authorities

(1) An appointment as a verifying authority must state:

(a) the kind or kinds of reference standards of measurement to which the appointment applies; and

(b) the range of denominations of standards of measurement that may be verified by the appointee; and

(c) the least uncertainty with which standards of measurement may be verified by the appointee.

(2) A verifying authority may arrange for the testing needed for verification of a standard of measurement to be conducted by another body or person under the supervision of the authority.

75 Certifying authorities

(1) An appointment as a certifying authority must state whether the appointment is made in relation to measuring instruments or reference materials generally or to measuring instruments or reference materials of a particular kind or of particular kinds.

(2) A certifying authority may arrange for the testing needed for certification of a measuring instrument or reference material to be conducted by another body or person under the supervision of the authority.

76 Approving authorities

(1) The Commission may appoint a competent body or person to perform, on behalf of the Commission, any or all of the following functions of the Commission under these regulations:

(a) to examine measuring instruments and patterns of measuring instruments;

(b) to approve patterns of measuring instruments;

(c) to issue certificates of approval;

(d) to vary or cancel approvals of patterns of measuring instruments;

(e) to reconsider its decisions not to vary or cancel approvals of patterns of measuring instruments.

(2) The Commission may vary the appointment by giving notice of the variation to the approving authority to which the appointment relates.

(3) The appointment:

(a) must be in writing; and

(b) must state whether the appointment is made for patterns of measuring instruments generally or for patterns of measuring instruments of a particular kind or of particular kinds; and

(c) may be made subject to a condition stated in the instrument of appointment.

(4) The appointment has effect when the Commission gives the instrument of appointment to the appointee.

(5) For subregulation (1):

competent body or person means a body or person who is competent to carry out the functions mentioned in subregulation (1).

77 General conditions of appointment of authorities

(1) An appointment as an authority is subject to the following conditions:

(a) if the authority employs or engages a person (a ***responsible agent or employee***) for the purposes of the appointment — that the authority tells the Commission in writing the name of the responsible agent or employee;

(b) that the authority participate in training, related to the performance of the duties of an authority, required by the Commission;

(c) that the authority report, as required by the Commission, about its performance of those duties;

(d) that the authority, and any responsible agent or employee of the authority, comply with the Act and these regulations and any condition stated in the instrument of appointment.

(2) An appointment as a verifying authority is subject to the condition that the verifying authority comply with a determination applying to the authority under regulation 20 or subregulation 24 (2).

(3) An appointment as a certifying authority is subject to the condition that the certifying authority comply with a determination applying to the authority under regulation 39 or 52.

78 Cancellation of appointments on application

(1) An authority may apply for cancellation of an appointment as an authority by lodging with the Commission:

(a) a written application; and

(b) the instrument of appointment.

(2) As soon as practicable, the Commission must:

(a) cancel the appointment; and

(b) give written notice of the cancellation to the applicant.

79 Grounds for cancelling and varying appointments other than on application

(1) The grounds for cancelling the appointment of an authority, other than on application, are that the authority has not complied with a condition to which the appointment is subject.

(2) The grounds for varying the appointment of an authority, other than on application, are the grounds stated in subregulation (1), but in circumstances that do not require cancellation of the appointment.

Part 8 Dealing with verification, certification, approval and appointment other than on application

Division 1 Preliminary

80 Definitions for Part 8

In this Part:

appointment means an appointment as an authority.

authority means a verifying, certifying or approving authority.

certificate does not include a certificate of verification of:

(a) an Australian primary or secondary standard of measurement; or

(b) a State primary standard of measurement.

Commission includes:

(a) for cancellation of a certificate of verification or certificate issued under regulation 37 — the verifying or certifying authority that issued the certificate; and

(b) for variation or cancellation of a certificate issued under regulation 48 — the certifying authority that issued the certificate; and

(c) for variation, cancellation or withdrawal of a certificate of approval — the approving authority that issued the certificate.

instrument means:

(a) a certificate; or

(b) a permission under regulation 71; or

(c) an instrument of appointment.

instrument holder means:

(a) an authority; or

(b) the holder of a certificate.

81 Application of Part 8

This Part applies if a reasonable ground exists:

(a) to cancel the verification of a standard of measurement; or

(b) to cancel the certification of a measuring instrument or reference material; or

(c) to vary the certification of a reference material, other than on application; or

(d) to vary or cancel the approval of the pattern of a measuring instrument, other than on application; or

(e) to withdraw the approval of the pattern of a measuring instrument; or

(f) to cancel a permission given under regulation 71; or

(g) to vary or cancel an appointment, other than on application.

Division 2 Cancellation, variation and withdrawal of instruments

82 Cancellation, variation and withdrawal of instruments

(1) The Commission must give the instrument holder written notice that:

(a) if the Commission proposes to vary the instrument — tells the instrument holder of the proposed variation; and

(b) if the Commission proposes to cancel or withdraw the instrument — tells the instrument holder of the proposed cancellation or withdrawal; and

(c) states the ground for the proposed variation, cancellation or withdrawal; and

(d) outlines the facts and other circumstances forming the basis for the view that the ground exists; and

(e) invites the instrument holder to state in writing to the Commission, within a stated period of at least 28 days after the notice is given to the instrument holder, why the instrument should not be varied, cancelled or withdrawn as proposed by the Commission (the ***proposed action***).

(2) The Commission may take the proposed action before giving the invitation mentioned in paragraph (1) (e) if the Commission considers that it is necessary to do so.

(3) If, after considering any written statement made to the Commission by the instrument holder within the stated period, there are reasonable grounds for considering that a ground exists to take the proposed action, the Commission may:

(a) if the proposed action is to vary the instrument in a stated way — vary the instrument in that way; or

(b) if the proposed action is to cancel the instrument — cancel the instrument or vary it in any way; or

(c) if the proposed action is to withdraw the approval — withdraw the approval.

(4) If the Commission varies, cancels or withdraws the instrument, the Commission:

(a) must tell the instrument holder in writing of the decision, give the holder written reasons for the decision, and tell the holder that the holder may apply to have the decision reconsidered; and

(b) may give written notice of the variation, cancellation or withdrawal to anyone else whom the Commission considers should be given notice of the variation, cancellation or withdrawal.

83 When variation, cancellation and withdrawal have effect

The variation, cancellation or withdrawal of an instrument has effect:

(a) when the instrument holder is told in writing of the decision by the Commission and given written reasons for the decision; or

(b) if the Commission tells the instrument holder that the decision takes effect on a later day — on the later day.

Part 9 Reconsideration and review

84 Definition for Part 9

In this Part:

decision maker means:

(a) a verifying, certifying or approving authority; and

(b) for a permission under regulation 71 or an application for appointment, or an appointment, as an authority — the Commission.

