|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 0001  FI |  |  |  | ge | We share the NL comment: “In its current form, without technological developments having been incorporated in the Recommendation, we worry that issuing authorities and conformity assessment bodies are not likely to adopt the next R76 into their practice, rendering the result of this work essentially irrelevant.” |  | See comment 0002. |
| 0002  DE |  |  |  | ge | The current CD (07/2023) was a huge job – thanks a lot to BIML for this proposal! The R76 is now split into 5 parts, but there were nearly no, only software related changes in the requirements and descriptions.  Two major aspects result:   1. As the current CD is more than only a splitting, thus new requirements were taken into account. This means, if OIML CS and the countries directly referring to OIML recommendations decide about acceptance of this version (independent of instead of an old version or additionally), the pressure on manufacturers and Issuing Authorities increase largely to adapt to this new version of R76 immediately, which causes huge efforts. For this case it has to be taken into account that other aspects of modernisation in R76 initially wished by the community were not recognised in this CD. Thus, even the other aspects need to be taken into account, as they are important too. So, the current CD cannot be accepted in this case. 2. If only a split would happen, possibly including the new evaluation report, the resulting version could be seen as technically the same as the current R76. This would allow OIML CS and directly referring countries to take the new version into account but not to request an immediate recognition, as the old and the new version would have the same technical content. The efforts to be spent, might be acceptable, as only the new evaluation report needs to be added. Thus, it is up to the OIML community when a real revision / modernisation will start. Even for this point of view the current CD is not acceptable, because it is more than only a split.   In both cases changes/adjustments to the draft are necessary. Because of that we will not support the current version. | Only splitting of the current version (OIML R76-1:2006) with NO technical changes,  or taking on board ALL (technical) comments and information collected before and during the revision process. | Comments noted.  We are trying to follow the instruction given by the Presidential Council in March 2023 to make progress with this project. The roadmap was outlined in emails sent to the PG in June and July 2023, and again explained at the 58th CIML Meeting in October 2023. We are encouraged by the detailed technical and editorial comments received, and hope to complete this revision to all stakeholders’ satisfaction. |
| 0003 |  |  |  |  | Comment moved to after 0007 |  |  |
| 0004 |  |  |  |  | Comment moved to after 0218 |  |  |
| 0005  FR | 0.all |  |  | Ge | France is not convenor for this CD1. OIML decided to create this CD1 and the convenorship is now managed by BIML.  The current CD1 is a huge job realized by BIML but this CD1 raises questions: the R76 is now split into 5 parts, some technical changes have been introduced but some information and requirements of R76:2006 have been removed. There are therefore some inconsistencies. In these conditions, the status of this CD is not clear.  If this project is kept as it is, it would imply that if OIML CS and the countries directly referring to OIML recommendations decide about acceptance of this version, the pressure on manufacturers and Issuing Authorities will increase largely to adapt to this new version of R76 whereas other aspects of modernisation in R76 initially wished by the community were not introduced in this CD. There is therefore no technical benefits.  If only a split would be realized without technical changes, the resulting version could technically as the same as the current R76. That would mean that the old and the new versions would have the same technical content. The pressure on manufacturers and Issuing Authorities might be acceptable. But for this point of view the current CD is not acceptable, because it is more than only a split.  In both cases, changes to the draft are necessary. We try to show in our comments some necessary changes. |  | See comment 0002. |
| 0006  NL | 0.all |  |  | ge | General NL comment covering the entire 1CD package of OIML R76  In the view of The Netherlands, the 1CD version under consideration is not acceptable for several reasons, itemized below.   1. Under time pressure, it appears that BIML has overlooked earlier development in the PG. The current split-up into parts 1 through 5 now before us is based on an intermediate WD which had been discarded by the PG who decided it was best to revert back to the published R76:2006 as a starting point. 2. In its current form, without technological developments having been incorporated in the Recommendation, we worry that issuing authorities and conformity assessment bodies are not likely to adopt the next R76 into their practice, rendering the result of this work essentially irrelevant.   It would be impractical and unnecessarily time-consuming for us to comment in detail on the 1CD under consideration, based on a WD which has already been rejected by the PG. If this version had been put to a vote, the Netherlands would have voted "no". | As was made clear at the PG meeting on 3 July, there is no apparent support for the current approach among the technical experts in the PG and we have heard from the manufacturers' organisation (CECIP) that this current effort will cause damage in the marketplace.  In agreement with the US position on this 1CD, and in line with our own position expressed in the questionnaire under TC9\_SC1\_p1\_N024, we suggest that the current ‘shortcut’ path is abandoned.  In support of the US position, we propose that a brand-new/fresh-start project should be proposed and initiated immediately, with a Project Proposal for a new project to revise OIML R76:2006 put before the CIML for approval in Thailand in Oct 2023. | See comment 0002. |
| 0007  US-01 | 0.All |  |  | General | General US Comment that covers the entire 1CD Package of OIML R76  **\*\* The United States has reviewed the OIML R76 1CD package (prepared by the BIML with zero assistance from the PG) and is NOT supportive.**  **If voting was allowed on a 1CD, the US would vote “NO” on this package.**  a.) The US participated in the most recent meeting of the PG that was held virtually on 03 July 2023. At that meeting, the German PG Convener posted a chart that showed the results of a quickly-held PG survey … the conclusion from that survey was that a majority of PG survey respondents was NOT in favor of this plan/path. Also, during PG discussions at that meeting, there was not one participant that was vocally supportive of the path presented by the BIML (with the exception of the two staff from the BIML).  b.) We see that one of the highest priorities in the OIML work is to “do no harm” in the marketplace. So, it is quite problematic for us to be moving forward with a plan of action that groups of manufacturers have said would cause “chaos” in the marketplace … and that would cause manufacturers additional costs and problems. We believe moving forward on this course of action *will* cause harm (as the manufacturers have indicated).  c.) About three years ago, a 1WD of R76-1 was distributed to the PG for review/comment. It was later decided by the PG that this 1WD contained too many missteps and mistakes (and was therefore unusable) … so further work on the R76 revision started over again with the 2006 published version of R76. Unfortunately, the BIML did not talk to anybody on the PG and just made their 1CD package starting with the 1WD that had been declared bad/unusable by the PG … so, that is what we see as one of the “fatal flaws” in the BIML-produced 1CD package.  *(Comment US-01 is continued in the next cell)* | **The United States believes that (for several reasons) the current iteration of the OIML R76 project should be halted/cancelled. This supports what we believe is the position of manufacturers that this current effort will cause harm in the marketplace.**  **A brand-new/fresh-start project could be proposed and initiated immediately, with a Project Proposal for a new project to revise OIML R76:2006 put before the CIML for approval in Thailand in Oct 2023.** | See comment 0002. |
| 0003  US-01 |  |  |  |  | *(continuation of Comment US-01)*  d.) While seemingly not absolutely “required” by OIML B6, it would have been much easier for the PG to review this 1CD package if a marked-up version of the documents had been provided.  e.) While we appreciate the efforts of the BIML on this project under problematic circumstances, we really believe that the work of producing the technical documents of the organization should be done by members of the PG.  f.) There are 34 P-members and 9 O-members on this R76 PG. However, at the time of posting this US-comments document on the 1CD package (30 Sept 2023 … with only a couple of days remaining before the 3-month deadline), only one country had posted any comments and those comments were entirely editorial.  g.) Actually reaching the finish-line of a high-quality, full-consensus, completed, and published R76 will require a great deal of effort from many people and organizations. Unfortunately (as-of-yet) **this current approach does NOT have agreement and “buy-in” from the members of the PG that will absolutely be needed to accomplish this very important work.**  h.) We have been in discussions with some of the other key members of this PG, and we believe that the change proposed in the adjacent block (initiating a fresh-start on the R76 project) has fairly significant support.  \*\* Note: The highest levels of this organization (the Presidential Council and the CIML) will likely be carefully reviewing a summary of the comments received on this 1CD package to make some important decisions. Hopefully, our submission of these US-comments will encourage other countries and organizations to make their positions known. \*\* |  |  |
| 0008  DE | 1 |  |  | Ge | Some parties usually see an “accepted solution” as an “advised” solution, what might lead to technical barriers to trade. | Change as far as applicable “accepted solution” into “example”. | Agreed. |
| 0009  UK | 1 |  |  | gen | Add a requirement for the measurement uncertainty, similar to what has been included in R 117-2:2019, section 4.2. It seems odd that the only uncertainty factor currently in R 76 is the uncertainty of the test weights. |  | Uncertainty requirements do only apply to test weights. |
| 0010  AT | 1 | 1 | Line 3 | ed | Part 2 is referred to as “Testing procedures" in the introduction, while R76-2 is called “Test procedures". (Same in Introduction of Part 2 itself.) | Uniform naming scheme | Changed to “Test procedures” in 1, 2, 4.1, 10.2.2, bibliography. |
| 0011  FR | 1 | 3 |  | ge | The annex B announced in this clause seems not useful. | Please delete the sentence and the annex B. | Annex deleted as it provides an opportunity for errors and search facilities will find terms in the document. |
