

FINAL DRAFT
DOCUMENT

52nd CIML Meeting

Cartagena de Indias 2017

SUBMITTED
FOR CIML
APPROVAL

New Document:

Surveillance of utility meters in service
on the basis of sampling inspections

(Information)



ORGANISATION INTERNATIONALE
DE MÉTROLOGIE LÉGALE

INTERNATIONAL ORGANIZATION
OF LEGAL METROLOGY



52nd CIML Meeting - Working Document

Additional Meeting Document

52-CIML-AMD-05

2017-09-25

Agenda item 15.1.1: Approval of Final Draft Recommendations and Documents

**New Document: Surveillance of utility meters in service
on the basis of sampling inspections**



Section 15.1.1 of the 52nd CIML meeting Working Document states:

"New Document: Surveillance of utility meters in service on the basis of sampling inspections (this was submitted to the CIML for Preliminary online ballot on 21 April 2017 with a deadline of 21 July 2017). CIML Members may download the current files from the "CIML Member online voting" page of the OIML website. Depending upon the result of the ballot, it is possible that this Draft Document will be submitted for approval at the 52nd CIML Meeting. Information will be provided on this in an Additional Meeting Document once the ballot has closed."

The result of the Preliminary online ballot (POB) was 32 "Yes" votes, 4 "No" votes and 2 abstentions so, in accordance with section of 6.5.4 a) of OIML B 6-1:2013, the majority of votes cast by CIML Members were in favor.

However, section 6.5.4 b) of OIML B 6-1:2013 also requires there to be "... no proposals or objections requiring substantial amendments of the text." Consequently, the result of the POB is considered to be "Passed (with substantial comments)".

The BIML has consulted the Convener of project TC 3/SC4/p 1 on the POB result and the comments that were received. Considering the broad majority of CIML Members that were in favor, the Convener has stated that they see no chance to further improve the existing Draft Document. In addition, the Convener feels that the preliminary clause ("This Document is primarily intended for use in countries that do not have existing regulations concerning sampling procedures. Existing national regulations have to be observed. This Document does not describe sampling procedures for measuring instruments aiming at the compliance of the maximum permissible errors during the extension of the period of the validity of the verification at any time.") which some of the comments address and object to, is key to them.

Taking into account the long history of the development of this Document, and also the fundamental differences between member countries' approaches as regards sampling procedures that became evident, the Convener has therefore come to the conclusion that no greater consensus can be achieved.

In accordance with section 6.5.8 of OIML B 6-1:2013, and after consultation with the CIML President, the following proposal to the CIML is made:

- The Draft Document *Surveillance of utility meters in service on the basis of sampling inspections* be put forward as a Final Draft Document (FDD) for approval at the 52nd CIML meeting.
- In the event that the FDD does not pass the CIML vote, it is proposed that the Document will instead be published as an OIML Guide (G). The CIML will be given the opportunity to vote again, although normally it is the CIML President who approves a G publication.
- Depending on the outcome of the vote(s) it can be discussed at the CIML meeting as to whether the existing PG be disbanded or be charged with the task of reconsidering the comments.

The FDD, including the result of the POB and the comments received, can be downloaded from the Cartagena website at: <http://cartagena.oiml.org/ciml.html#drafts>



OIML TC 3/SC 4/p 1

Draft Document: Surveillance of utility meters in service on the basis of sampling inspections

CIML Preliminary Online Ballot

Deadline: 2017-07-21

Status: Closed

Yes: 32

No: 4

Abstain: 2

Result: Passed, with substantial comments

Summary of votes

Country	Vote	Date	Comments
AUSTRALIA	Abstain	21/07/2017	Yes
AUSTRIA	Yes	03/07/2017	Yes
BELGIUM	Yes	13/07/2017	No
BRAZIL	No	21/07/2017	Yes
BULGARIA	Yes	21/07/2017	No
CANADA	Yes	19/07/2017	No
COLOMBIA	Yes	22/07/2017	No
CUBA	Yes	18/07/2017	No
CYPRUS	Yes	14/07/2017	No
CZECH REPUBLIC	Yes	21/06/2017	No
DENMARK	Yes	13/07/2017	No
EGYPT	Yes	07/06/2017	No
FRANCE	Yes	22/06/2017	No
GERMANY	Yes	03/05/2017	No
HUNGARY	Yes	21/07/2017	No