85 Certain decisions may be reconsidered

(1) The following decisions are decisions to which this regulation applies:

Item	Provision under which decision made	Brief description of decision
1	subregulation 12 (4)	not to examine a standard of measurement until the applicant complies with a notice
2	subregulation 13 (1)	not to verify a standard of measurement
3	subregulation 36 (4)	not to examine a measuring instrument until the applicant complies with a notice
4	subregulation 37 (1)	not to certify a measuring instrument on application or to give a certificate in a way not sought by the applicant
5	subregulation 46 (4) or 47 (3)	not to examine a reference material until the applicant complies with a notice

Regulation 85

Item	Provision under which decision made	Brief description of decision
6	subregulation 48 (1)	not to certify a reference material on application or to give a certificate in a way not sought by the applicant
7	subregulation 49 (1)	not to vary a certificate on application or to vary a certificate on application in a way not sought by the applicant
8	subregulation 58 (4) or 59 (3)	not to examine the pattern of a measuring instrument until the applicant complies with a notice
9	subregulation 60 (1)	not to approve the pattern of a measuring instrument on application or to give a certificate in a way not sought by the applicant
10	subregulation 61 (1)	not to vary a certificate on application or to vary a certificate on application in a way not sought by the applicant
11	regulation 71	not to give a permission or to cancel a permission
12	subregulation 72 (3)	not to vary an appointment on application
13	subregulation 72 (3)	to vary an appointment in a way not sought by the applicant
14	subregulation 73 (1)	not to make an appointment
15	subregulation 82 (3)	to vary, cancel or withdraw an instrument or certificate other than on application

(2) A person affected by a decision to which this regulation applies (the ***initial decision***) may ask the decision maker in writing to reconsider the decision.

(3) The request must be made within:

(a) 28 days after the person or anyone else was told in writing of the initial decision, and given reasons for the decision, by the decision maker; or

(b) any longer period allowed by the decision maker.

(4) The request for reconsideration must state the decision that the person wants the decision maker to make and outline why the decision maker should make that decision.

(5) Within 28 days after receiving the request, the decision maker must reconsider the initial decision and:

(a) confirm the decision; or

(b) vary the decision; or

(c) set the decision aside and substitute a new decision.

(6) The decision maker must tell the person in writing of the result of the reconsideration and, if the decision maker does not make the decision that the person wants the decision maker to make:

(a) give the person written reasons for the reconsidered decision; and

(b) tell the person that the person may apply to the Administrative Appeals Tribunal to have the decision reviewed by the Tribunal.

86 Certain decisions may be reviewed

Application may be made to the Administrative Appeals Tribunal under the *Administrative Appeals Tribunal Act 1975* for review of a decision that has been reconsidered under regulation 85.

Part 10 Miscellaneous

87 Exempt utility meters (Act, s 3)

For the definition of ***utility meter*** in subsection 3 (1) of the Act, the following utility meters are exempted from the operation of Part VA of the Act:

(a) a gas meter;

(b) an electricity meter;

(c) a water meter.

88 Conversion factors (Act, s 11)

The conversion factors stated in column 4 in an item in Schedule 11 are prescribed for the conversion of units of measurement stated in column 2 in that item to units of measurement stated in column 3 in the item.

Examples

1 To convert yards to metres use the conversion factor in Column 4 of item 3 of Schedule 11 which is 0.9144, so that:

2 yards × 0.9144 = 1.8288 metres.

2 To convert roods to square metres use the conversion factor in Column 4 of item 11 of Schedule 11 which is 1210 $(0.9144)^2$, so that:

16 roods × 1210 × $(0.9144)^2$ = 16 187.425 69 square metres.

3 To convert slugs to kilograms use the conversion factor in Column 4 of item 22 of Schedule 11 which is 32.174 × 0.453 592 37, so that:

7 slugs × 32.174 × 0.453 592 37 = 102.157 166 39 kilograms.

4 To convert cubic yards to cubic metres use the conversion factor in Column 4 of item 25 of Schedule 11 which is $(0.9144)^3$, so that:

88 cubic yards × $(0.9144)^3$ = 67.280 827 503 cubic metres.

5 To convert miles per hour to kilometres per hour use the conversion factor in Column 4 of item 36 of Schedule 11 which is 1.609 344, so that:

100 miles per hour × 1.609 344 = 160.9344 kilometres per hour.

6 To convert calories to joules use the conversion factor in Column 4 of item 39 of Schedule 11 which is 4.186 8, so that:

107 calories × 4.186 8 = 447.9876 joules.

7 To convert horsepower to watts use the conversion factor in Column 4 of item 41 of Schedule 11 which is 745.7, so that:

88 horsepower × 745.7 = 65 621.6 watts.

89 Utility meters — limits of error (Act, s 18V)

The maximum permissible error for a utility meter is set out in Schedule 12 and in the certificate for the utility meter.

90 Certificates as evidence

(1) In this regulation:

instrument means:

(a) an authorisation mentioned in paragraph 4 (2) (a); or

(b) a certificate; or

(c) a permission under regulation 71; or

(d) the instrument of appointment of a verifying, certifying or approving authority.

(2) An instrument is evidence of a matter stated in the instrument.

(3) The instrument may be received in evidence:

(a) in any court, whether or not the court is exercising federal jurisdiction; and

(b) in any proceeding before a person who is authorised by a law of the Commonwealth or of a State or Territory, or by consent of the parties to the proceeding, to receive and examine evidence.

(4) Unless the contrary is established:

(a) the instrument is taken to be issued by the person by whom the instrument purports to be issued; and

(b) the instrument is taken to be signed by the person by whom the instrument purports to be signed; and

(c) the person by whom the instrument purports to be signed is taken to be a person authorised under these regulations to sign the instrument.

Part 11 Repeals

91 Repeal of previous National Measurement Regulations

Statutory Rules 1961 No. 142, 1963 No. 126, 1964 No. 146, 1965 No. 13, 1968 No. 150, 1970 No. 40, 1972 Nos. 62, 133 and 160, 1973 Nos. 68 and 253, 1977 No. 150, 1979 No. 65, 1981 No. 195, 1983 No. 64, 1984 Nos. 195 and 231, 1985 No. 315, 1986 Nos. 172 and 399, 1988 Nos. 258 and 259, 1991 No. 146 and 1994 Nos. 54 and 319 are repealed.

92 Repeal of National Measurement (Patterns of Measuring Instruments) Regulations

Statutory Rules 1965 No. 147, 1966 No. 66, 1984 No. 232, 1986 No. 370, 1989 No. 325 and 1993 No. 104 are repealed.

Part 12 Transitional provisions

93 Transitional provisions

(1) If, immediately before the commencement of these regulations, the Commission has not decided an application made under the Patterns of Measuring Instruments Regulations to examine or approve a pattern of a measuring instrument, the application is taken to have been made under these regulations.

(2) If, immediately before the commencement of these regulations, the Commission has not complied with a request made under regulation 8 of the Patterns of Measuring Instruments Regulations, the request is taken to have been made under these regulations.

(3) A certificate issued under the Patterns of Measuring Instruments Regulations in relation to a measuring instrument is taken to be a certificate issued under these regulations in relation to the instrument.

(4) An appointment under regulation 77 of the previous regulations is taken to be an appointment under these regulations.

(5) A certificate issued under regulation 78A, 79 or 80 of the previous regulations is taken to be a certificate issued under these regulations.

(6) In this regulation:

Patterns of Measuring Instruments Regulations means the National Measurement (Patterns of Measuring Instruments) Regulations as in force immediately before the commencement of these regulations.

previous regulations means the National Measurement Regulations as in force immediately before the commencement of these regulations.

Schedule 1 Australian legal units of measurement

(regulation 5)

Part 1 SI base units of measurement

Item	Quantity	Name	Symbol	Definition
1.1	mass	kilogram	kg	The mass of the cylinder: (a) deposited in the International Bureau of Weights and Measures; and (b) declared to be the International Prototype Kilogram by the First General Conference on Weights and Measures held in Paris in 1889.