| 0012  JP1 | 1 | 3 |  | ed | We would like to propose an editorial add.  The number of the bibliography in OIML B18 must be corrected. | Add underlined sentences:  ***3 Terms and definitions***  *The terminology used in this Recommendation conforms to OIML V 2-200:2012 International Vocabulary of Metrology - Basic and General Concepts and Associated Terms (VIM) [2], OIML V 1:2022 International vocabulary of terms in legal metrology (VIML) [3], OIML B 18:2022 Framework for the OIML Certification System (OIML-CS) [\*\*],* *OIML D 11:2013 General requirements for measuring instruments - Environmental conditions [\*], OIML D 31:2023 General requirements for software controlled measuring instruments [\*] and other relevant OIML publications. In addition, for the purposes of this Recommendation, the following definitions apply. An index of all the terms, definitions and references defined in Annex B.* | Agree - all bibliography references will be corrected.  Agree to additional text. Even though they are covered by “other relevant OIML publications”, it is important to highlight these two. |
| 0013  RO | 1 | 3 | 1 | ge | Please keep Annex B. It is useful. | No change | See comment 0011 |
| 0014  NO | 1 | 3 | AnnexB | ge | The Annex B is useful | Keep Annex B as suggested in CD1 | See comment 0011.. |
| 0015  AT | 1 | 3 | Several | ed | For some terms and definitions taken from VIM/VIML, the corresponding reference is given, and for some not. | Uniform citation scheme | Agreed. |
| 0016  CECIP | 1 | 3.1.2 |  | te | "Instrument that requires the intervention of an operator during the weighing process to decide …"  The intervention… to decide is no proper English | Simplify and make clearer:  "Instrument that requires a (human) operator during the weighing process to decide that the weighing result is acceptable." | The current definition is correct English. However, the addition of “human” will be considered. |
| 0017  DE | 1 | 3.1.2 | Note 5 | Ed / te | Since e.g., equal arms balances and Béranger / Roberval balances are still included that statement is not correct. | Delete note 5 or change it at least into “”non-graduated” weighing instruments are for historical reasons part of this recommendation. All information is covered in a specific chapter.” | Note deleted, as it is not correct and it is not relevant to the definition to add anything else. |
| 0018  UK | 1 | 3.1.2.11 |  | ed | “mobile instrument” is used | Propose changing to “mobile weighing instrument” for clarity since it refers to weighing instrument mounted on or incorporated into a vehicle | More detailed discussion needed on what is meant by a mobile instrument and what categories are needed. |
| 0019  CECIP | 1 | 3.1.2.11 |  | te | "Mobile Instrument" | Rename for more clarity:  "Mobile Non-automatic weighing instrument" | See comment 0018. |
| 0020  NO | 1 | 3.1.2.11 | - | te | There are many NAWI is installed on board boat/ship. These boats travel for long distance and is regarded a mobile. It should be given an definition. | Put an example of on board non-automatic weighing instrument in a new note. For example Note.3 | See comment 0018. |
| 0021  CECIP | 1 | 3.1.2.11 | Note1 | Te | The note defines a new term which is "vehicle mounted instrument" and the relation to the definition 3.1.2.11 is unclear | Clarify or delete Note. | See comment 0018. |
| 0022  CECIP | 1 | 3.1.2.11 | Note2 | Te | The note defines a new term which is "vehicle-incorporated instrument" and the relation to the definition 3.1.2.11 is unclear | Clarify or delete Note | See comment 0018. |
| 0023  DE | 1 | 3.1.2.11 | Notes | Ed | Are the notes not definitions themselves? If so, then they should not be named “note”, should they? | Introduce sub-clauses 3.1.2.11.1 and 3.1.2.11.2 instead of the two notes. | See comment 0018. |
| 0024  CECIP | 1 | 3.1.2.9 & 7.4 | 4 of 7.4 | te | 3.1.2.9 describes what is a price-labelling instrument indicating that is the one used for prepackages. 4th paragraph of 7.4 states that these instruments cannot print below minimum capacity.  There has been a lot of discussions between different stakeholders on when an instrument can print below minimum capacity. Our purpose is to add a new description in Terms and definitions section, just after 3.1.2.9 indicating what does it mean the word prepackage, that is not used anymore, nor defined in the other sections of R76. This way, there is no more ambiguities on that. | We suggest to use the description detailed in OIML R79 paragraph 2.7 that says: “prepackage: single item for presentation as such to a consumer, consisting of a product and its packing material, made up before being offered for sale and in which the quantity of product has a predetermined value, whether the packing material encloses the product completely or only partially, but in any case in such a way that the actual quantity of product cannot be altered without the packing material either being opened or undergoing a perceptible modification  Note: For the purpose of this Recommendation prepackages include prepackages marked with a constant nominal quantity or random nominal quantities. The term “predetermined value” refers to the value determined prior to the prepackage being offered for sale.”  Adding this definition could help to avoid misunderstanding on when printing below minimum capacity is allowed. Now, some people understands that any label printing is forbidden. | Agreed, but has been added as 3.1.4 as 3.1.2 is about instruments. |
|  |  |  |  |  |  | Additionally, include in 7.4 a sentence indicating “Scales for direct sales to the public or for self service are not affected for this prohibition”. | Sentence modified to read “For instruments other than those for direct sales to the public or for self service, printing below minimum capacity shall not be possible. |
| 0025  CECIP | 1 | 3.1.3 |  | Te | Since subsequent definitions refer to this term as "indications" only, the term must be renamed to read "indications (of an instrument)" using brackets | must be renamed as "indications (of an instrument)" using brackets | Agreed. |
| 0026  CECIP | 1 | 3.1.3.1 |  | Te | Definition 3.1.3.1 is in contradiction to 3.1.3:  3.1.3 is defining a "value" (of a quantity) whereas 3.1.3.1 is defining a physical signal of this value. Thus 3.1.3.1 cannot be a subset of 3.1.3 which it is in this CD according to its numbering | The contradiction can be either solved by re-wording the set of three definitions.  A small improvement can be made by giving all three definitions the same "level". | Agreed there is a problem with these three. They might all be better at the same level To be discussed with indication/display. |
| 0027  CECIP | 1 | 3.1.3.2 |  | Te | Same as for 3.1.3.1 | Same as for 3.1.3.1 |  |
| 0028  DE | 1 | 3.2.2 |  | t/ge | The first sentence of the definition is in line with the VIML – the following information is much more than a definition. | Move the complete text/figure/table following the first sentence to another place in the recommendation, preferably to the rudiment chapter 6.16. Integrate the information worked out by the subgroup “Modules of NAWIs”. | Agreed. Only first sentence remains in 3.2.2. Reference to VIML added.  Other text, notes and diagram moved to 4.3 Modular approach. |
| 0029  CECIP | 1 | 3.2.2 |  | Ed | Three occurrences of "may optionally have" in section 3.2.2 ( 3.2.2.3,3.2.2.4,3.2.2.7) | Abbreviate and make clearer:  "may have "(3 times) | As definitions shall not have more than one sentence, these will be re-worded which will remove the repetition. |
| 0030  CECIP | 1 | 3.2.2 | Figure 1 | Tech. | The differentiation between “Digital raw values (counts)” and “weighing value (in mass units)” is not clear. While the output of module 3 is the pure digitalized load cell signal, the output of 4 is already scaled to an interpretable value (e.g. counts). | Change text between 3 - 4 to “unscaled value (e.g. unscaled counts)” and text between 4 – 5 to “scaled weighing value (e.g. scaled counts)”. | To be reconsidered in new figure. |
| 0031  AT | 1 | 3.2.2 | Line 4 | ed | Typing: "Not 1e:" | "Note 1:" | Agreed. |
| 0032  DE | 1 | 3.2.2 | Note 1 | Ed | Is spelled “Not 1e” instead of “Note 1”. | Correct spelling | Agreed. |
| 0033  DE | 1 | 3.2.2 | Table | Ed | Numbers to “analogue load cell” and “primary display” do not have their correct position. | Correct position | Will be corrected as a new figure is needed. |
| 0034  CECIP | 1 | 3.2.2.6 |  | ed | According to the structure and context given above use the term "device…." in the defining phrase | "A digital display is a device and can…" | To be considered when definitions are restructured. Also discuss with indication/ display. |
| 0035  CECIP | 1 | 3.2.2.6 |  | te | " (i.e. terminal without keys),"  This is a contradiction since a terminal must have keys according to the definition given above | Contradiction must be solved.  Definition of terminal must be confirmed first, then definition of digital display must be corrected by e.g. deleting the phrase in brackets. | Agreed. |
| 0036  CECIP | 1 | 3.2.4 |  | Tech. | The displaying devices can also be software module physically separated from the weighing instrument. | 1. Add “The displaying device may be implemented by a software module on a hardware physically separated from the weighing instrument.”. | Agreed. |
| 0037  CECIP | 1 | 3.2.5 |  | Te | Auxiliary indicating devices  Definition of "auxiliary indicating device" is missing | 1. Add definition of auxiliary indicating device 2. Proposal:   Device to indicate values smaller than e. | Discussion needed on indication/display. |
| 0038  DE | 1 | 3.2.6 |  | Ed | Alternative designation “extended indicating device” is still used in 6.6.3 and 7.1.6. We should use the same expression all over the document. As in the old R76-1 there is a mix of “displaying” and “indicating” devices. We should stick to one uniform designation. Any device being used for indicating anything should be named an “xxx indicating device”. | Replace “displaying devices” by “indicating devices”. |  |
| 0039  JP3 | 1 | 3.2.8 |  | te | Add a definition for remote verification.  (see Draft revision of D 31 for CIML Preliminary Online Ballot, 3.2.52) | ***3.2.8.10 remote verification***  *set of procedures to support verification of an instrument during use, potentially without a person on site.* | 3.2.8 will be aligned with D 31 |
| 0040  JP4 | 1 | 3.2.8 |  | te | Add a definition for verification software.  (see Draft revision of D 31 for CIML Preliminary Online Ballot, 3.2.75) | ***3.2.8.11 verification software***  *software on a remote unit used for the purpose of verification of a measuring instrument.* | See comment 0039. |
| 0041  CECIP | 1 | 3.2.8.4 |  | te | Lack of consistency:  Definition of "authorized person" is missing  "Un-alterable" is not defined.  "un-alterable" is not the same as "secured" as this parameter obviously can be altered after removing any seals. | Discuss and make consistent.  The easiest way to achieve consistency would be to delete all Notes as they add more confusion than value. The definition is clear by itself and doesn't need any Notes. | See comment 0039. |
| 0042  AT | 1 | 3.2.8.7 | Title | ed | In the title: There seems to be some free hand drawing of dots and lines above the letters o, w, and s. Best seen when zooming in on the title. | Remove the drawings | Agreed. May have resulted from pdf conversion. |
| 0043  JP2 | 1 | 3.2.8.X |  | te | Add a definition for checking facility.  (see Draft revision of D 31 for CIML Preliminary Online Ballot, 3.2.5) | Add the following definition from OIML V 1:2013, 5.07.  ***3.2.8.9 checking facility***  *facility that is incorporated in a measuring instrument and which enables significant defect to be detected and acted upon*  *Note: “Acted upon” refers to any adequate response by the measuring instrument (luminous signal, acoustic signal, prevention of the measurement process, etc.).*  adapted from [OIML V 1:2013, 5.07] | Agreed. |