Country	Vote	Date	Comments
IRAN	Yes	20/07/2017	No
IRELAND	Yes	13/07/2017	No
JAPAN	Yes	21/07/2017	Yes
KAZAKHSTAN	Yes	23/06/2017	No
KOREA (R.)	Yes	21/07/2017	No
MONACO	Yes	21/04/2017	No
NETHERLANDS	No	21/07/2017	Yes
NEW ZEALAND	Yes	29/06/2017	No
NORWAY	Yes	08/06/2017	No
PAKISTAN	Yes	24/04/2017	No
POLAND	Yes	17/07/2017	No
ROMANIA	Yes	18/07/2017	No
RUSSIAN FEDERATION	Yes	13/07/2017	No
SAUDI ARABIA	Yes	10/07/2017	No
SLOVAKIA	Yes	21/07/2017	No
SLOVENIA	Yes	12/06/2017	No
SWEDEN	Abstain	21/07/2017	Yes
SWITZERLAND	Yes	17/07/2017	No
TUNISIA	Yes	21/07/2017	Yes
TURKEY	Yes	19/07/2017	No
UNITED KINGDOM	No	20/07/2017	Yes
UNITED STATES	No	21/07/2017	Yes
VIET NAM	Yes	14/07/2017	No

Template for comments and convener's observations

Date:2017-07-25

Document: Draft Document

Project: TC 3/SC 4/p 1

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
US 001				gen	<p>We have voted “no” on this document.</p> <ul style="list-style-type: none"> We do not believe this document is yet ready for CIML approval and publication. We do not believe the document is yet ready to be referenced in the relevant OIML Recommendations: R46, R49, R75, and R137. 		<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
US 002				Gen/tech	<p>Two <u>key</u> statements were added to this document between the 4CD and the preliminary ballot.</p> <ol style="list-style-type: none"> This Document is primarily intended for use in countries that do not yet have any existing regulations concerning sampling procedures. This Document does not describe sampling procedures for measuring instruments aiming at the compliance of the maximum permissible errors during the extension of the period of the validity of the verification at any time. <p>Both statements are clearly changes to the <u>scope</u> of the document (even though the statements are not found in the scope section) ... and both statements are clearly non-editorial changes,</p>		<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>

¹ Country code (enter the ISO 3166 two-letter country code, e.g. CN for China)

² Type of comment: ge = general te = technical ed = editorial

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					<p>which are not allowed by the current edition of B6.</p> <p>Statement 1) above is especially troubling because OIML documents are usually expected to be consensus-developed standards that reflect “best-in-the-world” requirements and practices. Statement 1) seems to run counter to that expectation.</p>		
US 003				Gen/tech	Too many very good comments from several nations that were received on the 4CD were either “noted” or “not accepted” ... and were not used to improve the document.		<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
AU 004				Gen	<ul style="list-style-type: none"> The technical comments provided by Australia for the previous CD have not been accepted, with no reasoning provided. Our concerns regarding the technical matters still remain unanswered in this Draft Document. The document is too restrictive and may not suit the requirements of many economies involved. This concern had been raised in the comments provided to previous CD along with suggestions to add provisions that would facilitate the National Regulatory Body to prescribe their own requirements. This 		<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>