Note Because the name for the legal unit of measurement for mass contains a prefix, the names for other units of measurement for mass are formed by combining prefixes with ***gram*** as described in Part 4 in the way mentioned in guidelines issued by the Commission under subsection 7B (1) of the Act.

1.2	amount of substance	mole	mol	The amount of substance of a system that contains as many elementary entities as there are atoms in 0.012 kg of carbon 12. When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.
1.3	length	metre	m	The length of the path travelled by light in a vacuum during a time interval of $^1/_{299\,792\,458}$ of a second.

Item	Quantity	Name	Symbol	Definition
1.4	time	second	s	The duration of 9 192 631 770 periods of the radiation corresponding to the transition between the 2 hyperfine levels of the ground state of the caesium 133 atom.
1.5	luminous intensity	candela	cd	The luminous intensity, in a given direction, of a source that emits monochromatic radiation of the frequency 540 x 10^{12} hertz and has a radiant intensity in that direction of $^1/_{683}$ watt per steradian.
1.6	thermo-dynamic temperature	kelvin	K	The fraction $^1/_{273.16}$ of the thermodynamic temperature of the triple point of water.
1.7	electric current	ampere	A	The unvarying electric current that, when flowing in each of 2 parallel straight conductors of infinite length of negligible cross-section and separated by a distance of 1 metre from each other in free space, produces between those conductors a force equal to 0.2×10^{-6} newton per metre length of conductor.

Part 2 SI derived units of measurement with special names

Item	Quantity	Name	Symbol	Definition
2.1	frequency	hertz	Hz	The frequency of a regularly recurrent phenomenon that repeats itself once each second.
2.2	force	newton	N	The force that, when applied to a body having a mass of 1 kilogram, causes an acceleration of 1 metre per second squared in the direction of the application of the force.
2.3	pressure	pascal	Pa	The pressure resulting from a force of 1 newton applied uniformly over an area of 1 square metre.
2.4	energy, work	joule	J	The work done or the energy expended when a force of 1 newton moves the point of application 1 metre in the direction of that force.
2.5	power, including sound power	watt	W	The power used when work is done or energy is expended at the rate of 1 joule per second.
2.6	electric charge	coulomb	C	The quantity of electric charge that is transferred each second by an electric current of 1 ampere.
2.7	potential difference, electro-motive force	volt	V	The potential difference that exists between 2 points on a conductor carrying an unvarying electric current of 1 ampere when the power dissipated between those points is equal to 1 watt.

Item	Quantity	Name	Symbol	Definition
2.8	electric capacitance	farad	F	The electric capacitance that exists between 2 conductors when the transfer of an electric charge of 1 coulomb from one to the other changes the potential difference between them by 1 volt.
2.9	electric conductance	siemens	S	The electric conductance of a conductor that has an electric resistance of 1 ohm.
2.10	electric inductance	henry	H	The electric inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current that traverses the circuit varies uniformly at the rate of 1 ampere per second.
2.11	electric resistance	ohm	Ω	The electric resistance between 2 points on a conductor that does not contain any source of electromotive force when a constant potential difference of 1 volt maintained between those points results in a current of 1 ampere in the conductor.
2.12	magnetic flux	weber	Wb	The magnetic flux that, linking a circuit of 1 turn, produces in that circuit an electromotive force of 1 volt if the magnetic flux is reduced to zero at a uniform rate in 1 second.
2.13	magnetic flux density	tesla	T	The magnetic flux density that results if a magnetic flux of 1 weber is uniformly distributed over a plane 1 square metre in area, the direction of the magnetic flux density being perpendicular to that plane.

Item	Quantity	Name	Symbol	Definition
2.14	luminous flux	lumen	lm	The luminous flux emitted into a solid angle of 1 steradian by an isotropic point source having a luminous intensity of 1 candela.
2.15	illuminance	lux	lx	The illuminance produced at the surface of a sphere having a radius of 1 metre by a point source that: (a) is situated at its centre; and (b) has a luminous intensity of 1 candela in all directions.
2.16	activity of a radionuclide	becquerel	Bq	The activity of a radionuclide that is undergoing 1 transformation per second on average.
2.17	absorbed dose, absorbed dose index, kerma, specific energy imparted	gray	Gy	The absorbed dose, absorbed dose index, kerma or specific energy imparted when 1 joule is imparted to 1 kilogram of irradiated matter

Item	Quantity	Name	Symbol	Definition
2.18	dose equivalent	sievert	Sv	The sievert is the dose equivalent or dose equivalent index where: (a) an absorbed dose of ionising radiation equal to 1 gray is delivered to a biological material; and (b) the conditions under which the dose is delivered satisfy the formula: $Q \times N = 1$ where: Q is a factor that is the quality factor representing the effect on the detriment of the microscopic distribution of absorbed energy; and N is a factor that is the product of all other modifying factors specified by the International Commission on Radiological Protection as at the commencement of these regulations.
2.19	plane angle	radian	rad	The radian is the plane angle between 2 radii of a circle that cut off on the circumference an arc equal in length to the radius.
2.20	solid angle	steradian	sr	The steradian is the solid angle that has its vertex in the centre of a sphere and cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere.

Part 3 Non-SI units of measurement used with SI units of measurement

Item	Quantity	Name	Symbol	Definition
3.1	sound power level	decibel	dB	In measuring sound power level in decibels, the number of decibels is the number equal to 10 times the logarithm to the base 10 of the ratio of the sound power in the particular case expressed in watts to a reference sound power of 10^{-12} watts.
3.2	sound pressure level	decibel	dB	In measuring sound pressure level in decibels, the number of decibels is the number equal to 20 times the logarithm to the base 10 of the ratio of the root-mean-square sound pressure in the particular case expressed in pascals to a reference sound pressure of 2×10^{-5} pascals.
3.3	sound intensity level	decibel	dB	In measuring sound intensity level in decibels, the number of decibels is the number equal to 10 times the logarithm to the base 10 of the ratio of the sound intensity in the particular case expressed in watts per square metre to a reference sound intensity of 10^{-12} watts per square metre.
3.4	area	hectare	ha	10^4 m^2
3.5	energy	electron-volt	eV	The kinetic energy acquired by an electron in passing through a potential difference of 1 volt in vacuum. 1 eV = $1.602\ 177\ 33 \times 10^{-19}$ J
3.6	kinematic viscosity	stokes	St	10^{-4} m^2/s
3.7	length	nautical mile	n mile	1852 m

Item	Quantity	Name	Symbol	Definition
3.8	mass	tonne	t	10^3 kg
3.9	mass	metric carat	CM or ct	0.2×10^{-3} kg
3.10	plane angle	degree	°	$\pi/180$ rad
3.11	plane angle	minute	′	$1/60 \times \pi/180$ rad
3.12	plane angle	second	″	$1/3\,600 \times \pi/180$ rad
3.13	time interval	day	d	86 400 s
3.14	time interval	hour	h	3 600 s
3.15	time interval	minute	min	60 s
3.16	temperature	degree Celsius	°C	A degree Celsius is equal in magnitude to a kelvin. t(°C) = T(K) – 273.15 where: ***t(°C)*** is the numerical value of temperature in degrees Celsius. ***T(K)*** is the numerical value of temperature in kelvins.
3.17	velocity	knot	kn	$1852/3600$ m/s
3.18	viscosity	poise	P	10^{-1} Pa.s
3.19	volume	litre	L or l	10^{-3} m^3