| 0044  AU | 1 | 3.3.2.2 |  | te | To make it clear that actual scale interval d is not used for the classification and verification of an instrument. |  | Note added. |
| 0045  CECIP | 1 | 3.3.2.7 |  | te | “instrument having two or more weighing ranges with different maximum capacities and different scale intervals for the same load receptor, each range extending from zero to its maximum capacity”  The scale interval does not necessarily have to be different. | Proposed new text:  instrument having two or more weighing ranges with different maximum capacities and possibly different scale intervals for the same load receptor, each range extending from zero to its maximum capacity | Not agreed. The scale intervals will be different otherwise it will not be a multiple range instrument. |
| 0046  AU | 1 | 3.3.4 |  | ge | 3.3.4 type should add reference to pattern (same as in D32) | Type (pattern) Note: ‘Pattern’ is used in legal metrology with the same meaning as ‘type’. | “Type” is the current terminology in the VIML. Xref added. |
| 0047  AU | 1 | 3.3.5 |  | ed | New caption Figure 3 – Errors should include mpe as well | Figure 3 – Errors and MPEs | Agreed |
| 0048  DE | 1 | 3.5.1.1 |  | Ed | The title mentions an action (“balancing”) while the definition defines a value (“value of metrological controlled weights”). This is inconsistent. | Either change title or reformulate definition. (E.g., “Balancing the load by metrologically controlled weights of known value…”) | Term not used, so deleted. |
| 0049  CECIP | 1 | 3.5.4.2 |  | te | The term “Inaccuracy” does not comply with current VIM definitions, especially when it refers to a numerical quantity value and a standard deviation | Rename 3.5.4.2 to “overall reproducibility of reading” | Definition deleted. Requirement in 6.4.1 reworded to use “reproducibility”. |
| 0050  UK | 1 | 3.5.4.4 | Figure 2 | ed | L is included in table in section 3.8 but not S. the definition is worded around digital indication (displaying device), whereas the requirements for the min reading distance appear to only apply analogue indications? | Reword to say indication rather than displaying device? | Table in 3.8 to be reconsidered.  Display vs indicate to be considered |
| 0051  AT | 1 | 3.5.5.2 | Line 1 | ed | cites VIML:2013,0.06, which is superseded by VIML:2022,0.06. Entries of the two versions are identical though. | Update to current versions of reference documents in general? | All xrefs will be updated |
| 0052  DE | 1 | 3.5.5.6 |  | T | “significant fault” is already defined in the VIML; the information here is not a definition but a requirement | Use the definition given in VIML  Define the “fault limit” in chapter 5 “Metrological Requirements” | Agreed to align with VIML, add fault limit definition and requirement. |
| 0053  DE | 1 | 3.6.1 |  | Ed / te | Although the definition is adopted from VIM and is part of other weighing instruments recommendations it is not quite clear what is meant. The problem is that the term “measurand” can either mean the value indicated (as being measured- “output”) and obviously the mass to be determined (“input”). The mass, however, is an absolute value (may also be expressed in “mol” – number of molecules, atoms, etc.) that can never be affected by influence factors such as temperature or humidity. The latter may lead to absorption processes, but this is, so to speak, “a mass that has been added”. This is, what is expressed by the definition in OIML V1:2013, 0.07. However, if the indication is not the measuring (weighing) result, what can it be? | Clarification what is meant by “measurand” in his context, perhaps by adding an adequate note. | Align with VIM, 2.52 |
| 0054  DE | 1 | 3.6.4 |  | Ed / te | Reference position  „Position of the instrument at which its operation is adjusted “ | It is not clearly defined what is meant by “adjusting the operation”. Definitely, it may be the span of an instrument that is being adjusted (adjusting instrument at zero and at maximum load). This is normally done in horizontal position of the instrument. Yet, the term is ambiguously used. It is applied to “zero” (see A.4.3) as well. We should differentiate whether the term refers to the horizontal position (as suggested in 3.2.7.1) or something else. Preferably, new definitions should be introduced. | Reword where used to avoid the need for definitions |
| 0055  AU | 1 | 3.8 |  | ed | ADC shows reference error |  | Corrected |
| 0056  NO | 1 | 3.8 |  | ge | Abbreviation/symbol for price to pay should not be P | Ptp | Agreed table to be reconsidered/deleted |
| 0057  UK | 1 | 3.8 |  | ed | the table has not been numbered unlike the other ones. L appears 3 times with different meanings |  | See 0056 |
| 0058  CA | 1 | 3.8 |  | te | With the new formats being introduced there exist two definitions using “P” as the symbol with one definition being “indication prior to rounding”, as noted as ID17 and ID18. | A new symbol is proposed “Ip ” since “I” is defines as “**indicated weight value**” | See 0056 |
| 0059  AT | 1 | 3.8 | Table | ed | Typing: Some subscript letters seem to be misaligned/sized. (i.e. small font, no subscript) | Change to subscript | Agreed |
| 0060  AT | 1 | 3.8 | Table | ed | Table misses “NAWI”, used once in 7.8.1. | include NAWI or remove abbreviation from 7.8.1 | Will be mentioned in definition of non-automatic weighing instrument. |
| 0061  DE | 1 | 3.8 | Table | Ed | “ADC”: Error message in most right column (“Error! Reference source not found.”) |  | Corrected. |
| 0062  DE | 1 | 4.1 |  | Ed / te | Last sentence on page 28 reads: “The maximum permissible errors do not apply to calculated net values when a preset tare device is in operation.” | We should think about the implications of that statement. In many countries instruments for direct sales use pre-set tare values to consider the weight of a package. The printed net weight normally is the basis of the price to pay. Is it acceptable when the net weight may exceed any mpe because mpes are not applicable? With pre-packages we face the same problem because only net is printed on the label. (See 6.9.3, 7.1, 7.2, 7.4) The consumer must live with net weights of which the keeping of the error limits is not guaranteed neither is there any transparency about the gross weight (to which the error limits apply) because it cannot be reconstructed without the pre-set tare value having been printed. Should we further allow to print mere net weights? | What is the proposal? No other comments on this subject, which is about the way the instrument is used. |
| 0063  DE | 1 | 4.1 |  | Ed / te | The first paragraph on page 29 reads: “A minimum capacity (Min) is specified to indicate that use of the instrument below this value is likely to give rise to considerable relative errors.”  As table 3 indicates, this is the lower limit of the minimum capacity that must not be gone below at all. However, the minimum capacity of a specific individual weighing instrument may be higher (e.g., depending on the application) | Reword as follows: “A lower limit of the minimum capacity (Min) is specified to indicate that use of the instrument below this value is likely to give rise to considerable relative errors.”  See Table 3 as well. | Agreed. |
| 0064  CA | 1 | 4.1 | paragraph2 | ed | In this section it reads” In this Recommendation, completely mechanical designed instruments are described in clause 8”. Sentence is difficult to read and is not complete. | Propose to change to “The requirements for completely mechanical designed instruments are described in clause 8 of this Recommendation,” | Sentence deleted and bullets reorganised. |
| 0065  UK | 1 | 4.1 |  | ed | last paragraph, Type approval report format should be Type evaluation report format |  | Agreed. |
| 0066  DE | 1 | 4.2 |  | Ed | Weighing instruments in ships (7.8) are missing. |  | Agreed. |
| 0067  AT | 1 | 4.2 | Line 4 | ed | Typing: "multi- interval" | Remove space: "multi-interval" | Agreed |
| 0068  AT | 1 | 4.2 | Several | ed | multiple range instruments are referred to as “multiple range”, “multi-range” and “multi range” | Uniform naming scheme? (That would be necessary for automatic generation of an index of terms on page 97.) | Changed to multiple range. |
| 0069  CECIP | 1 | 4.3 | Par. 2 | Ed. | The definition of “devices performing relevant functions” is not very precise. | Either it needs to be defined as “devices performing metrological relevant functions” or it needs to be specified which devices / device functions are meant. Additional examples for non-metrological relevant devices or device functions should be added. | Changed to “metrologically relevant functions”. |
| 0070  DE | 1 | 5.1.2 |  | Ed / te | Non-graduated instruments are missing although technical designs of the kind of instruments are still included in clause 8. |  | Not agreed. A non-self indicating instrument does not have a verification scale interval. Clause 8 states that clauses 5 and 6 apply “as applicable”. |
| 0071  FR | 1 | 5.2 |  | ge | The text under the table indicates to see the exception in 5.4.4. It would be clearer for users if the sentence “*For an instrument of class I with d < 0.1 mg, n may be less than 50 000”* in 5.4.4 was directly under the table and to delete the clause 5.4.4. | Please replace the second sentence under the table by “*For an instrument of class I with d < 0.1 mg, n may be less than 50 000*” and delete the clause 5.4.4. | Agreed. |
| 0072  FR | 1 | 5.2 |  | ge | The clause 5.4.3 indicates the minimum capacity of the instrument should be determined with the actual scale interval, d whereas the table indicates e. It would be clearer for users to use directly d in the column minimum capacity. | Please replace “e” by d” in the last column of table 3 and delete 5.4.3. | Agreed. |
| 0073  BIZ | 1 | 5.2 | Par. 5 | Ed. | A combination of class III + IIII is possible. Currently only I + II and II + III are mentioned. Therefore III + IIII should be also mentioned. | Add “, or in class III and IIII.” | Agreed. |
| 0074  CECIP | 1 | 5.2 | Table | te | Add another footnote to the last column for more clarity | Add footnote to last column:  "see exception in 3.4.3" | See comment 0072. |
| 0075  CECIP | 1 | 5.2 | Table 3 | te | The column of Min defined by e is not valid for instruments with e>d | replace e by d then it is also valid for instruments with d<e (see 5.4.3)  alternatively work with \*\*\* and reference the exception as done with \*\* | See comment 0072. |
| 0076  CECIP | 1 | 5.2 | Table 3 | te | The sentence “\* it is not feasible…” tries to explain a rule but doesn’t give the explanation. | it is feasable... but in many cases not sensible...  is that sentence needed? Either it is a fix rule "e>=1mg" or you might consider to allow e<1mg in the future under certain circumstances | Note deleted. |
| 0077  DE | 1 | 5.3.1 |  | Ed / te | „Partial weighing range“ | First bullet: Should read “ei+1”. The “1” belongs to the index.  Third bullet: Should read “Mini = Maxi-1” The “1” belongs to the index. | Agreed. |
| 0078  AT | 1 | 5.3.1 | Line 2 | ed | Typing: “*ei*, *ei*+1 > *ei*,“ | Change “+1” to subscript: “*ei*, *ei*+1 > *ei*,“ | Agreed. |