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					<p>suggestion has not been accepted by the convener.</p> <ul style="list-style-type: none"> Australia does not consider this document to be sufficiently mature enough at this stage, to be passed as Draft Document and to be published. Australia "ABSTAINS" with comments. 		
AU 005				Gen	<ul style="list-style-type: none"> The introduction of "Existing national regulations must be observed", in the introduction of the document has been quoted by the Convener as the reason to reject suggestions to add "National regulatory body can amend as required for their national use" in the document. The statement in the introduction does not support this argument, as it allows only for existing national regulations to be observed but not that any amendments can be made to the requirements prescribed in this document on a need basis. This makes the document too restrictive. 	Suggest adding, "National regulatory body can amend as required" wherever needed. This makes the document user friendly and easily adaptable.	<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
UK 006				ge	<p>Although we are content with the Document, it should be noted that for water meters the instrument is often unusable following the test /calibration process</p>	Please make a note that the instrument will not be useable following a calibration test process.	<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
NL 007				ge	<p>Although some restriction of the application of the Document is made in its introduction</p> <p>the present draft document is considered not</p>	NL supports any measure that will improve the present draft in an as short as possible period of time.	<p>Noted</p> <p>See Additional Meeting Document with reference to</p>

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					consistent and not sufficiently mature. For that a negative vote is cast on the draft.		section 15.1.1 of the CIML Working Document (Cartagena 2017)
NL 008				ge	Most of the comments issued by the NL experts in previous drafting stages have not been given an adequate answer by the Project Group. It was requested several times to the convener to forward adequate replies on the comments delivered and suggested to organize a Project Group meeting in order to try to get some consensus on the issues concerning the Project. The observed missing communication between the convener and the Project Group and the members of the Project Group is considered a missed chance for coming to some consensus. Nevertheless NL still supports the high priority to the production of a document containing information on surveillance by sampling by providing the information on the preferred methods including the options being actually in place. However it is still expected that such high priority should not lead to production of an incomplete document or to a too restrictive document tending to exclude valid sampling systems.	See following NL comments.	Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
NL 009				ge	Many of the comments provided on the 3 CD and 4 CD (including comments from other p-members) appear not to have been taken into	NL supports any measure that will improve the present draft in an as short as possible period of	Noted See Additional Meeting

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					<p>account in the DD and no adequate reply has been provided by the convener on the reasons why and still many of these comments on the previous drafts are valid while the non-acceptance of the comments have not been supported by any arguments from the Project Group.</p> <p>Further no information was received about voting results or results of the survey as promised to be distributed by the convener in the info document observations column.</p> <p>In the replies to the NL proposals on the 4CD the convener seems to be aware of the incompleteness and imperfections in the present draft by stating that during revision of the Document the NL comments could be taken into account</p>	time.	Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
NL 010				te	<p>Repeated comment; not given an adequate answer.</p> <p><i>“The inspection period (time needed for sampling and performing tests on a sample) should be limited somehow. In The Netherlands a twelve months period is applied as normal period. In case of insufficient results an extra year is given to complete the sample size. This means a ratio of 3 or 5 between the normal inspection period and the inspection interval. (gas meters interval is 5 years; volume conversion devices is 3 years.)”</i></p>	<p>Restrict the inspection period to one year, giving an escape in case of insufficient samples.</p> <p>As a general approach the maximum ratio of inspection period in relation to the inspection interval may be given.</p>	<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
SE 011				Gen	SE is in favor of a document on sampling		Noted

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					<p>procedures for utility meters in service.</p> <p>This document is however too detailed in various aspects for example in 4.1 and 6 where the utility has go through an application procedure. Another example is the restrictive minimum criteria of defining a lot. These and other comments and proposed changes were put forward to CD5 although not considered and thus still valid for this DD. For details, see SE comments on CD5, TC3_SC4_p1_DD_POB_info.pdf).</p> <p>Even though the document now gives some flexibility to the national authority it will, as we understand it, not be applicable in its entirety in Swedish legislation.</p>		See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
UK 012			scope	ge	<p>Water meters are also used for commercial and light industrial.</p> <p>.</p>	We propose to include meters for commercial and light industrial use in the scope of the document.	<p>Noted</p> <p>See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)</p>
NL 013		01		ge	<p>The restriction “<i>This Document is intended...</i>” reduces the scope of application.</p>	Move this restriction to 2. Scope	<p>Noted</p> <p>See Additional Meeting Document with reference to</p>