Part 4 Additional derived units of measurement

Item	Quantity	Name	Symbol	Definition
4.1	mass	gram	g	10^{-3} kg
4.2	length	micron	μm	10^{-6} m
4.3	area	square metre	m^2	base unit
4.4	area	square kilometre	km^2	10^{-6} m^2
4.5		square decimetre	dm^2	10^{-2} m^2
4.6		square centimetre	cm^2	10^{-4} m^2
4.7		square millimetre	mm^2	10^{-6} m^2
4.8		square micrometre	μm^2	10^{-12} m^2
4.9	volume	cubic kilometre	km^3	10^{9} m^3
4.10		cubic metre	m^3	base unit
4.11		cubic decimetre	dm^3	10^{-3} m^3
4.12		cubic centimetre	cm^3	10^{-6} m^3
4.13		cubic millimetre	mm^3	10^{-9} m^3
4.14		hectolitre	hL or hl	10^{-1} m^3
4.15		millilitre	mL or ml	10^{-6} m^3
4.16	density	kilogram per cubic metre	kg/m^3	base unit
4.17	velocity and speed	metre per second	m/s	base unit
4.18	acceleration	metre per second squared	m/s^2	base unit
4.19	luminance	candela per square metre	cd/m^2	base unit
4.20	absorbed dose, absorbed dose index, kerma, specific energy imparted	rad	rad	10^{-2} Gy
4.21	activity of a radionuclide	curie	Ci	3.7×10^{10} Bq
4.22	dose equivalent	rem	rem	10^{-2} Sv

Item	Quantity	Name	Symbol	Definition
4.23	exposure	roentgen	R	0.258×10^{-3} C/kg
4.24	frequency	revolutions per minute	r/min	60 Hz
4.25		revolutions per second	r/s	1 Hz
4.26	apparent power	volt ampere	VA	$V_{rms}A_{rms}$
4.27	reactive power	volt ampere reactive	var	$V_{rms}A_{rms}\sin\phi$ where ϕ radians is the phase angle between the electro-motive force (emf) and the current
4.28	apparent energy	volt ampere hour	Vah	$V_{rms}A_{rms}$ h
4.29	reactive energy	volt ampere hour reactive	varh	$V_{rms}A_{rms}$ h$\sin\phi$ where ϕ radians is the phase angle between the electro-motive force (emf) and the current

Schedule 2 Additional legal units of measurement

(regulation 6)

Part 1 Additional Australian legal units of measurement

Item	Quantity	Name	Symbol	Definition
1.1	length	inch	in	$0.9144/36$ m
1.2	length	foot	ft	$0.9144/3$ m
1.3	mass	troy ounce	oz tr	$480 \times 0.453\ 592\ 37/7000$ kg
1.4	power	horsepower	hp	745.7 W
1.5	pressure	millibar	mb or mbar	100 Pa
1.6	pressure	millimetre of mercury	mmHg	133.322 19 Pa
1.7	velocity	foot per minute	ft/min	$0.3048/60$ m/s
1.8	work and energy	kilocalorie	kcal	4.1868×10^3 J

Part 2 Purposes for which additional legal units of measurement may be used

Item	Name	Purpose
2.1	inch	(a) automotive tyres or rims; or (b) equipment used, or intended for use, in the manufacture or repair of automotive tyres or rims; or (c) precision pipes, precision tubes, precision fittings or precision screw threads; or (d) spare parts for equipment constructed using measurements other than metric measurements; or (e) equipment used, or intended for use, in the manufacture of equipment referred to in paragraph (c) or (d); or (f) defence equipment; or (g) equipment used, or intended for use, in aviation; or (h) equipment used, or intended for use, in the computer industry; or (i) equipment used, or intended for use, in the electronics industry; or (j) components of equipment referred to in subparagraphs (a) to (i) inclusive
2.2	foot	(a) altitude in aviation; or (b) vertical separation in aviation; or (c) submarine depth
2.3	troy ounce	the mass of precious metals
2.4	horsepower	engine ratings: (a) in the aviation industry; or (b) in defence equipment
2.5	millibar	air pressure in the aviation industry
2.6	millimetre of mercury	blood pressure
2.7	foot per minute	vehicular vertical speed
2.8	kilocaloric	food energy values

Schedule 3 SI prefixes

(regulation 7)

Item	Numerical Value	Name	Symbol
1	10^{24}	yotta	Y
2	10^{21}	zetta	Z
3	10^{18}	exa	E
4	10^{15}	peta	P
5	10^{12}	tera	T
6	10^{9}	giga	G
7	10^{6}	mega	M
8	10^{3}	kilo	k
9	10^{2}	hecto	h
10	10^{1}	deka	da
11	10^{-1}	deci	d
12	10^{-2}	centi	c
13	10^{-3}	milli	m
14	10^{-6}	micro	μ
15	10^{-9}	nano	n
16	10^{-12}	pico	p
17	10^{-15}	femto	f
18	10^{-18}	atto	a
19	10^{-21}	zepto	z
20	10^{-24}	yocto	y

Schedule 4 Permissible uncertainty — length (State primary and secondary standards)

(paragraphs 18 (5) (a) and 25 (a))

Column 1 Denomination	Column 2 Permissible uncertainty: State primary standard	Column 3 Permissible uncertainty: State secondary standard
Part 1 Flexible standards		
≤ 10 metres	0.1 mm	0.2 mm
> 10 metres	0.001%	0.002%
Part 2 Rigid standards		
≤ 1 metre	0.01 mm	0.02

Schedule 5 Permissible uncertainty — mass (State primary, secondary and tertiary standards)

(paragraphs 18 (5) (b) and (c), 25 (b) and 26 (a) and subparagraphs 25 (d) (i) and 26 (c) (i))

Column 1 Denomination	Column 2 Permissible uncertainty: State primary standard (in milligrams)	Column 3 Permissible uncertainty: State secondary standard (in milligrams)	Column 4 Permissible uncertainty: State tertiary standard (in milligrams)
50 kilograms		150	200
25 kilograms		75	100
20 kilograms		60	80
10 kilograms	10	30	40
5 kilograms	5	15	20
2 kilograms	2	6	13
1 kilogram	1	3	9
500 grams	0.5	1.5	6.5
200 grams	0.2	0.6	4.2
100 grams	0.1	0.3	3.0
50 grams	0.05	0.15	2.1
20 grams	0.02	0.06	1.3
10 grams	0.01	0.03	0.9
5 grams	0.01	0.03	0.65
2 grams	0.01	0.03	0.42
1 gram	0.01	0.03	0.30
500 milligrams	0.005	0.015	0.21

Column 1 Denomination	Column 2 Permissible uncertainty: State primary standard (in milligrams)	Column 3 Permissible uncertainty: State secondary standard (in milligrams)	Column 4 Permissible uncertainty: State tertiary standard (in milligrams)
200 milligrams	0.005	0.015	0.13
100 milligrams	0.005	0.015	0.09
50 milligrams	0.002	0.006	0.06
20 milligrams	0.002	0.006	0.04
10 milligrams	0.002	0.006	0.03
5 milligrams	0.002	0.006	0.02
2 milligrams	0.002	0.006	0.01
1 milligram	0.002	0.006	0.01