| 0079  AT | 1 | 5.3.1 | Line 4 | ed | Typing: “Max*i* – 1“ | Change “-1” to subscript: “Max*i*–1“ | Agreed. |
| 0080  DE | 1 | 5.3.3 |  | Ed / te | Table 4, index to “e” is not correct | The second row shows the “e” with a wrong index. The correct index spelling is “ei”, not “ei+1”. This can be discerned by checking the following examples in the same section. (see also 5.3.1, last bullet and 5.3.2) | Agreed. |
| 0081  AT | 1 | 5.3.3 | Table 4 | ed | Typing: “Maxi / ei+1”, “i” from “Maxi” is a smaller font, but not subscript. | Change “i” from Maxi and “+1” to subscript | Agreed but see comment 0080. |
| 0082  AU | 1 | 5.4.1 |  | te | Now there are selectable differentiated scale divisions by pressing a key. | Add: the differentiated scale division may be selectable. | Agreed. |
| 0083  AT | 1 | 5.4.1 | Figure 4 | ed | Figure Captions in Fig 4 (5.4.1), Fig 5 (6.5.1), Fig 6 (8.7.3), Fig 7 (9.1.4) are placed above the drawing, while for Figs 1-3, they are placed the bottom. | Uniform placement of Figure captions | Moved to below to comply with B 6-2, 6.3.4. |
| 0084  DE | 1 | 5.4.1 | Note | Ed | Expression: “extended displaying devices” should be replaced with “extended indicating device” for consistency all over the document. | We prefer “extended indicating devices” because this is used in part 4 (checklist) as well, moreover, in R51 and R61. | More general harmonisation needed. |
| 0085  CECIP | 1 | 5.4.2 |  | Ed/te | "This requirement does not apply to an instrument of class I with d < 1 mg, where e = 1 mg, as shown in the following Table"  must be d < 0.1 mg | Correct to read:  "This requirement does not apply to an instrument of class I with d < 0.1 mg, where e = 1 mg, as shown in the following Table" | Not agreed, see comment 0086. |
| 0086  CECIP | 1 | 5.4.2 | Table 5b | te | Table Caption  "Table 5b – Example values of e where d < 1 mg"  Must be d < 0.1 mg | Correct to read:  "Table 5b – Example values of e where d < 0.1 mg" | Table altered. |
| 0087  AU | 1 | 5.4.3 |  | te | Verification scale interval e is for legal use and verification but actual scale interval d is not. Is this clause appropriate? Also if d is selectable (clause 5.4.1), what is the correct Min? | Deleted or reworded. | Deleted. |
| 0088  CECIP | 1 | 5.5 |  | ed | Chapter 5.5 (maximum permissible errors) must be checked if the whole content is really "requirements" and should not be moved to another part dealing with test methods. | OIML must advise new structure. |  |
| 0089  CECIP | 1 | 5.5.1 | Table 6 | te | It should be considered to change the historic mpe as a static value for a certain weighing range into a relative mpe; this approach would take into account the nowadays achieved accuracy of weighing instruments with very small actual scale intervals (having allowed mpe of up to 5000 d today) for which the mpe is not sensible and also one could achieve reasonable mpe for high load balances used in rough environments having difficulties to pass an mpe of one d as it is today… | See proposal of Marc Tettue, METAS from previous revisions | Not agreed. Not within the scope of this revision. |
| 0090  AU | 1 | 5.5.2 |  | ge | There is no definition of “In Service Inspection” nor who carriers out such inspection. |  | Definition of “in service” to be added. |
| 0091  AU | 1 | 5.5.2 |  | ge | Clarify that changed MPEs are for inspection, not verification. | Suggested text:  The maximum permissible errors for in-service inspections shall be no more than twice the maximum permissible errors of the initial verification. | Agreed. |
| 0092  CECIP | 1 | 5.5.2 |  | ed | "The maximum permissible errors in service shall be twice the maximum permissible errors on initial verification (see 10.4.2)."  subsequent verification should also be mentioned | Amend to read:  "The maximum permissible errors in service shall be twice the maximum permissible errors on initial and subsequent verification (see 10.4.2). | Agreed. |
| 0093  FR | 1 | 5.5.3 |  | te | We do not understand why the repeatability test is linked to the accuracy. (= to cumulate a weighing test and a repeatability test). There is already a test for accuracy. | To discuss. | 5.3.3 deleted. |
| 0094  DE | 1 | 5.5.3.2 |  | Te | Rounding error | It should be mentioned here (or a reference to R76-2, 5.4.4 be given) that this is not applicable for testing modules of which the error limits have to be multiplied by “pi”. With pi = 0.5, the error limit is 0.25 e only. Indications with d = 0.2 e add a rounding error of at least 0.1 e. It might even be questioned whether 0.2 e is sufficient for complete instruments and weighing modules. (The rounding error could still be 0.1 e, so an instrument could slightly exceed the error limits without that being noted.) | To be discussed.  - Change “eliminated” to “taken into account”?  - Is 0.2 *e* sufficient? |
| 0095  DE | 1 | 5.5.3.3 |  | Te | From the statement here it must be concluded that calculated net values are not subject to this recommendation because the error limits do not apply. Then, however, it must be questioned whether it is allowed to print solely net values (calculated from pre-set tare and gross) with instruments for direct sales to the public and weigh-price labellers. (See 6.9.3, first dot) |  | No reason to make an exception for preset tare. 5.5.3.3 deleted and clarification added to 5.5.1. |
| 0096  FR | 1 | 5.5.5 |  | ge | The text from the note is not a requirement but a testing procedure. | Please delete “*when the instrument is tested according to 5.5.5.1-5.5.5.4*” and move the text from the note to the end to the part on the eccentricity test. | Moved to R 76-2 and combined with existing text |
| 0097  UK | 1 | 5.5.6 |  | te | shall be zero between digital displaying and printing devices – does this not contradict the stable equilibrium requirement in 6.6.2 first bullet point? |  | 6.6.2 states what is meant by stable equilibrium, it does not allow a difference between indicated and printed values. |
| 0098  FR | 1 | 5.6 |  | ge | The part does not deal with the metrological requirements of the instrument but with testing procedure. | Move this part to part 2. | Agreed in principle, relevant text to be moved to R 76-2. |
| 0099  DE | 1 | 5.6 |  | T | Does the information really cover requirements or is this information regarding testing of instruments with specific characteristics. | This information cover the requirements regarding the uncertainties of reference values AND its realisation possibilities. Reformulate the requirement and cover the resulting realisations into part 2 or elsewhere. | See comment 0098 |
| 0100  CECIP | 1 | 5.6 |  | ed | Chapter 5.6 must be checked if the whole content is really "requirements" and should not be moved to another part dealing with test methods. | OIML must advise new structure | See comment 0098 |
| 0101  FR | 1 | 5.6.1 |  | te | How to manage weighing standard which doesn’t meet with OIM R111? | To discuss. | Text moved to R 76-2 and amended. “In principle” covers non R 111 weights. |
| 0102  FR | 1 | 5.7 |  | te | If non-self indicating instruments are maintained (see part 8), why is the R76:2006, 3.8.1 not maintained? | Please clarify and keep R76:2006, 3.8.1 in CD1 5.7, if necessary. | It had been moved to 8, which has now been restructured. |
| 0103  FR | 1 | 5.7 |  | ge | The part does not deal with the metrological requirements of the instrument but with how to test the instrument. | Move to part 2. | Reworded to make them requirements. |
| 0104  DE | 1 | 5.7 |  | T | What exactly is the requirement behind the given procedures | Differentiate the requirement and the testing procedure | See comment 0103. |
| 0105  CECIP | 1 | 5.7.2 |  | ed | "An additional load equal to 1.4 times the actual scale interval,"  Typo. Must be the verification scale interval |  | Not accepted. This was in R 76:2006. |
| 0106  DE | 1 | 5.8.1 |  | T | The requirements are described before “a)” – all following information cover guidance, possible realisations | Differentiate between requirements – allowed deviations under tilting – and realisation or testing procedures. | Not accepted. a) to d) are requirements. |
| 0107  FR | 1 | 5.8.1.1 |  | ge | This part mixes requirements and testing procedures |  | See comment 0106. |
| 0108  CECIP | 1 | 5.8.1.1 | 2nd bullet point | ed | “at self indication capacity” is wrong… | … it should be changed with “at the load close to the lowest load where the mpe changes”, see also Part 2, 6.1 | Agreed. Text from R 76-2, 6.1 used. |
| 0109  CECIP | 1 | 5.8.1.1 | Item d) | Tech. | The term “open locations” is not very precise. Therefore this could lead to misinterpretation for mobile scales with functions for easy levelling (e.g. mobile bench scales with easy to use levelling device & indicator).  Such mobile devices may also fit under a). | Add “For mobile instruments fitted with easy to use levelling devices and level indicator, a) applies.” | To be discussed with other requirements for mobile instruments. |
| 0110  DE | 1 | 5.8.1.1 c) + d) |  | Te | „c) If neither a) nor b) applies, the limiting value of tilting is 50/1000 in any direction.”  d) Mobile instruments intended to be used outside in open locations … in the case of a Cardanic suspension, c) applies …” | The “50/1000”, i.e., 5% refers to instruments without any means to switch off the indication at tilting above the limit or a mechanical compensation (cardanic suspension - gimbal mounted). A tilting of more than 5%, however, very likely occurs in open streets. For that reason, the European WELMEC decided to require at least a tilting of 10%. This is also a requirement on vehicle mounted instruments in R51/2006. Even a cardanic suspension shall guarantee that a tilting of 10% does not lead to exceeding the error limits. The differentiation between systems equipped with a tilt sensor and gimbal mounted systems does not make sense and leads to an unequal metrological treatment of the instruments. Moreover, instruments with tilt sensors would switch off the indication at too high levels of tilting while gimbal mounted load receptors would most probably touch the base frame of the instrument without that being obvious, while that would lead to excessive errors. | Agreed, but will also be discussed with other requirements for mobile instruments. |
| 0111  DE | 1 | 5.8.2.1 |  | Ed | Headline reads: “modulesmperature limits” | Should be “prescribed temperature limits” | Agreed. |
| 0112  AT | 1 | 5.8.2.1 | Title | ed | Spelling: Title "modulesmperature limits" | "Temperature limits" | See comment 0111. |
| 0113  DE | 1 | 5.8.4.1 |  | Te | Creep | In contrast to R76, R60 requires that this test need not only be performed at 20 °C but also at the extreme temperatures of the temperature range. This requirement has been established because the creep at these temperatures may significantly differ from the creep at 20 °C. Therefore, it would be consequent to perform a creep test at the limit temperatures of the temperature range (e.g., -10 °C and 40 °C).  However, R76 applies smaller error limits (0.5 e) than R60 (0.7 x mpe, that is a maximum of 1.05 e depending on the load). This may question whether load cells tested as per R60 can be used in instruments as per R76 without any further test. | To be discussed. |
| 0114  CECIP | 1 | 5.8.4.1 |  | te | If “creep” means the same as [VIM3] 4.21 instrumental drift, then please amend | “creep (instrumental drift)” | VIM definition will be added to 3. |