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							section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 014		01		ge	The Brazilian Legal Metrology Directorate does not support the proposed document for publication due to the reasons exposed below.	More discussions to improve the document	Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 015		01		ge	For more than 10 years Brazil is trying to implement periodical verifications for utility meters especially for electricity meters. However, the meter population estimated in more than 70 million of instruments is so huge, that even after the release of two regulations, we could not implement. For this reason, the Brazilian Legal Metrology Directorate has a big expectation into an OIML document that provide guidance to perform these verifications in an efficient and economical way. Many discussions were conducted in our country, but no consensus has been reach, proving that the problem is not easy to solve.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 016		01		ge	We already tried to implement periodical verifications in electricity meters based in sampling inspections by attributes, just like the		Noted See Additional Meeting

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					proposal of the current document, however we don't get satisfactory results.		Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 017		01		ge	In 2007 we used sampling plans of ISO 2859-2 standard to carry out an in-service verification of AMR meters installed in Rio de Janeiro metropolitan area.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 018		01		ge	In total 1300 units was tested in the field (800 units from one manufacturer and 500 from another) spending more than 3 years until obtain important conclusions. The resources employed, the time expended in tests and the difficulties found in the field, showed us that inspection by attributes is very difficult to use in large geographical areas.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 019		01		ge	In fact this approach is based on homogeneous lots, a very uncommon situation in our country, since the instruments from a particular lot are generally installed in a large geographical area, making difficult to get the samples of such instruments. This is especially true for old electromechanical meters which, in many cases,		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)

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					were re-located during its operational life		
BR 020		01		ge	Just to get an idea, in the Brazilian state of Minas Gerais with a population of 19.5 million inhabitants, it is estimated that there are installed 4,117,237 electricity meters spread in 853 municipalities that belongs to its territory of 586.521 km ² . (Http://cod.ibge.gov.br/1P2). In such geographical area the diversity of electricity meters is very high, making almost impossible to conform homogeneous lots.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 021		01		ge	Even worse are administrative decisions when, for example, a lot is rejected. The difficulty and cost to remove from the field such instruments, makes any administrative decision ineffective and subject to disputes. Someone think that rejected lots could be improbable as manufacturers have controlled the production quality, however lot rejection could be more common than expected. Because of this, we are researching other approaches to conduct periodic verifications in utility meters.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 022		01		ge	Even the real purpose of this metrological control step is questioned today in the country and new ideas are suggesting that main goal of periodic verification should be monitoring the measurement error in the field regardless of the type of meter, the year of manufacture and even the accuracy class. Defenders of this new trend agree with the comments made by The Netherlands who propose to use other types of		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)

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					inspection, such as inspection by variables.		
BR 023		01		ge	The idea of periodically monitoring field measurement error within specific geographic areas (for example, in a municipality or neighbourhood) through quick inspections on randomly chosen samples seems to make more sense. Using this proposal the samples can be collected quickly (as they are close one from other) and tested in designated laboratories that will perform just an accuracy test at 1 or 3 load points.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 024		01		ge	Less desirable in Brazil due to safety problems is the in-field inspection, where a metrological team crosses the geographical area performing accuracy tests (1 or 3 load points). In this approach the display test proposed in item 8.1.2 would be dispensed since it is the most time-consuming test.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 025		01		ge	Other discussion is related with administrative consequences of rejected lots. In the proposal of monitoring periodically the measurement error in field regardless lot homogeneity, the supervisory authority may impose penalties on utility when errors in the geographic areas present positive trends (in detriment of the consumers). If the errors present a negative tendency, utility is encouraged to correct this situation naturally and no fine will be applied.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)