Schedule 6 Permissible uncertainty — volume (State secondary and tertiary standards)

(paragraph 25 (c), subparagraph 25 (d) (ii), paragraph 26 (b) and subparagraph 26 (c) (ii))

Column 1	Column 2	Column 3
Denomination	**Permissible uncertainty: State secondary standard (in millilitres)**	**Permissible uncertainty: State tertiary standard (in millilitres)**
10 000 litres	1000	2000
5 000 litres	500	1000
2 000 litres	200	400
1 000 litres	100	200
500 litres	50	100
200 litres	20	40
100 litres	10	20
50 litres	5	9
20 litres	2	5
15 litres	1.5	4
10 litres	1.0	3
5 litres	0.5	2
2 litres	0.2	1
1 litre	0.1	0.6
500 millilitres	0.05	0.4
250 millilitres	0.02	0.26
200 millilitres	0.02	0.22
100 millilitres	0.01	0.14
50 millilitres	0.005	0.09
25 millilitres	0.005	0.06

Column 1 Denomination	Column 2 Permissible uncertainty: State secondary standard (in millilitres)	Column 3 Permissible uncertainty: State tertiary standard (in millilitres)
20 millilitres	0.005	0.05
10 millilitres	0.005	0.03
5 millilitres	0.005	0.02
2 millilitres	0.005	0.01
1 millilitre	0.002	0.006
0.5 millilitre	0.001	0.003
0.2 millilitre	0.001	0.003
0.1 millilitre	0.001	0.003

Schedule 7 Permissible uncertainty and permissible variation — length (Inspectors' class 1 and class 2 standards)

(paragraphs 27 (a), 28 (a), 32 (a) and 33 (a))

Column 1	Column 2	Column 3	Column 4	Column 5
Denomination	**Permissible uncertainty: Inspectors' Class 1 standard**	**Permissible variation: Inspectors' Class 1 standard**	**Permissible uncertainty: Inspectors' Class 2 standard**	**Permissible variation: Inspectors' Class 2 standard**
Part 1 Flexible standards				
≤ metres	0.5 mm	1.5 mm	1.5 mm	5.0 mm
> 10 metres	0.005%	0.015%	0.015%	0.05%
Part 2 Rigid standards				
≤ 500 millimetres	0.05 mm	0.15 mm		
> 500 millimetres but ≤ 1 metre	0.05 mm	0.2 mm		
> 1 metre but ≤ 2 metres	0.07 mm	0.2 mm		

Schedule 8 Permissible uncertainty and permissible variation — area (Inspectors' class 1 standards)

(paragraph 27 (b), subparagraph 27 (e) (i) and regulation 32)

Column 1	Column 2	Column 3
Denomination not exceeding (in square decimetres)	**Permissible uncertainty (in square decimetres)**	**Permissible variation (in square decimetres)**
35	0.06	0.18
40	0.07	0.20
50	0.08	0.25
60	0.10	0.30
70	0.12	0.35
80	0.13	0.40
90	0.15	0.45
100	0.17	0.50
150	0.25	0.75

Schedule 9 Permissible uncertainty and permissible variation — mass (Inspectors' class 1, class 2 and class 3 standards)

(paragraph 27 (c), subparagraph 27 (e) (ii), paragraphs 28 (b) and (c) and regulations 29, 32, 33 and 34)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Denomination	**Permissible uncertainty: Inspectors' Class 1 standard (in milligrams)**	**Permissible variation: Inspectors' Class 1 standard (in milligrams)**	**Permissible uncertainty: Inspectors' Class 2 standard (in milligrams)**	**Permissible variation: Inspectors' Class 2 standard (in milligrams)**	**Permissible uncertainty: Inspectors' Class 3 standard (in milligrams)**	**Permissible variation: Inspectors' Class 3 standard (in milligrams)**
10 000 kilograms					230 000	700 000
1 000 kilograms					23 300	70 000
500 kilograms					11 600	35 000
200 kilograms					4 600	14 000
100 kilograms					2 300	7 000
50 kilograms	200	200	200	400	1 150	3 500
25 kilograms	100	100	100	200	580	1 750
20 kilograms	80	80	80	160	500	1 550
10 kilograms	40	40	40	80	360	1 100
5 kilograms	20	28	20	55	260	780
2 kilograms	13	18	13	35	165	500

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Denomination	**Permissible uncertainty: Inspectors' Class 1 standard (in milligrams)**	**Permissible variation: Inspectors' Class 1 standard (in milligrams)**	**Permissible uncertainty: Inspectors' Class 2 standard (in milligrams)**	**Permissible variation: Inspectors' Class 2 standard (in milligrams)**	**Permissible uncertainty: Inspectors' Class 3 standard (in milligrams)**	**Permissible variation: Inspectors' Class 3 standard (in milligrams)**
1 kilogram	9	13	9	25	115	350
500 grams	6.5	9	6.5	18	80	250
200 grams	4.2	6	4.2	11	50	160
100 grams	3.0	4	3.0	8	35	110
50 grams	2.1	3	2.1	5		
20 grams	1.3	2	1.3	3.5		
10 grams	0.9	1.5	0.9	2.5		
5 grams	0.65	1.0	0.65	2.0		
2 grams	0.42	0.6	0.42	1.0		
1 gram	0.30	0.4	0.30	0.8		
500 milligrams	0.21	0.3	0.21	0.6		
200 milligrams	0.13	0.2	0.13	0.35		
100 milligrams	0.09	0.15	0.09	0.25		
50 milligrams	0.06	0.10	0.06	0.20		
20 milligrams	0.04	0.06	0.04	0.10		
10 milligrams	0.03	0.04	0.03	0.08		
5 milligrams	0.02	0.03	0.02	0.06		
2 milligrams	0.01	0.02	0.01	0.035		
1 milligram	0.01	0.02	0.01	0.025		

Schedule 10 Permissible uncertainty and permissible variation — volume (Inspectors' class 1 standards)

(paragraph 27 (d), subparagraph 27 (e) (iii) and regulation 32)

Column 1 Denomination	Column 2 Permissible uncertainty (in millilitres)	Column 3 Permissible variation (in millilitres)
10 000 litres	2000	6000
5 000 litres	1000	3000
2 000 litres	400	1200
1 000 litres	200	600
500 litres	100	300
200 litres	40	120
100 litres	20	60
50 litres	9	27
20 litres	5	15
15 litres	4	12
10 litres	3	9
5 litres	2	6
2 litres	1	3
1 litre	0.6	2
500 millilitres	0.4	1.2
250 millilitres	0.26	0.8
200 millilitres	0.22	0.7
100 millilitres	0.14	0.4
50 millilitres	0.09	0.27

Column 1 Denomination	Column 2 Permissible uncertainty (in millilitres)	Column 3 Permissible variation (in millilitres)
25 millilitres	0.06	0.17
20 millilitres	0.05	0.15
10 millilitres	0.03	0.09
5 millilitres	0.02	0.06
2 millilitres	0.01	0.03
1 millilitre	0.006	0.02
0.5 millilitre	0.003	0.01
0.2 millilitre	0.003	0.01
0.1 millilitre	0.003	0.01

Schedule 11 Conversion factors

(regulation 88)