| 0115  CECIP | 1 | 5.8.4.1 |  | te | It is unclear what “and the indication observed during the following 30 minutes” means. Is it meant that the indication is observed CONTINUOUSLY, or can this been done e.g. EVERY MINUTE?  Same question regarding “observed during the following four hours”: Continuously observed?? | Make text clearer. | Every five minutes for the first 30 minutes, and every hour. See clarified text. |
| 0116  UK | 1 | 5.8.5 | note | ed | should not be less than 10 kg – is this a requirement in a note? I do not think this is specified anywhere else. | Make it either a requirement or add ‘usually’? | Agreed. |
| 0117  FR | 1 | 5.9. |  | ge | All this part mixes requirements and testing procedure. It is necessary to separate requirements from testing procedures (part 2). |  | Testing clauses will be moved to R 76-2. |
| 0118  DE | 1 | 5.9.2.1 |  | Ed | Apportioning of errors  The equation *p*1 + *p*2 + *p*3 + ... ≤ 1 is wrong. (Squares are missing.) | Correct equation:  *p*12 + *p*22 + *p*32 + ... ≤ 1 | Agreed. |
| 0119  AT | 1 | 5.9.2.1 | Line 6 | ed | Indices in “p2+p2+p2+ ... = 1” appear to be wrong. | Change to: “p1+p2+p3+ ... = 1” | Agreed. |
| 0120  AT | 1 | 5.9.2.1 | Table 7 |  | Typing: "warm- up" | Remove space: "warm-up" | Agreed. |
| 0121  CECIP | 1 | 5.9.2.1 | Table 7 | te | Add column with sum of squares for illustration of the result.  Clarify in the Table caption that these are examples (if). | Add column with sum of squares for illustration of the result.  Clarify in the Table caption that these are examples (if). | Not agreed.  Agreed. |
| 0122  DE | 1 | 5.9.2.2 |  | Ed | Lasts paragraph. “… in 6.2and …”. No blank in between “6.2” and “and”. |  | Agreed. |
| 0123  CECIP | 1 | 5.9.2.2 | Headline | ed | More clarity | Tests for Modules | To be restructured. |
| 0124  AT | 1 | 5.9.2.2 | Last line |  | Typing: "6.2and" | Add space: "6.2 and" | Agreed. |
| 0125  CECIP | 1 | 5.9.2.3 | Headline | ed | More clarity | Compatibility of Modules | To be restructured. |
| 0126  CECIP | 1 | 5.9.2.3 | Headline | ed | Misleading use of the term “manufacturer” | The term manufacturer is not defined in the recommendation. It would be helpful to include as part of the terms and definitions. | Appropriate definition will be included and manufacturer/applicant usage harmonised. |
| 0127  AU | 1 | 5.9.2.4 |  | te | The last paragraph, to include endurance (this test often not carried out) eg. To conduct tests that have not been performed such as tilting | eg. To conduct tests that have not been performed such as tilting or endurance. | Agreed. |
| 0128  DE | 1 | 5.9.2.4 |  | Ed | First dot: It must be questioned whether that can be kept as it is. See our remarks on 5.8.4.1 “Creep”! |  | See comment 0113. |
| 0129  UK | 1 | 5.9.2.4 |  | ed | replace SH or CH tested with SH or CH marked |  | Agreed |
| 0130  UK | 1 | 5.9.3 |  | ed | why recipient? The only other instance is simple recipient printer. | Propose to delete recipient? | Changed to “simple”. |
| 0131  DE | 1 | 5.9.4.2 |  | Te | Variants within a family to be tested | The procedures described here do not consider the real signal levels Δu / e within a weighing instrument. A weighing instrument may have a larger verification scale interval, however, the signal per verification scale interval may be smaller than that of the instrument having the smaller verification scale interval. This depends on the load cell and optional reduction ratios (“R”). This is especially relevant for selection of EUTs when testing for EMC. | Agreed. e changed to microvolts per e. |
| 0132  DE | 1 | 5.9.4.6 |  | T | Is the **number** of instrument functions, indications, connected peripheral devices, implemented digital devices and analogue/digital interfaces really an important information regarding the type? | Check and change. | Agreed. |
| 0133  DE | 1 | 5.9.4.6 |  | Te | Summary of relevant metrological characteristics  3rd dot | “lowest input signal, μV/*e* (when using analog strain gauge load cells)”  This may be relevant with other technologies as well. Load cells using electromagnetic force compensation may feed the A-to-D converter with a voltage for which a Δumin / e could be defined. | Agreed. |
| 0134  DE | 1 | 5.9.4.6 |  | Ed | Table 9: Dots are missing between extreme values in rows 4 and 5. |  | Agreed. |
| 0135  AT | 1 | 5.9.4.6 | Table 9 | ed | Typing: Entries e and d of family 1: “…” missing between mass values | Change to “0.01 g … 0.2 g“, and “0.001 g … 0.2 g“. | Agreed. |
| 0136  FR | 1 | 5.X |  | te | There are no metrological requirements for modules in this proposal. It is necessary to move the metrological requirements from annexes of R76:2006 for each module in this part. | Move the metrological requirements from annexes for each module in this part. | To be considered as part of restructuring 5.9. |
| 0137  DE | 1 | 6 |  | Ed | Missing internal cross-references still need to be added, see for example comment in 6.1.2.4. The software requirements are no longer in 6.5.2.2, but in 6.2 and 6.3. | Update/correct all internal cross-references. | Agreed. |
| 0138  DE | 1 | 6.1.1.3 |  | Te | Suitability for verification  “In particular, load receptors shall be such that the standard weight can be deposited on them easily and in total safety. If weights cannot be placed, an additional support may be required.” | This paragraph excludes substitutional procedures which are extremely important for verification of vehicle mounted instruments having a tank / vessel as their load receptor. Normally, for constructional reasons, several tons of load cannot not be applied on the tank. (Simply because the material of the tank wall is too weak.) A suitable substitutional procedure could be using a truck scale as reference instrument of which the error is known (e.g., after calibration). The road tanker is driven onto the load receptor and its load is tared. Afterwards, the tank is being filled with e.g., water and the indications of the truck scale and the vehicle mounted scale are compared.  Moreover, we should keep in mind that substitution of standard weights is allowed up to 80% of Max of the instrument (See 5.6.3.). Taking that into account, other alternative methods should be allowed as well, e.g., using a reference weighing instrument. | Agreed. Reference to 5.6.3 added. |
| 0139  FR | 1 | 6.1.2.4 |  | te | The reference to CRC16 needs to be updated. | To discuss. | Amended to CRC32 as in 6.3.5.3. |
| 0140  DE | 1 | 6.1.2.4 |  | Ed | B6-2 does not specify the text element “acceptable solution”. From the perspective of B6-2-, these should be phrased as examples. | Rephrase and reformat all “acceptable solutions” as examples. | Not accepted, The list of text elements in B 6-2 is not exhaustive. |
| 0141  CECIP | 1 | 6.1.2.4 |  | te | 3 instances of “authorized person”, but this term is not defned | Define “authorized person” in terms and definition section | Need for a definition to be considered by software subgroup. |
| 0142  UK | 1 | 6.1.2.4 | a), note | ed | ‘without the intervention of an authorized person’ | should this be evidence of intervention (as per note in c))? | Not agreed. |
| 0143  D | 1 | 6.1.3 |  | T |  | Include the link to OIML D11. | Not agreed. D 11 gives options to PGs for elements to be included in Recommendations rather than referenced. |
| 0144  DE | 1 | 6.1.4 |  | Ed / Te | Acting upon significant faults  “When a significant fault has been detected, the instrument shall either be made inoperative automatically or a visual or audible indication shall be provided automatically and shall continue until such time as the user takes action or the fault disappears.” | In case a manufacturer decides to choose option a) [“first a)”] of 6.1.3, the instrument need not have a device that detects significant faults. However, when it does not have that device, section 6.1.4 cannot be met. The hierarchical (numerical) order shows that 6.1.4 shall be considered completely independently from 6.1.3. Otherwise, it would be a sub-paragraph of 6.1.3. Thus, independent of the choice of option a) of 6.1.3 the use of devices detecting significant faults would be obligatory. Obviously, these consequences had not been thoroughly considered when drawing up these paragraphs. | Not agreed. 6.1.4 applies “when a significant fault has been detected” which is not possible under 6.1.3 a) as significant faults do not occur. |
| 0145  AU | 1 | 6.1.5.3 |  | ed | typo | Class 1 instruments excepted | Agreed. |
| 0146  DE | 1 | 6.1.5.3 |  | Ed | “..., cltesting ass I instruments...” | Delete “testing” | See comment 0145. |
| 0147  CA | 1 | 6.1.5.3 |  | ed | Spelling error: “6.1.5.3 Electronic instruments, cltesting ass I instruments excepted, shall be subjected to the span stability test specified in 6.1.6.4.” | Propose to change to : : “6.1.5.3 Electronic instruments, class I instruments excepted, shall be subjected to the span stability test specified in 6.1.6.4.” | See comment 0145. |
| 0148  AT | 1 | 6.1.5.3 | Line 1 |  | Typing: "cltesting ass I instruments" | Change to "class I instruments" | See comment 0145. |
| 0149  AU | 1 | 6.1.6.2 |  | ed | Format: The first and second paragraphs should be one paragraph. |  | Agreed. |
| 0150  DE | 1 | 6.1.6.2 |  | Ed | The two paragraphs should only be one. |  | See comment 0149. |
| 0151  CA | 1 | 6.1.6.2 | paragraph1 | ed | Paragraph contains line spacing error on line 3. | Remove extra space between lines in original document | See comment 0149. |
| 0152  DE | 1 | 6.2.1 |  | Ed | As marked in 1CD, this subclause does not belong in clause 6.2 on software and should be moved to a different clause on hardware requirements. | Move the subclause to 6.1 “General construction requirements”. | Moved to 6.1.7. |
| 0153  DE | 1 | 6.2.1 |  | T | The complete chapter 6.2.1 is a mixture of guidance information and test procedure, but no technical requirement. | Move the chapter to part 2 or elsewhere. | Text on testing to be moved to R 76-2. |
| 0154  CECIP | 1 | 6.2.1 | 11 No. 3 | ed | “PC: According to 5.10.2” refers to non-existing chapter | Please update reference | Agreed. Cross-references will be updated. |
| 0155  CECIP | 1 | 6.2.1 | 11 No. 5 | ed | “PC: According to 5.10.3” refers to non-existing chapter | Please update reference | See comment 0154. |
| 0156  JP5 | 1 | 6.2.1 | **Table 11** | ed | Please make a correction. | Correct “Annex C” to “R76-2, 9” | Agreed. |
| 0157  JP6 | 1 | 6.2.1 | **Table 11** | ed | Please make a correction. | Correct “11.2.1.2” to “10.2.1.2” | Agreed but moved to column heading. |
| 0158  CECIP | 1 | 6.2.1 | Table 11 | Ed. | Annex C is mentioned in table 11. Wrong link. | Refer to R76-2 chapter 9 | Agreed. |
| 0159  CECIP | 1 | 6.2.1 | Table 11 | Tech | For configuration under no. 4 it is possible to use the power supply from the PC system for the ADC provided that the ADC have its own input wiring to ensure a proper power supply from any power source. This would require that the ADC was tested standalone concerning its power supply. | Add a remark to no. 4: “PC power supply may be used if ADC was tested for use with independent power supply”. | Not agreed, covered by 3. |
| 0160  CA | 1 | 6.2.1 | title | ed | Title written as “6.2.1 Hardware requirements for weighing instruments containing universal devices | Propose to reword title to better reflect that hardware is part of the universal device that is used as weighing instrument: “Hardware requirements for universal devices used as weighing instruments” | Agreed. Changed to “.. universal devices incorporating weighing instruments”. |