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BR 026		01		ge	Period of validity is also an especial concern in Brazil. As we have electromechanical meters installed for more than 20 years, more than 2 verifications should be done in the whole meter life. However, even when manufacturers of electronic meters claim that its life expectancy can reach 10 years, the truth is that we receive many claims from utilities regarding the electronic meters' reliability.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
BR 027		01		ge	As previously mentioned all these discussions are very controversial and they are not finished yet. The only consensus reached is that the proposed document needs to be improved and because of this, we kindly decline to support its publication.		Noted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
AU 028		01	Introduction	Edit	<ul style="list-style-type: none"> Paragraph, "As the replacement of in-service.....meter reliability is high" is incomprehensible. 	Suggest re-editing.	Not accepted See Additional Meeting Document with reference to section 15.1.1 of the CIML Working Document (Cartagena 2017)
AU 029		01	Introduction	Tech	<ul style="list-style-type: none"> The introduction of the document introduces terms Limiting Quality values (LQ), and Consumers Risk, without defining these terms. It makes the document very hard to understand. 	Suggest defining the statistical terms used in the introduction, as the premise of the whole document is based on these terms and providing the definition upfront makes it easy	Not accepted Could be discussed in the next revision

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						to read and understand the document.	
NL 030		02		ge	This clause “Scope” contains sub clauses which should not be part of the scope.	Suggest to move 2.2 and 2.4 (e.g. to Introduction)	Not accepted Each country decides for itself
AU 031		02	Scope	Tech	<ul style="list-style-type: none"> The Scope of the document is quite narrow, being restricted to ‘private homes’. In Australia, utilities cover domestic use along with light industrial and commercial use. 	Suggest expanding the scope or provide flexibility for National regulatory bodies to provide flexibility as required.	Not accepted Each country decides for itself
UK 032		03.02		ge	‘R137’ should be expressed according to its parts more accuracy.	‘R137’ should be expressed as ‘R137 Parts 1 and Parts 2	Accepted The FDD text should read as follows: “R137 Part 1 and Part 2”.
NL 033		03.02		ge	<p>NL commented on the 4CD to follow CIML 2011 Resolution 24.</p> <p>No reference is to be made to definitions in other Recommendations. Further it is anyhow inconsistent to refer for one Recommendation (R 137) to parts and for other Recommendations to the complete Recommendation</p> <p>The convener suggested to take this into account in a next revision.</p>	<p>Repeated request:</p> <p>Amend taking into account the CIML 2011 Resolution 24</p> <p>NL supports any measure that will improve the present draft in an as short as possible period of time.</p>	Not accepted Could be discussed in the next revision
NL 034		03.03 – 3.6		ed	NL commented on the 4CD that the definitions are not quite clear and suggested to have some exchange of information as to come to definitions covering most of (preferably all) international	<p>Repeated request:</p> <p><i>“Amend to come to definitions covering most of (preferably all) international legislative</i></p>	Not accepted Each country decides for itself

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					legislative structures	<i>structures.”</i>	
AU 035		04.01	Carrying out the sampling inspection - General	Tech	<ul style="list-style-type: none"> Is it necessary for the entity responsible for the meters to submit an application to the relevant legal authority prior to undertaking an inspection? Would a report detailing the outcomes of the inspection be of greater relevance to the relevant authority? Consideration should also be given to making the requirement to submit an application voluntary, implemented at the discretion of the relevant authority. 	<p>Suggest making the application process voluntary, to be implemented at the discretion of the relevant national authority.</p> <p>Also suggest that a report detailing the outcomes of the inspection would be of more relevance than an application. It would be the responsibility of the utility company to ensure that they follow this document when determining lots and selecting samples.</p>	<p>Not accepted</p> <p>Each country decides for itself</p>
TN 036		05	05.1	GEN	<p>It is appropriate to add: Same ambient conditions since the conditions of operation of the meter in service may differ according to the geographical zone (climatic conditions: temperatures, humidity, UV rays, etc.)</p> <p>Add also "same constant" as parameter to take into account to collect the counters in the same batch</p>	<ul style="list-style-type: none"> Same ambient conditions (temperatures, humidity, UV rays, etc.) same constant 	<p>Not accepted</p> <p>Each country decides for itself</p>
NL 037		05.01		ge	The convener did not accept the NL experts suggestions on this sub clause (see info document) and suggested to take this into account in a next revision.	NL supports any measure that will improve the present draft in an as short as possible period of time.	<p>Not accepted</p> <p>Could be discussed in the next revision</p>
AT 038		05.01		te	the same measuring principle should be used, don't mix testing with ultrasonic flow sensors and		Not accepted