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
Length			
1	mile	metre	1 609.344
2	chain	metre	$22 \times 0.914\ 4$
3	yard	metre	0.914 4
4	link	metre	$22 \times 0.914\ 4/100$
5	foot	metre	$0.914\ 4/3$
6	inch	metre	$0.914\ 4/36$
Area			
7	square yard	square metre	$(0.914\ 4)^2$
8	square foot	square metre	$(0.914\ 4)^2/9$
9	square inch	square metre	$(0.914\ 4)^2/(9 \times 144)$
10	acre	square metre	$4\ 840 \times (0.914\ 4)^2$
11	rood	square metre	$1\ 210 \times (0.914\ 4)^2$
12	perch	square metre	$30.25 \times (0.914\ 4)^2$
Mass			
13	ton	kilogram	$2\ 240 \times 0.453\ 592\ 37$
14	short ton (sh tn)	kilogram	$2\ 000 \times 0.453\ 592\ 37$
15	hundredweight (cwt)	kilogram	$112 \times 0.453\ 592\ 37$
16	quarter (qr)	kilogram	$28 \times 0.453\ 592\ 37$
17	stone	kilogram	$14 \times 0.453\ 592\ 37$
18	pound (lb)	kilogram	0.453 592 37
19	ounce (oz)	kilogram	$0.453\ 592\ 37/16$

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
20	dram (dr)	kilogram	$0.453\ 592\ 37/256$
21	grain (gr)	kilogram	$0.453\ 592\ 37/7\ 000$
22	slug	kilogram	$32.174 \times 0.453\ 592\ 37$
23	troy ounce (oz tr)	kilogram	$480 \times 0.453\ 592\ 37/7\ 000$
24	pennyweight (dwt)	kilogram	$24 \times 0.453\ 592\ 37/7\ 000$
Volume			
25	cubic yard (cu yd or yd^3)	cubic metre	$(0.914\ 4)^3$
26	cubic foot (cu ft or ft^3)	cubic metre	$(0.914\ 4)^3/27$
27	cubic inch (cu in or in^3)	cubic metre	$(0.914\ 4)^3/466\ 56$
28	gallon (gal)	cubic metre	$4.546\ 09 \times 10^{-3}$
29	quart (qt)	cubic metre	$4.546\ 09 \times 10^{-3}/4$
30	pint (pt)	cubic metre	$4.546\ 09 \times 10^{-3}/8$
31	gill	cubic metre	$4.546\ 09 \times 10^{-3}/32$
32	fluid ounce (fl oz)	cubic metre	$4.546\ 09 \times 10^{-3}/160$
33	fluid drachm (fl dr)	cubic metre	$4.546\ 09 \times 10^{-3}/1\ 280$
34	minim (min)	cubic metre	$4.546\ 09 \times 10^{-3}/76\ 800$
Velocity and speed			
35	mile per hour (mile/h or mph)	metre per second	$1\ 609.344/3\ 600$
36	mile per hour (mile/h or mph)	kilometre per hour	1.609 344
37	foot per minute (ft/min)	metre per second	$0.304\ 8/60$

Column 1 Item	Column 2 Unit of measurement	Column 3 Unit of measurement	Column 4 Conversion Factor
Work and energy			
38	kilocaloric (kcal)	joule	$4.186\ 8 \times 10^3$
39	calorie (cal)	joule	4.186 8
40	British thermal unit (Btu)	joule	1 055. 056
Power			
41	horsepower (hp)	watt	745.7
Pressure			
42	millimetre of mercury (mm Hg)	pascal	133.322 19
43	millibar (mb or mbar)	pascal	100

Schedule 12 Maximum permissible errors

(regulation 3, definition of ***maximum permissible error***)

Part 1 Verification or certification of measuring instruments

Division 1 Measures

1 Measures of length

The maximum permissible error from zero to any scale mark is:

(a) for lengths up to 500 mm — ±0.5 mm; and

(b) for lengths over 500 mm but not over 2 m — ±1 mm; and

(c) for lengths over 2 m but not over 100 m — ±0.05%.

2 Weights

2.1 Metric weights

Denomination	Maximum permissible error (mg)		
	Non-ferrous weights marked 'A'	Non-ferrous weights not marked 'A'	Iron weights
1 mg	+0.1	-	-
2 mg	+0.2	-	-
5 mg	+0.3	-	-
10 mg	+0.4	-	-
20 mg	+0.6	-	-
50 mg	+0.9	-	-

Denomination	Maximum permissible error (mg)		
	Non-ferrous weights marked 'A'	Non-ferrous weights not marked 'A'	Iron weights
100 mg	+1.3	-	-
200 mg	+2	-	-
500 mg	+3	-	-
1 g	+4	+60	-
2 g	+5.5	+60	-
5 g	+9	+60	-
10 g	+12.5	+120	-
20 g	+18	+120	-
50 g	+28	+120	-
100 g	+40	+120	+240
200 g	+60	+170	+340
500 g	+90	+270	+540
1 kg	+130	+380	+760
2 kg	+220	+650	+1300
5 kg	+280	+850	+1700
10 kg	+400	+1200	+2400
20 kg	+560	+1700	+3400

2.2 *Metric carat weights*

Denomination (CM)	Maximum permissible error (mg)
0.005	+0.1
0.01	+0.1
0.02	+0.1
0.05	+0.1
0.1	+0.1
0.2	+0.15
0.5	+0.2
1	+0.2
2	+0.3
5	+0.5
10	+0.7
20	+1
50	+2
100	+2
200	+3
500	+5

3 Measures of volume

3.1 Conical measures

Capacity (L)	Maximum permissible error (mL)
0.5	+5
1	+6
2	+10
4	+15
5	+20
10	+30
20	+45

3.2 Cylindrical line measures

Capacity (L)	Maximum permissible error (mL)
0.5	±5
1	±10
2	±15
5	±30
10	±45
20	±70

3.3 Cylindrical brim measures for alcoholic liquor

Capacity (mL)	Maximum permissible error (mL)
15	+1
30	+2
60	+3.5

3.4 Cylindrical line measures for special purposes

Capacity (L)	Purpose	Maximum permissible error (mL)
12	Ice cream	±50
45	Milk	±150

3.5 Drinking and potable measures

Maximum permissible error is:

(a) for line measures — ±3%; and

(b) for brim measures — +6%.

3.6 Pharmaceutical dispensing measures

3.6.1 Conical dispensing measures

Scale Mark (mL)	Maximum permissible error at each scale mark (mL)
1	±0.08
2	±0.12
3	±0.16
4	±0.20
5	±0.25
6, 7, 8	±0.3
9	±0.4
10	±0.4
15	±0.5
20	±0.6
30	±0.8
40, 50	±1.0
60, 70, 80, 90	±1.5
100, 120, 140	±2.0
160, 180, 200	±3.0

3.6.2 Beaker dispensing measures

Capacity (mL)	Maximum permissible error at each scale mark on a particular measure (mL)
500	±5
1000	±7

3.7 Lubricating oil measures

Capacity (L)	Maximum permissible error (mL)
0.5	+20
1	+30

3.8 Graduated measuring cylinders

Capacity (mL)	Maximum permissible error (mL)
5	±0.1
10	±0.2
25	±0.5
50	±1
100	±1
250	±2
500	±5
1000	±10
2000	±20

Division 2 Measuring instruments, utility meters

4 Length-measuring instruments

Maximum permissible error is:

(a) for an instrument with analog indication — ±0.5%; and

(b) for an instrument with digital indication — ±0.5% + 0.5 scale interval.