| 0161  DE | 1 | 6.2.2 | 1st paragraph | Ed | Reference to clause “XXX” needs to be replaced. | Reference clause 3.2.8.6 (definition of software identification) instead. | Agreed. |
| 0162  CECIP | 1 | 6.2.2 | Bullet points | te | The relationship between the three bullet points is not unambiguous. | Add “or” after the first bullet point. | Not agreed. “or” is used only before the last item in a list. |
| 0163  CECIP | 1 | 6.2.2 | Last indent | ed | Mistyping: “Software idenficiation” | Correct to “Software identification” | Agreed. |
| 0164  JP7 | 1 | 6.2.4.3  6.2.4.4 |  | ed | Please make a correction. | Correct “11.2.1” to “10.2.1.2” | Agreed. |
| 0165  DE | 1 | 6.2.7.2  6.3.2.1.1  6.3.2.1.2  6.3.2.2.1  6.3.2.2.2  6.3.2.2.3  6.3.4.16.3.7 |  | Ed | Error messages (Error! Reference source not found.) need to be deleted | Delete error messages after checking if current references are correct | Agreed. These have been corrected. |
| 0166  CA | 1 | 6.2.7.2 | Paragraph 1 | ed | Paragraph contains link error: “see **Error! Reference source not found**.11.2.1..” | Correct reference or re-establish link | See comment 0165. |
| 0167  CECIP | 1 | 6.3 + others |  | Ed. | Error! Reference source not found. | Check references. | See comment 0165. |
| 0168  DE | 1 | 6.3 and also 6.2 |  | Ge/t | Chapter 6.3 mainly corresponds to chapter 6.2 of OIML D31 (which is regularly revised). It should be avoided to repeat the information given in D31. | A link to the chapters given in the specific version of OIML D31 that will be valid to the point of finalisation of R76 including statements where other solutions and/or requirements are to be specified for NAWIs.  Furthermore, several of the included links are not fitting. | Software subgroup to be consulted on best approach to link to D 31. |
| 0169  CA | 1 | 6.3.2.1.1 | Paragraph 1 | ed | Paragraph contains link error: “see **Error! Reference source not found**.11.2.1..” | Correct reference or re-establish link | See comment 0165. |
| 0170  CA | 1 | 6.3.2.1.2 | See note | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | See comment 0165. |
| 0171  DE | 1 | 6.3.2.1.3 |  | Ed | Reference to clause “0” needs to be corrected. | Change reference to 6.2.4.2 “Evidence of an intervention”. | See comment 0165. |
| 0172  JP8 | 1 | 6.3.2.1.3 |  | ed | There is no reference in "see 0" | Please specify the correct reference. | See comment 0165. |
| 0173  CECIP | 1 | 6.3.2.1.3 | End of paragraph | ed | Reference “…., see 0.” is unclear | Add correct reference. | See comment 0165. |
| 0174  DE | 1 | 6.3.2.1.7 |  | Te | As indicated by comment ME52 in 1CD, the PG still needs to decide which physical components of a non-automatic weighing instrument shall always be on site. | Decide on a list of components and add this list as an exception in 6.3.2.1.7. | Discuss with software subgroup. |
| 0175  CA | 1 | 6.3.2.2.1 | Para 3 | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | See comment 0165. |
| 0176  JP9 | 1 | 6.3.2.2.2 |  | ed | The reference number is missing. | Add underlined reference:  ***Acceptable solution:***  *In the example described in , the software interface consists of the procedures in the library and their parameters and return values. The configuration of the operating system (see 6.3.6.6.1) ensures that the legally relevant software part cannot be influenced except through the defined procedures.* | See comment 0165. |
| 0177  JP10 | 1 | 6.3.2.2.2 |  | ed | Please make a correction. | Correct “11.2.1” to “10.2.1.2” | Agreed. |
| 0178  DE | 1 | 6.3.2.2.2 | Acc. solution | Ed | The acceptable solution seems to reference to clauses but does not give their respective clause numbers. | Change to “In the example describe in 6.3.2.2.1…The configuration of the operating system (see 6.3.6)…” | Agreed. |
| 0179  AT | 1 | 6.3.2.2.2 | Line 2 from bottom | ed | "The configuration of the operating system (see ) ensures that …": Reference in (see ) is missing. | - | See comment 0178. |
| 0180  AT | 1 | 6.3.2.2.2 | Line 3 from bottom | ed | "In the example described in , the software interface consists of …": Part of the sentence is missing. | - | See comment 0178. |
| 0181  AT | 1 | 6.3.2.2.2 | Note 2 | ed | Missing period at end of last sentence of Note 2. | Add “.” | Agreed. |
| 0182  CA | 1 | 6.3.2.2.2 | Para 1 | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | See comment 0165. |
| 0183  CA | 1 | 6.3.2.2.3 |  | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | See comment 0165. |
| 0184  CA | 1 | 6.3.4.1 |  | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | See comment 0165. |
| 0185  JP11 | 1 | 6.3.4.4 |  | ed | There is no reference in "see 6.2.6.1" | Please specify the correct reference. | See comment 0165. |
| 0186  CECIP | 1 | 6.3.4.5 |  | te | This seems to prevent a ‘circular’ (FIFO) use of DSD | Allow circular use of DSD: when it is full, the oldest data can be overwritten by the new ones, provided that the life span of the data is enough for the application | Consult software subgroup for wording. |
| 0187  JP12 | 1 | 6.3.5 |  | ed | Modify the title of 6.3.5 (see R76-2 8.3.3) | Add underlined sentences:  ***6.3.5 Transmission via communication lines (internet, dial up modem, etc.)*** | Agreed but put into paragraph text. |
| 0188  JP13 | 1 | 6.3.5.1 |  | ed | Please make a correction. | Correct "6.3.5.2 to" to "6.3.5.2 to 6.3.5.4" | Agreed. |
| 0189  JP14 | 1 | 6.3.7 |  | ed | Please make a correction. | Correct "6.3.6.2 and 6.3.6.3" to "6.3.7.1 and 6.3.7.2"  and "OIML D 34:2019 [12]" to "D34:2019 [16]" | Agreed. |
| 0190  CA | 1 | 6.3.7 | Note 1 | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Agreed. |
| 0191  DE | 1 | 6.3.7.1  6.3.7.2.1 |  | Ed | Missing internal cross-references still need to be added | Update internal cross-references | Agreed. |
| 0192  CA | 1 | 6.3.7.1 | Para 1 | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Agreed. |
| 0193  AT | 1 | 6.3.7.1 | Several | ed | Here and 6.3 in general, 6.1.5, etc.: While most paragraphs in the document are justified, some are aligned left. | Justify paragraphs | Agreed. Style was left aligned. |
| 0194  AU | 1 | 6.3.7.2 |  | ed | 6.3.7.2 Traced Update The title of this section is on the page before the rest of the content of this section which is on page 59. Adjust to have title and section content on same page. |  | Problem with PDF only. |
| 0195  CA | 1 | 6.3.7.2 |  |  | TRACED UPDATES | QUESTION FOR MANAGEMENT POLICY | Comment not understood. |
| 0196  AT | 1 | 6.3.7.2 | Several | ed | Typing: “Traced Update / traced update / Traced update”: Capitalization varies in the paragraphs | Uniform capitalization; here and in the corresponding Fig. | Agreed. |
| 0197  CA | 1 | 6.3.7.2.1 | Para 1 | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Agreed. |
| 0198  AT | 1 | 6.3.7.2.9 | Figure 1 | ed | "Figure 1 – Software update procedure":  redundant numbering: Figure Number 1 is used both for Figures on page 13 and page 60. | Correct Figure numbers and update the corresponding references. | Agreed. |
| 0199  AT | 1 | 6.3.7.2.9 | Figure 1 | ed | Within Figure: References to clauses are outdated: "Traced Update (6.3.6.3)", "Verified Update (6.3.6.2)", "... by a person at place (See 6.3.6) ". | Change to "Traced Update (6.3.7.2)", "Verified Update (6.3.7.1) ". Also, some arrows could be formatted in the flowchart so that they won’t point towards each other. | Agreed |
| 0200  JP15 | 1 | 6.3.7.2.9 | **Figure1** | ed | Please make a correction. | Correct "Figure 1" to "Figure 5" | Agreed. |
| 0201  DE | 1 | 6.3.8.1 |  | Ed | References to verification are incorrect, as the requirements have been moved to part 5 | Update of references to verification | Cross-references are to documentation and these have been corrected. |
| 0202  CA | 1 | 6.3.8.1 | Note | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Agreed. |
| 0203  CA | 1 | 6.3.8.3 |  | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Consult software subgroup. |
| 0204  CA | 1 | 6.3.8.4.3 |  | ed | Same type of error as 6.3.2.1.1 | Correct reference or re-establish link | Agreed. |
| 0205  CECIP | 1 | 6.4.1 |  | te | “inaccuracy” is not defined | Proposal not possible since unclear what is meant by  “the overall inaccuracy of reading of an analog indicating device” | See comment 0049. |
| 0206  CECIP | 1 | 6.4.2.2 |  | te | “the decimal sign shall maintain its position in the  Display."  But to our understanding, the example given below this statement does not follow this requirement |  | Not agreed. The examples comply with the requirement. |
| 0207  CECIP | 1 | 6.4.2.2 |  | ed | “Example 1” is not referenced in the text | Add reference to “Example 1” in the text | Neither example is specifically referenced in the text. The paragraph introducing the examples is sufficient. |
| 0208  CECIP | 1 | 6.4.2.2 |  | ed | 4 Result columns should separated by 3 "or” | Add “or” | Not agreed. Table format is acceptable. |
| 0209  CA | 1 | 6.4.2.2 |  | te | The unit of mass shall be chosen so that weight values have not more than one non-significant zero to the right. For values with decimal sign, the non-significant zero is allowed only in the third position after the decimal sign. | Canada does not allow non-significant zeroes to the right of decimal sign in any cases and wishes to discuss if this clause should be modified. Canada’s rational for this is that it miss represents the indication to a higher level of precision than is approved and is misleading. Eg device with approved verification interval of 50 g can only be displayed as 0.05 kg | To be discussed in PG. |
| 0210  AT | 1 | 6.4.2.2 | Example 1 and 2 | ed | Typing: Maxi, e1, e2: Some indices i, 1 and 2 appear to be in smaller font, but not formatted as subscript. | Change to subscript | Agreed. |
| 0211  DE | 1 | 6.4.3 |  | Ed | The title is confusing. | Re-insert former title “limits of indication”. | Agreed. |
| 0212  CECIP | 1 | 6.4.3 |  |  | "It is also possible that negative values down to - 20 d are displayed."  Must be -20e as already corrected in the EN45501: 2015 | "It is also possible that negative values down to - 20 e are displayed." | Agreed. |
| 0213  CECIP | 1 | 6.4.3 |  | ed | “provided these values cannot be transmitted,  printed or used for a price calculation.”  If this is a separate requirement, then this should be written in a seprate full sentence or paragraph | Separate requirement. | Not a separate requirement. Text clarified. |
| 0214  UK | 1 | 6.4.4 |  | ed | Approximate displaying device is not defined in 3. |  | See comment 0215. |
| 0215  CECIP | 1 | 6.4.4 |  | te | “Approximate displaying device” Definition missing | Add definition for Approximate displaying device | Consult CECIP on definition. |
| 0216  AT | 1 | 6.4.5 | Line 1 | ed | Typing: "self- indication" | Remove space: "self-indication" | Agreed. |
| 0217  DE | 1 | 6.4.5 | a) | Ed | a) reads “The scale interval of extension…”  As “scale interval” is defined (3.3.2.2 and 3.3.2.3), it may not be used here. This is even more obvious when you consider that this “scale interval” should be equal to the whole self-indicating weighing range. | Delete “scale”. | Agreed. Changed to “extension interval”. |
| 0218  JP16 | 1 | 6.5.1 | Acceptable solutions:b) | ed | Please make a correction. | Correct "Figure 5" to "Figure 6" for b) **Acceptable solutions** | Agreed. |
| 0004  JP17 |  | 6.5.1 | **Figure 5** | ed | Please make a correction | Correct “Figure 5" to "Figure 6" | See comment 0218. |