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					for instance Woltman sensors		
AT 039		05.01	b and d	ed	Be consistent in abbreviation. If you use Q_3 etc for water meters, please use Q_{\max} , q_p etc for the other meter types	Maximum flow rate (Q_{\max}) Nominal diameter (DN) Permanent flow rate (q_p) <i>Limiting flow rate (q_s)</i>	Not accepted Could be discussed in the next revision
AU 040		05.01	Criteria for the assembly and delimitation of a lot	Tech	“Moreover, the following characteristics must be identical in all meters”, makes the document too restrictive. <ul style="list-style-type: none">Suggest providing some flexibility.	Suggest rewording, “The following characteristics can be used to further the representability of the sampling lot”.	Not accepted Could be discussed in the next revision
AU 041		05.01	Criteria for the assembly and delimitation of a lot	Edit	Use of differing terms ‘Same year of production’ and ‘year of manufacture’, to prescribe same requirement.	Suggest using the same terminology to avoid confusion.	Accepted The FDD text should read as follows: “Year of production”.
JP 042		05.01 (a) Electrical energy meters		Te, Ed	Characteristics of electricity meters should be specified using the terms in R 46 (2012). Specification using a ratio of maximum / basic current is not appropriate.	Delete the characteristic using current-carrying capacity. Instead, specify the characteristics with the terms in R 46, i.e. starting current, minimum current, transitional current and maximum current.	Not accepted Could be discussed in the next revision
JP 043		05.01 (b) Gas		Te	As we requested to 4 CD, the requirement using the same membrane material is not necessary	Delete the item “ <i>membrane material (if</i>	Not accepted

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		meters			because R137-1&2 (2012) does not specify a membrane material.	<i>applicable</i>)".	Could be discussed in the next revision
TN 044		06	06.a	GEN	Clarify the parameter " transitional current "		Not accepted Could be discussed in the next revision
AU 045		06	Application for sampling inspection	Tech	Suggest that the need to submit an application form prior to an inspection be left to the discretion of the national authority. The aim of this document should be to define what is acceptable in terms of lot definition and sampling plans, to which utility companies should comply when undertaking an inspection. The national authority would presumably be more interested in the outcome of the inspection and the decision to extend (or not) the period of verification validity	Suggest adding a note: "National authority to prescribe administrative requirements of the inspection plan".	Not accepted Each country decides for itself
AT 046		06	c and d	ed	Nominal diameter should be added in clause 5.1 as well and see clause 5.1		Not accepted Could be discussed in the next revision
TN 047		07	7	GEN	Must also consider the possibility of checking meters on site ie it is not necessary to uninstall and check it systematically in the laboratory.		Not accepted Could be discussed in the next revision

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AU 048		07	Selection and treatment of the sample meters.	Tech	“Reference shall be made.....updated criteria.” Unclear as to what updated criteria is being referred to here. The OIML documents specify requirements with regards to handling and treatment of the meters.	Please clarify as to the specific requirements in the OIML Recommendations that are being referenced here. This would reduce ambiguity related to the applicability of OIML Recommendations in relation to this document.	Not accepted Could be discussed in the next revision
AU 049		08.01.1	Type approval certificate	Tech	The reference to mandatory verification is somewhat ambiguous. It is assumed that the intent is that a meter is non-compliant if it is not verified in accordance with national regulations.	Suggest rewording the last part of the sentence as: “...and if it is not verified in accordance with the relevant national regulations.” Or similar.	Not accepted Could be discussed in the next revision
AU 050		08.01.2	Display Test	Edit	Based on the title of the subclause 8.1, it can be assumed that this subclause, provides conditions under which a meter is evaluated as non-conforming. The requirements in the subsequent subclause 8.1.2 (Display test), under 8.1, need to be reworded for a better read of the document.	Suggest rewording,” <i>A meter forming a part of the sample shall be considered as non-conforming if its display does not comply with the requirements to legibility and correct operation according to the relevant OIML Recommendation.</i> ”	Not accepted Could be discussed in the next revision
JP 051		08.01.2 Display test		Ed	Because the entire clause 8.1 is titled as ‘non-conforming meters’, sub-clauses shall provide a condition under which a meter is evaluated as non-conforming.	We recommend a revision as shown below. <u><i>A meter forming a part of the sample shall be considered as non-conforming if its display does not comply with the requirements to legibility and correct operation according to the applicable OIML Recommendation.</i></u> If above change is not acceptable, Clause 8.1.2 should be renumbered as 8.2 as a test item under	Not accepted Could be discussed in the next revision