5 Area-measuring instruments

Instruments must be tested for single-measurement error and mean error.

5.1 Single-measurement error

5.1.1 Instruments with analog indication

Area of templet(s) (dm^2)	Maximum permissible error (dm^2)
Not exceeding 25	±0.5
Exceeding 25	±(0.5 + 1 dm^2 for each additional 50 dm^2 or part)

5.1.2 Instruments with digital indication

For instruments with digital indication add 0.5 scale interval to the maximum permissible error for an analog instrument.

5.2 Mean error

On analog and digital instruments the mean of 20 measurements must not differ from the denominated value of the templet by more than half the maximum permissible error mentioned in clause 5.1.

Note The test templets for measuring instruments with digital indication must have values that are an integral number of square decimetres.

6 Farm milk tanks

The maximum permissible error for all scale marks on the dipsticks is ±1 scale interval.

7 Vehicle tanks

7.1 Tanks used only for sullage

The maximum permissible error for each scale mark on a sight tube is ±0.5 scale interval.

7.2 Vehicle tanks except for sullage

The maximum permissible error applicable to a vehicle tank is:

(a) for a tank with a capacity mark — ±0.2% of the indicated volume; and

(b) for a tank with a dipstick — ±0.5 scale interval for each scale mark on the dipstick.

8 Liquid-measuring systems

8.1 Accuracy classes

Liquid-measuring systems are classified into 5 accuracy classes stated in the following table:

Table 1

Accuracy Class	Field of application
0.3	Measuring systems on pipeline
0.5	All measuring systems if not differently stated elsewhere in this table, in particular: • fuel dispensers for motor vehicles (except LPG dispensers) • measuring systems on road tankers for liquids of low viscosity • measuring systems for the unloading of ships' tanks and rail and road tankers • measuring systems for milk

Table 1

Accuracy Class	Field of application
	• measuring systems for loading ships • measuring systems for refuelling aircraft
1.0	Measuring systems (except LPG dispensers) for liquefied gases under pressure measured at a temperature equal to or above -10°C LPG dispensers for motor vehicles Measuring systems normally in class 0.3 or 0.5 but used for liquids: (a) the temperature of which is less than -10°C or greater than 50°C; or (b) the dynamic viscosity of which is higher than 1000 mPa.s; or (c) the maximum volumetric flow rate of which is not higher than 20 L/h
1.5	Measuring systems for liquefied carbon dioxide Measuring systems (except LPG dispensers) for liquefied gases under pressure measured at a temperature below -10°C
2.5	Measuring systems for liquids at a temperature below -153°C

8.2 Maximum permissible errors

8.2.1 For volumes of at least 2L, and subject to subclause 8.2.3, the maximum permissible relative errors, positive or negative, on volume indications are specified in the following table:

Table 2

	Accuracy classes				
	0.3	**0.5**	**1.0**	**1.5**	**2.5**
A (see 8.3)	0.3%	0.5%	1.0%	1.5%	2.5%
B (see 8.3)	0.2%	0.3%	0.6%	1.0%	1.5%

8.2.2 For volumes smaller than 2L, and subject to subclause 8.2.3, the maximum permissible errors, positive or negative, on volume indications are specified in the following table:

Table 3

Measured quantity	Maximum permissible errors
≥ 1L, < 2L	Value fixed in table 2, applied to 2L
≥ 0.4L, < 1L	2 × the value fixed in table 2
≥ 0.2L, < 0.4L	2 × the value fixed in table 2, applied to 0.4L
≥ 0.1L, < 0.2L	4 × the value fixed in table 2
< 0.1L	4 × the value fixed in table 2, applied to 0.1L

8.2.3 However, whatever the measured quantity may be, the magnitude of the maximum permissible error is given by the greater of the following 2 values:

- absolute value of the maximum permissible error given in table 2 or 3
- minimum specified volume deviation.

For minimum measured quantities greater than or equal to 2L, the minimum specified volume deviation (E_{min}) is calculated using the formula:

$$E_{min} = 2 \times V_{min} \times A/100$$

where:

V_{min} is the minimum measured quantity.

A is the numerical value specified in line A of table 2 for the relevant accuracy class.

For minimum measured quantities less than 2L, the minimum specified volume deviation is twice the value specified in table 3 and related to line A of table 2.

Note The minimum specified volume deviation is an absolute maximum permissible error.

8.3 Conditions for applying maximum permissible errors

This clause applies to volume indications at metering conditions (see clause 8.4 for converted indications).

8.3.1 Maximum permissible errors in line A of table 2 apply to complete measuring systems, for all liquids, all temperatures and all pressures of the liquids, and all flow rates for which the system is intended to be, or has been approved, without any adjustment between the various tests, for:

- pattern approval; and
- initial certification or verification in one stage or the second stage of a 2-stage initial certification or verification; and
- subsequent certifications and verifications.

8.3.2 Maximum permissible errors in line B of table 2 apply to:

- pattern approval of a meter, for all liquids, all temperatures and all pressures of the liquids, and all flow rates for which the system is intended to be approved; and
- initial certification or verification (first stage of the verification) of a meter intended to be fitted in a measuring system subject to a 2-stage initial certification or verification.

Note 1 An adjustment is allowed for each liquid, but in this case the pattern approval certificate provides information on the capability of the meter to measure all the liquids without particular precautions. For example, the meter may be allowed only for measuring 1 liquid in normal use, or an automatic device that provides an adaptation to each liquid may be necessary.

Note 2 If the meter is provided with an adjustment or correction device, it is sufficient to verify that an error curve is within a range of twice the value specified in line B of table 2.

8.3.3 When stated in the pattern approval certificate, a 1-stage initial certification or verification or the second stage of a 2-stage initial certification or verification of a measuring system intended to measure 2 or more liquids may be carried out with 1 liquid only or with a liquid different from the intended liquids. In this case, and if necessary, the pattern approval certificate will provide a smaller range or a shift for maximum permissible errors, so that subclause 8.3.1 is fulfilled by the measuring system for all intended liquids.

When stated in the pattern approval certificate, the initial certification or verification of a meter of a measuring system intended to measure 2 or more liquids may be carried out with 1 liquid only or with a liquid different from the intended liquids. In this case, and if necessary, the pattern approval certificate will provide a smaller range or a shift for maximum permissible errors, so that subclause 8.3.2 is fulfilled by the meter for all intended liquids.

These considerations may be extended to a measuring system or meter intended to measure only 1 liquid but certified or verified with another liquid.

8.4 Provisions for converted indications

8.4.1 Maximum permissible errors on conversion devices

When a conversion device for converting into a volume at base conditions or into a weight (including all its components and associated measuring instruments) is certified or verified separately, maximum permissible errors on converted indications due to the conversion device, positive or negative, are equal to ± (A–B), A and B being the values specified in table 2. However, the magnitude of the maximum permissible error must not be less than the greater of the 2 following values:

- one-half scale interval of the indicating device for converted indications;
- half of the value corresponding to the minimum specified volume deviation.

8.4.2 Accuracy of associated measuring instruments

When certified or verified separately, associated measuring instruments must exhibit an accuracy at least as good as the values in table 4.