| 0219  CECIP | 1 | 6.6.2 |  | te | “During continuous or temporary disturbance of the equilibrium, ...”  This text is not in line with the above definition. It should be replaced by referencing the above:  "If not in stable equilibirum, ..." | Replace by  "If not in stable equilibirum, ..." | Agreed. |
| 0220  CECIP | 1 | 6.6.3 |  | te | 5 seconds can be few during initial verification tests | Allow more than 5 seconds, provided that this special state is clearly indicated by the instrument | Not agreed. Option of first bullet could be used. |
| 0221  CECIP | 1 | 6.6.3 |  | te | “Extended indicating device”  Definition missing in the document | Add definition of “Exteded indicating device” | 3.2.6 defines “extended displaying device”. Displaying vs indicating to be harmonised after PG discussion. |
| 0222  CECIP | 1 | 6.6.4 |  | te | “quantities other than weight values...”  Isn't this in contradiction to section 4.4 (Units of measurement) | Clarify units of measurement and 6.6.4 | This is not in conflict with 4.4. |
| 0223  AU | 1 | 6.7.1 |  | ed | Incorrect heading | Maximum effect | Agreed. |
| 0224  DE | 1 | 6.7.1 |  | Ed | The title must be “Maximum effect”. | Replace “accuracy” with “Maximum effect”. | Se comment 0223. |
| 0225  UK | 1 | 6.7.1 |  | ed | title should be Maximum effect, not accuracy |  | See comment 0223. |
| 0226  CECIP | 1 | 6.7.1 |  | ed | “this does not affect” | Clearer wording:  “this does not apply to...” | Agreed. |
| 0227  CECIP | 1 | 6.7.1 |  | ed | “not.... except...”  Unclear and ambiguous language | .Split in two separate sentences, the second to read:  “For class IIII, these requirements only apply if the instrument is used for commercial transactions.” | See comment 0226. |
| 0228  AT | 1 | 6.7.1 | Title | ed | Consecutive subclauses with identical titles “accuracy” and “Accuracy” (6.7.2) | Combine to a single clause | Not agreed. Title of 6.7.1 has been changed to “Maximum effect”. |
| 0229  CA | 1 | 6.7.1 | title | ed | The title of this section was renamed “accuracy” . In the previous edition of R76 is was labelled “Maximum effect” | Paragraph does not list an accuracy of the ser-setting or zero-tracking device and should be returned to original title of “Maximum effect” | See comment 0223. |
| 0230  UK | 1 | 6.7.5 |  | ed | add ‘or preset tare’ after tare for clarity? | Clarify the meaning of tare adding device. | Not agreed as zero will not be indicated after a preset tare has been selected. |
| 0231  CECIP | 1 | 6.7.7 |  | ed | Unclear if the bullets are “or” or “and” connected | Add “or” or “and”. | Not agreed. In English, lists only have “or” or the “and” before the last item. The same condition is understood to apply to all items in the list. |
| 0232  CECIP | 1 | 6.7.7 | 3rd bullet | te | Unclear what “corrections” means | Clarify | Clarified. |
| 0233  CECIP | 1 | 6.7.7 | 3rd bullet | te | Unclear what the difference of the 3rd bullet to the 2nd bullet is | Clarify | Not agreed. Stable equilibrium and zero-tracking are different. |
| 0248  DE | 1 | 6.8.3 | 2nd dot | Ed | “On a multi-interval instrument…”: As located here, it seems that this applies to mechanical instruments (with digital indication) only. However, this is not the case. So, that sentence should be located separately at the end of the sub-clause. | As with the 2006 version move that sentence back to the end of the sub-clause without being a “dot”. | Agreed. |
| 0249  CECIP | 1 | 6.8.3 | 2nd bullet point | ed | Is that sentence/exception needed? +-0.25e should be applicable to all devices  (see 6,7,2) | Delete this point | Not agreed, as in R 76:2006. |
| 0250  AU | 1 | 6.8.3 | 3rd para | ed | Should be a new paragraph for multi-interval instrument or as a note, this is not relevant to mechanical instrument. |  | See comment 0248. |
| 0234  CECIP | 1 | 6.8.11 |  | te | Is this only applicable to PRIMARY INDICATIONs? (This would make sense, but is unclear, should be made clearer!). Introduction sentence to 6 can be interpreted as chapter 6 only applies to PRIMARY INDICATIONS. | clarify | No clarification needed here. See definitions in 3.1.3.1 and 3.1.3.2. |
| 0235  CECIP | 1 | 6.8.11 | - | Ed. | Currently only printing below minimum load is prohibited for price-labelling devices (see chapter 7.4). There should be a general requirement how to handle this for printing / registration of weighing result for all kind of instruments. | Find a general solution. | Please propose a solution. |
| 0236  AT | 1 | 6.8.11 | Line 4 | ed | Typing: "semi- automatic" | Remove space: "semi-automatic" | Agreed. |
| 0237  CECIP | 1 | 6.8.12 |  | ed | the examples would be much easier to follow and understand, if the numeric values are the same in all examples. | Use the same numeric values for all examples | The figures are as in R 76:2006. Please make a proposal if you feel they are not clear. |
| 0238  CECIP | 1 | 6.8.12 | - | Ed. | Makes reference to 6.7.11 | Reference has to be made to 6.8.11. | Agreed. |
| 0239  DE | 1 | 6.8.12.2 |  | Ed | There is a reference to “6.7.11”, but that sub-clause does not exist. | Change to “6.8.11” | See comment 0238. |
| 0240  AT | 1 | 6.8.12.3 |  | ed | Typing: “Specifications of the instrument: Class III Max” | Add comma: “Specifications of the instrument: Class III, Max” | Agreed. |
| 0241  DE | 1 | 6.8.12.3 |  | Ed | There is a reference to “6.7.11”, but that sub-clause does not exist. | Change to “6.8.11” | See comment 0238. |
| 0242  DE | 1 | 6.8.12.4 |  | Ed | There is a reference to “6.7.11”, but that sub-clause does not exist. | Change to “6.8.11” | See comment 0238. |
| 0243  DE | 1 | 6.8.12.4 |  | Ed | “Total loading, internal value = 14.561 kg”  The figure is not correct. | Change “14.561” to “266.219” as in 2006 version. | Agreed. |
| 0244  AT | 1 | 6.8.12.4 | Line 11 | ed | Typing: "53.500 kg T2)4)" | Change superscript T to normal text | Agreed. |
| 0245  DE | 1 | 6.8.12.5 |  | Ed | There is a reference to “6.7.11”, but that sub-clause does not exist. | Change to “6.8.11” | See comment 0238. |
| 0246  DE | 1 | 6.8.12.6 |  | Ed | There is transmission mistake in line “internal calculation: “13.380 kg – 3.818 kg…” | Change “3.818 kg” to “3.814 kg” | Agreed. |
| 0247  DE | 1 | 6.8.12.6 |  | Ed | There is a reference to “6.7.11”, but that sub-clause does not exist. | Change to “6.8.11” | See comment 0238. |
| 0251  CECIP | 1 | 6.9.3 |  | te | “the “NET” symbol shall disappear”  This is in contradiction to the "indicated on the instrument". it should read "the visible indication shall disappear" | "the visible indication shall disappear" | Agreed. |
| 0252  CECIP | 1 | 6.13 |  | te | “Devices for selection (or switching) between various load receptors and/or load transmitting devices and various load measuring devices”  Wrong language/wrong brackets: selection ... between various...??? | Improve language for clarity | Agreed. |
| 0253  CECIP | 1 | 6.14 |  | ed | “Plus and minus” comparator instruments  Avoid unclear language and use of quotation marks | Use clear language and defined terms | Consider adding definition. Please provide proposal. |
| 0254  CECIP | 1 | 6.14 |  | te | Definitino of “comparator instrument” missing | Add definition | See comment 0253. |
| 0255  CECIP | 1 | 6.15 | Par. 7 | Ed. | “Switch-off” condition for “display” is not precise. When switching between different modes (e.g. non-weighing mode) strictly speaking the scale display is in “switched-off” condition. | Example for this condition should mentioned to delimit this requirement from the different mode requirements as in paragraph 1. Does switch-off means power less or stand-by mode or hiding a software controlled primary indication (fading with other applications, e.g. advertisement) | Text clarified. |
| 0256  CECIP | 1 | 6.15 | Par. 7 | Ed. | The requirement to immediately switch back “if the correct zero position has been automatically checked” needs to be described more detailed. | Examples could be:  - automatic switch back from screensaver (while scale is zero and being loaded).  - automatically switch back while scale display is temporary suspended for a limited time from other software via interface command (as long as no change in the weight value occurs) | See comment 0255. |
| 0257  FR | 1 | 6.16 |  | te | There are no technical requirements for modules in this proposal. It is necessary to move the technical requirements from annexes of R76:2006 for each module in this part. | Move the technical requirements from annexes for each module in this part. | Agreed. |
| 0258  DE | 1 | 6.16 |  | t/ge | See comment on 3.2.2 | Integrate the **results of subgroup “Modules of NAWIs”** | Agreed. |
| 0259  CECIP | 1 | 7.1 | Headline |  | 7.1 Instruments for direct sales to the public  A definition for direct sales to the public is missing. The NOTE following causes confusion | Add a definition for "direct sales to the public" in the terms and definitions section and delete the NOTE.    The Blue Guide of the European Commission uses the term "consumer" in such situations. Would it be an option to change all phrases of "direct sales to the public" to "direct sales to the consumer"? To be discussed. | Agreed in principle. To be discussed. |
| 0260  CECIP | 1 | 7.1.1 |  | ed | “On an instrument for direct sales to the public the primary indications are the weighing result and information about correct zero position, tare and preset tare operations. “  Unclear enumeration. | Use bulleted list | Not needed. Comma added for clarification. |
| 0261  AU | 1 | 7.1.10 |  | Te | Tare increase shall not be permitted to prevent the fraud of bring your own container | The action of the tare device does not permit an increase of a value of the tare. | Comment not understood. |
| 0262  AT | 1 | 7.1.3.2 | Line 6 | ed | Typing: "the tare value is indicated with a “–”sign " | Add space between "“-“" and "sign" | Agreed. |
| 0263  UK | 1 | 7.2.1 |  | ed | ‘number, unit price and price to pay for non-weighed articles, prices for non- weighed articles’ | Replace with number, unit price and price to pay for multiple non-weighed articles, prices for single non- weighed articles for clarity? | Agreed. |
| 0264  AT | 1 | 7.2.1 | Line 1 | ed | Typing: "non- weighed articles" | Remove space: "non-weighed articles" | Agreed. |
| 0265  AU | 1 | 7.2.3 |  | te | Rounding could be 1 cent or 5 cents or 10 cents, depending on transaction or label or payment method. | Add a note that the price to pay shall be rounded according to national regulations. | Already covered by 1st sentence of 2nd para. |
| 0266  UK | 1 | 7.2.4 |  | te | Clarify first paragraph: additional functions to what? | Give examples of such functions.  A solution could be to give the customer the choice to print a receipt in such cases, with a clear indication that the transaction, once settled, cannot be disputed in the absence of a receipt? | Clarified. |
| 0267  CECIP | 1 | 7.2.4.1 | Par. 1 | Tech. | For non-weighed article there are also requirements for weighing mode to be functional, e.g. completeness check, internal accounting, order handling, …  A non-weighed article may be accompanied by an weigh values determined by the weighing instrument. In this case the weight values need to marked clearly. | Add “Optional a weight value can be determined and printed provided that the weight values is clearly marked as not the accounted value (e.g. some text or symbol).” | Not accepted. |