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						"8. sampling inspection".	
AU 052		08.02	Test Points	Tech	<p>Australia raised the issue that the clause states that test points are generally defined by national authorities, but then 8.2.1 to 8.2.4 specify test points for meters, in the comments for 4 CD.</p> <p>It is still an issue, as providing specific test points for each type of meter following the statement that the meters are tested at test points required by national legislation, makes the document internally inconsistent.</p>	Suggest adding a statement to clause 8.2 that the test points specified in clause 8.2.1 to 8.2.4 are informative or suggested.	<p>Not accepted</p> <p>Each country decides for itself</p>
JP 053		08.02 Test points (and 8.1.2)		Ed, Ge	Clause 8.1.2 specifies to refer a relevant OIML Recommendation. A similar general statement should be added to Clause 8.2.	<p>We recommend adding a note given below to Clause 8.2.</p> <p><i>Note: the sample meters should be inspected according to the relevant OIML Recommendation. A national responsible body may however specify test points independently.</i></p>	<p>Not accepted</p> <p>Could be discussed in the next revision</p>
JP 054		08.02.1.1 Running with no load		Ed	8.2.4.1 of R 46 (2012) requires a non-load check only at U_{nom} . A test on 'running with no load' therefore may be conducted only at U_{nom} .	<p>Change the first paragraph as given below.</p> <p><i>When the voltage is applied ... the meter shall not register energy at <u>the voltage of U_{nom}</u>.</i></p>	<p>Not accepted</p> <p>Could be discussed in the next revision</p>
JP 055		08.02.1.1 Running with		Ed	The second paragraph begins with " <i>The term I_{tr} ...</i> " is not related to 'no load test' and it is not	Delete the second paragraph.	Not accepted

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		no load			necessary.		See 8.2.1.2
JP 056		08.02.1.2 accuracy tests		Te, Ed	Test points should be compliant with those specified in R 46 (2012).	Use the test point given below which are specified in 8.2.4.3 of R 46 (2012). <i>I_{min}: PF=1, I_{tr}: PF=1, I_{tr}: PF=0.5 inductive, 10 I_{tr}: PF=1, 10 I_{tr}: PF=0.5 inductive, I_{max}: PF=1 and I_{max}: PF=0.5 inductive</i>	Not accepted Could be discussed in the next revision
AT 057		08.02.2		te	Range and order (as stated above)		Not accepted Could be discussed in the next revision
AT 058		08.02.3.1		ed	Sub clause is not necessary	8.2.3 Water meters	Accepted Sub-clause “8.2.3.1 Test points for water meters” should be deleted in the FDD
AT 059		08.02.3.1		te	The order of measurements should be mandatory. And the order should be changed by starting with Q_2 because of possible air in the meter	...of actual volume must be determined in the following order for at least.... (a) between Q_2 and 1.1 Q_2 ; (b) between Q_1 and 1.1 Q_1 ; and (c) between 0.9 Q_3 and Q_3 ; 	Not accepted Could be discussed in the next revision