These values apply to the indications of associated measuring instruments taken into account for the calculation of the converted quantity and include errors mentioned in subclause 8.4.3.

Table 4

Maximum permissible errors on measuring:	**Accuracy classes of the measuring system**				
	0.3	0.5	1.0	1.5	2.5
Temperature	±0.3°C	±0.5°C			±1°C
Pressure	Less than 1 MPa: ±50 kPa between 1 and 4 MPa: ±5% more than 4 MPa: ±200 kPa				
Density	±1 kg/m^3		±2 kg/m^3		±5 kg/m^3

8.4.3 Accuracy for calculation of characteristic quantities of the liquid

When the calculating function of a conversion device is certified or verified separately, the maximum permissible error for the calculation of each characteristic quantity of the liquid, positive or negative, is equal to $^2/_5$ the value fixed in subclause 8.4.2. However the magnitude of the maximum permissible error must not be less than one-half scale interval of the indicating device for converted indications.

8.4.4 Direct certification or verification of a converted weight indication

When a conversion device is only associated with, or included in, a meter and when the converted weight indication is verified directly by comparison to weight standards (for example, by using a weighing machine) the maximum permissible errors on the converted indication, positive or negative, are calculated using the formula:

$$\text{MPE} = \pm [B^2 + (A - B)^2]^{1/2}$$

where:

MPE is maximum permissible error.

A and ***B*** are the values specified in table 2.

When a conversion device is included in a measuring system, maximum permissible errors of line A of table 2 apply to the converted weight indication. However in any case, the magnitude of maximum permissible errors must not be less than the weight corresponding to the minimum specified volume deviation.

8.4.5 Direct certification or verification of a converted volume indication

Standards delivering directly the true value of converted volume indications are not available for general uses. Such standards only exist for a given liquid or for very similar liquids. When such standards are available, provisions in subclause 8.4.4 may be applied by analogy.

8.5 Maximum permissible errors on calculators

Maximum permissible errors on quantities of liquid indications applicable to calculators, positive or negative, when they are tested separately, are equal to $^1/_{10}$ the maximum permissible error defined in line A of table 2. However, the magnitude of the maximum permissible error must not be less than one half-scale interval of the measuring system in which the calculator is intended to be included.

9 Weighing instruments

9.1 Class 1, 2, 3 or 4 non-automatic instruments

The maximum permissible errors for increasing and decreasing loads, expressed in terms of certification or verification scale interval (e), with an instrument adjusted to zero with ±0.25e at no load, are:

Maximum permissible	Load			
error	Class 1	Class 2	Class 3	Class 4
±0.5e	0 to 50 000e	0 to 5 000e	0 to 500e	0 to 50e
±1e	> 50 000e, ≤ 200 000e	> 5 000e ≤ 20 000e	> 500e ≤ 2 000e	> 50e ≤ 200e
±1.5e	> 200 000e	> 20 000e	> 2 000e	> 200e

For digital indication or printing, a permissible error does not include the positive or negative error arising from rounding up or down to the nearest whole number of scale intervals.

9.2 Unclassified non-automatic instruments

9.2.1 Unclassified even-arm scales

Capacity	Maximum permissible error			
		Beam scales		Counter
	Balances	Class B	Class C	scales
5g	±4 mg	±10 mg	-	-
25 g	±6 mg	±15 mg	±60 mg	-
50 g	-	±20 mg	-	-
100 g	-	±30 mg	-	-
250 g	-	±60 mg	±240 mg	-
500 g	±12 mg	±100 mg	±400 mg	±1.5 g

Capacity	Maximum permissible error			
		Beam scales		Counter
	Balances	Class B	Class C	scales
1 kg	-	±150 mg	±600 mg	±2.5 g
2 kg	-	±250 mg	±1 g	±3.5 g
5 kg	±70 mg	±500 mg	±2 g	±6 g
10 kg	-	± 1 g	±4 g	±8 g
15 kg	-	±1.5 g	±6 g	±10 g
25 kg	±120 mg	±2.5 g	±10 g	±15 g
50 kg	-	±4.5 g	±20 g	±25 g

The maximum permissible error for even-arm scales must be half the amount specified in the table for loads up to half capacity and the whole amount specified for loads from half to maximum capacity.

9.2.2 Other unclassified instruments

The maximum permissible errors for self-indicating weighing instruments and graduated non-self-indicating weighing instruments, with an instrument adjusted to zero within ±0.25 scale interval at no load must be:

(a) ±0.5 scale interval for the first 500 scale intervals; and

(b) ±1 scale interval over 500 and up to 2000 scale intervals; and

(c) ±1.5 scale intervals over 2000 scale intervals.

9.3 Belt weighers

Class	Maximum permissible error
1	±0.5%
2	±1.0%

10 Automatic rail-weighbridges

10.1 Accuracy classes

Automatic rail-weighbridges are divided into the following 4 accuracy classes:

(a) 0.2;

(b) 0.5;

(c) 1;

(d) 2.

An automatic rail-weighbridge cannot be in the same accuracy class for wagon weighing as for train weighing.

10.2 Maximum permissible errors

10.2.1 Weighing-in motion

The maximum permissible errors for weighing-in-motion are set out in table 1.

Table 1

Accuracy class	Percentage of weight of single wagon or total train, as appropriate	
	Initial certification or verification	In-service
0.2	±0.10%	±0.2%
0.5	±0.25%	±0.5%
1	±0.50%	±1.0%
2	±1.00%	±2.0%

On initial certification or verification of an automatic rail-weighbridge weighing coupled wagons, the errors on not more than 10% of the weighing results taken from 1 or more passes of the test train may exceed the appropriate maximum permissible error given in table 1 but must not exceed twice that value.

10.2.2 Static weighing

The maximum permissible errors on static weighing for increasing or decreasing loads must be the appropriate values in table 2.

Table 2

Maximum permissible errors	Load (*m*) expressed in numbers of scale intervals
±0.5 *d*	$0 \leq m \leq 500$
±1.0 *d*	$500 \leq m \leq 2\,000$
±1.5 *d*	$2\,000 \leq m \leq 10\,000$

10.3 Minimum capacity

The minimum capacity must not be less than 1 t, and not greater than the value of the result of the minimum wagon weight divided by the number of partial weighings.

10.4 Minimum wagon weight

The minimum wagon weight must not be less than 50 *d*.

Part 2 Reverification or in-service inspection of measures and measuring instruments

The maximum permissible errors (where v is the absolute value of the maximum permissible error at certification or verification) are specified in the following table for recertification of measures and measuring instruments for use for trade, except utility meters.

	Maximum permissible error	
	Deficiency	**Excess**
Measure of length	v	v
Measure of weight	0.5v	v
Measures of volume		
Glass measures		
Lines measures	v	v
Brim measures	0	v
Metal measures		
Line measures	2v	2v
Brim measures	v	v
Length-measuring instruments	2v	2v
Area-measuring instruments	2v	2v
Farm milk tanks	v	v
Vehicle tanks	v	v
Liquid-measuring instruments	v	v
Weighing instruments	2v	2v
Weighing-in-motion	2v	2v

Note

1. Made by the Governor-General on 1 1999, and notified in the *Commonwealth of Australia Gazette* on 9 June 1 17 June 1999.