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JP 060		08.02.3.1 test points for water meters		Ed	A wrong clause 10.1.3, which does not exist in R 49-1 (2006), is referred and the correct clause is 6.3.3. Regardless this misprint however, the respective clause in the new version (R 49-1: 2013) should be referred.	Use the statement in Clause 7.3.4 of R 49-1 (2013) for Clause 8.2.3.1 of the present draft.	Accepted The FDD text should read as follows: “The following scheme relates to 7.3.4 of OIML R 49-1:2013 ...”.
AT 061		08.02.4		ed	Give an explanation about the abbreviation and write them in italic fonts	$\Delta\theta_{\min}, \dots$	Not accepted Could be discussed in the next revision
AT 062		08.02.4		te	The measurement of exact $0.1q_p$, q_i and q_p would not be possible, therefore ranges should be give or a possible deviation of flow rate	(a) $q_i \square\square q \square\square 1.1 q_i$ b) $0.1 qp \square\square q \square\square 0.11 qp$ c) $0.9 qp \square\square q \square\square 1.0 qp$	Not accepted Could be discussed in the next revision
UK 063		08.04		te	The UK has a Testing (IST) scheme which covers Gas and Electricity meters within GB. Whilst there is no legal obligation on suppliers to use IST, there is a legal obligation on suppliers to maintain their population of meters in proper working order at all times and participation in IST helps them to demonstrate to us that they are fulfilling this requirement. Those suppliers who do not wish to participate in our IST scheme are free to use any other method	Please add under section 8.4 (see 4CD comments the following sentence: “The test facilities will use calibrated equipment traceable to national and international standards as agreed with the supervising authority.”	Not accepted Each country decides for itself

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					<p>of in-service sampling however, so long as they can demonstrate to us that it is the equal to, or better than our IST scheme, in its testing requirements etc.</p> <p>In view of this we strongly recommend that the convenor consider our previous comments to the 4CD, proposing a new sentence under 8.4 (see 4CD comments):</p> <p>“The test facilities will use calibrated equipment traceable to national and international standards as agreed with the supervising authority.”</p> <p>If this document is passed and adopted by the OIML as it stands, some UK suppliers may feel they can use this to show compliance to us, but could argue they do not need to use properly calibrated test facilities as it is not stated anywhere.</p>		
JP 064		08.04.2 Gas meters		Te	<p>The expression “<i>volume passed through the meter shall be at least 50 times the cyclic volume of the meter</i>” is applicable only for gas meters using a membrane diaphragm. The expression should include other types of meter.</p> <p>This is a repetition of our comment to 4 CD. If this</p>	<p>Correct the expression as shown below.</p> <p><i>Before starting the tests, the volume passed through the meter shall be at least 50 times the cyclic volume of the meter, <u>or a volume equivalent to the amount passing through the meter for 1 min at Qmax.</u></i></p>	<p>Accepted</p> <p>The FDD text should read as follows: “Before starting the tests, the volume passed through the meter shall be at least 50 times the cyclic</p>

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					change is not acceptable, please explain the reason.		volume of the meter, or a volume equivalent to the amount passing through the meter for 1 min at Qmax.“
NL 065		1		ed	Repeated comment; not given an adequate answer. <i>"as the replacementreliability is high". This sentence is rather incomprehensible.</i>	Re-editing is necessary while the contents as presented does not make sense.	Accepted The FDD text should be amended as follows: “The replacement of in-service meters when their periods of validity expire is a costly matter. The results of successful sampling inspection may suggest that such replacement is premature and helps to reduce the meter owner’s operating costs.”
AU 066		6(h)	Application for sampling inspection	Tech	“Statement by the public.....inspections”. Unclear as to the necessity of the requirements prescribed here. What is the intended use of this information?	Please provide more clarity.	Not accepted Could be discussed in the next revision
NL 067		Annex 2		te	Repeated comment: <i>“The document only accepts a sampling plan based on attributes. For your information: In the Netherlands we a system based on variables (based on ISO 3951-2) is implemented. The standards ISO 2859 and ISO 3951 are in line with</i>	Repeated proposal: <i>“Add information on the possibility of using a system based on variables (ISO 3951-2) for this inspection”</i>	Not accepted Could be discussed in the next revision

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					<p><i>each other as written in ISO 2859-10. Even the tables have been based on the same risk levels</i></p> <p><i>(See OIML Bulletin (2014 2/3) page 5) “</i></p> <p>The convener suggested to this take into account in a next revision</p>	NL supports any measure that will improve the present draft in an as short as possible period of time.	

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