| 0268  CECIP | 1 | 7.2.4.4 | 1 | ge | Cancellation | Some acceptable solution both for printed and/or displayed cancellation indication would be desirable. “Appropriate comment” and “clearly differentiated” current texts are not clear and open to discussions. | Not accepted. Current text is clear enough. |
| 0269  NO | 1 | 7.6.3 |  | te | There are NWAI that is installed on something like shopping cart. This is used in grocery for weighing of good that will be delivered to customer at home. The customer is not present at the moment where weighing takes place. These instruments are mobile instrument have same requitement as for mobile instrument. | Add an application of such instrument in a note in same clause. | This type of instrument has been included in the definition of a mobile instrument. |
| 0270  CECIP | 1 | 7.6.3 | - | Ed. | The wording “not intended to be use in open locations” is misleading. Mobile scale like the mentioned ones may also be used outside buildings. For those still the requirements of 7.6.3 can apply. | Remove “intended to be used outside in open locations”. | To be considered in discussion of mobile instruments. |
| 0271  CECIP | 1 | 7.8 | Headline | Ed. | The headline mentions “installed in ships”. – Is this also applicable to weighing instrument “used” in ships (e.g. counter scales, mobile scales,…) | It would be better to use the wording “used” instead of “installed”. | Agreed. |
| 0272  CECIP | 1 | 7.8.1 | - | Tech. | The incorporation of two load cells may be one technical solution. Other technical solutions may shall be also acceptable: e.g. internal calibration weights, double vibrating string load cells, …) | Add “Other technology may be used if fulfilling the following requirements. | Text clarified. |
| 0273  AT | 1 | 7.8.2 | Line 1 | ed | Typing: "±3m/s2" | Add space: "±3 m/s2" | Agreed. |
| 0274  AU | 1 | 7.8.3 |  | te | Tilt of 25% should be close to 14 degrees | No reference to degrees | Agreed. |
| 0275  AU | 1 | 7.8.3 |  | Ed/te | Tilt sensor is subject to temperature, humidity and EMC. To be consistent with clause 7.6.2 | Use of wording in clause 7.6.2 if appropriate. | Comment not understood. |
| 0276  NO | 1 | 7.8.3 |  | te | It must be possible to test the tilt test with lower tilt than 25%. Let the manufacturer decide the limit. | We suggest that the manufacturer shall specify the limit of tilt. Instead of saying 25%. | Lesser values already covered in the first sentence. |
| 0277  NO | 1 | 7.8.4 | Paragraph 3 | te | It must be possible to test the tilt compensation device in dynamic mode with lower tilt than 25%. Let the manufacturer decide the limit. | We suggest that the manufacturer shall specify the limit of tilt. Instead of saying 25%. | Lesser values already covered in 2nd bullet. |
| 0278  CA | 1 | 8.2.1.1 |  |  | Editors comment of changing the “are” and “is” to “shall” . | None. Just a note to say I agree with this statement. | Thank you! |
| 0279  CECIP | 1 | 8.2.1.2 |  | te | “shall produce a visible displacement of the indicating element.”  Both “displacement” and “indicating element” are undefined. Express in defined terms to avoid ambiguity | Proposal:  Shall produce a visible change in indication. | Agreed. |
| 0280  CECIP | 1 | 8.2.1.2 |  | ed | “may be printed with a smaller scale interval.”  "printed with" is unclear. Clearer: "resolved to the smaller scale interval". | "resolved to the smaller scale interval". | This comment is on 6.8.11.  See proposed clarification. |
| 0281  CECIP | 1 | 8.2.1.2 |  | ed | “smaller”  Smaller than what? - unclear | Clarify | See comment 0280. |
| 0282  JP18 | 1 | 8.7.3 | **Figure 6** | ed | Please make a correction. | Correct "Figure 6" to "Figure 7" | Agreed, but this is in 8.10.3. |
| 0283  CECIP | 1 | 8.9.3 |  | ed | Scale interval  Replace by “actual scale interval” | Replace by “actual scale interval” | Agreed. |
| 0284  AT | 1 | 8.9.3 | Line 1 | ed | Typing: "(x = 1, 2, 3...)" | Add ", ": "(x = 1, 2, 3, ...)" | Agreed. |
| 0285  AU | 1 | 9.1.1 |  | te | Max … Min… is kind of ambiguous. It is not clear what … means, eg, Max 6 kg or Max= 6kg or both acceptable. Clause 9.1.4 provides examples but they are just acceptable solutions. |  | It is conventional not to use “=” for Max and Min. |
| 0286  AU | 1 | 9.1.2 |  | te | Suggest adding marking of instrument model number |  | Agreed. Added to 9.1.1. |
| 0287  CECIP | 1 | 9.1.2 | bullet 5 (G), sub-bullet 1 | Ed. | “software identification (compulsory for software-controlled instruments)” is misleading. This is only applicable for instrument not having an digital indication of the software identification. | Add “without digital indication of software identification”. | Not agreed. Covered by 9.1.4 para 3. |
| 0288  CECIP | 1 | 9.1.2 | Very last point | ed | a range should not contain / in the middle. Allow other ways of defining the temp. range | Don’t give a fixed format at all or allow to put it as: x °C ... y °C | Not agreed. |
| 0289  CECIP | 1 | 9.1.4 | b) | Ed | The acceptable solution b) shows a marking in table form for Multi Range instruments. But it is very common to use the form:  Max1/2 20/100 kg  Min1/2 0,2 / 1 kg  e1/2 = 10 / 50 g  This presentation is more compact and can also be used on smaller devices. | Add the presentation in the form:  Max1/2 20/100 kg  Min1/2 0,2 / 1 kg  e1/2 = 10 / 50 g | Figure 7 shows examples, other presentations are possible. |
| 0290  RO | 1 | 9.1.4 | b/7 | ed | Please keep “Figure” | No change | Agreed. |
| 0291  AT | 1 | 9.1.4 | Figure 7 | ed | Typing: "Max 1 000g" | Insert space: "Max 1 000 g" | Agreed. |
| 0292  JP19 | 1 | 9.1.4 | **Figure 7** | ed | Please make a correction. | Correct "Figure 7" to "Figure 8" | Agreed. |
| 0293  CECIP | 1 | 9.1.4 | Figure 7 | ed | Example for a class II instrument with auxiliary indicating device over a partial range is missing.  Caused big troubles in Austria a few years ago. | Amend Figure 7 with a class II instrument with auxiliary indicating device over a partial range. | Please make a proposal for consideration. |
| 0294  CECIP | 1 | 9.1.4 | Figure 7 | te | An example of frequently used instruments which are not explicitly mentioned in the recommendation is missing | add an example of a single range balance with changing value of actual scale interval. Define the name of such instruments (single range instrument with variable scale interval)? | Please make a proposal for consideration. |
| 0295  CECIP | 1 | 9.1.4 | Par. 3, sentence 1 | Ed. | All descriptive markings can alternatively been shown in the display while the weighing instrument is switched on. | Replace sentence 1 of paragraph 3 with: “All descriptive markings can alternatively been shown in the display while the weighing instrument is switched on.” | Agreed. |
| 0296  CA | 1 | 9.1.4 | Part c) | ed | Title is “Fixing” The test describes how the plate will be affixed | Canada suggests replacing this term with “Permanence of marking plate” | Changed to “Securing of marking plate (if applicable)”. |
| 0297  DE | 1 | 9.1.5.1 |  | Ed | Instruments having several load receptors and load measuring devices  “Each load measuring device which is connected or can be connected to two or more ~~one or more~~ load receptors, shall bear the descriptive markings relating to these, with:” | The yellow marked part of the sentence can be deleted because the paragraph exactly deals with instruments having *at least* TWO (“several load receptors”) load receptors or MORE. If several load measuring devices were connected to one load receptor, then, from the metrological point of view, this would mean having not ONE instrument but SEVERAL instruments. | Agreed. |
| 0298  FR | 1 | 10 |  | ge | The scope of the part “metrological controls” shall be clarified. The clauses dealing with subsequent verifications have been removed whereas these verifications are metrological controls. | Please clarify the scope of this part. It could be relevant to keep a part on subsequent verifications in part 1 (without details) and to develop the verifications in part 5. | Reference to part 5 added to 10.1. |
| 0299  DE | 1 | 10.2.1.2 |  | Ed | Descriptive documents  Table, item 10  Error message in the text: „**Error! Reference source not found.”** |  | Reference corrected. |
| 0300  AT | 1 | 10.2.1.2 | Table | ed | Item “5.13“: Typing: "self- service" | Remove space: "self-service" | Agreed. |
| 0301  DE | 1 | 3 |  | T | Several of the terms are defined in the VIML. Without specific need individual definitions should be avoided and if so, the respective deviataions should be visible.  It will not be possible to list here all items, some are listed in the following. | Use as much as possible the terms defined in the VIML and other vocabularies or standards and add the reference in the specific definition.  Take care, that no requirements are covered within the definitions, e.g. “mpe” in 3.5.5.4 is connected with “zero, at no-load, in the reference position” and “reference standard masses or standard weights”. Move the respective requirements to chapter 5 “Metrological Requirements” | Agreed. Terminology section will be fully reviewed. |
| 0302  RO | 1 | Annex B |  | ge | Please keep Annex B. It is useful. | No change | Not agreed. Search functions make this Annex unnecessary. |
| 0303  UK | 1 | Table 10 |  | ed | replace road vehicle power supply with road vehicle battery (as per latest OIML Recommendations) – same in other parts |  | Agreed. |
| 0304  PL | 1 and 2 |  |  | ge | New International Recomendation OIML R 76-1 Non automatic weighing instruments Part 1: „Metrological and technical requirements” as well as Part 2: „Test procedures” are copied word in word from EN 45501. The text does not contain information that it is a copy of the standard.  This situation is incomprehensible. Why you can't refer directly to the standard without rewriting the whole document? |  | No! EN 45501 is a copy of R 76. Regional requirements should follow international requirements, not the other way around. |
| 0305  AT | 1 and 2 | several | several | ed | Throughout the documents, spelling of some combined words sometimes vary, e.g., “changeover / change-over / change over“, and “-“ or space in „non-uniform“, zero-setting, self-indication, tare-balancing, non-removable, multi-range, … Being of minor importance, this may still play a role if an index list was automatically generated from the text. | - | Agreed. Usage will be harmonised. |
| 0306  DE | 1+2 |  |  | Ge | It is nearly impossible to mark all items that need discussion in such three months only.  The used structure is not filled accordingly. There are several open aspects that need to be filled. | Decide carefully about the scope of this revision!  Check carefully the used structure.  Please take the following comments more as an intermediate state as it was not possible to list all aspects that need discussion. | Noted. |
| 0307  AT | 2 | 1 | Line 3 | ed | Part 2 is referred to as “Testing procedures" in the introduction, while R76-2 is called “Test procedures". (Same in Introduction of Part 1 itself.) | Uniform naming scheme | Agreed. |
| 0308  CECIP | 2 | 4.3 |  | ed | “….according to the checklist given in the Test Report Format (R 76-3).” There is no checklist in R 76-3. | Refer to R 76-4 if that was meant. | Agreed. Same applies to 4.1 and 4.2. |
| 0309  DE | 2 | 5.1.10 |  | Te | As per 5.1.10 a pre-loading is forbidden before testing on warm-up time.  The definition in R76-1, 3.4.6 and the requirement in 6.1.5.5 make clear that warm-up effects are supposed to be noticed with electric / electronic instruments. That means warm-up effects are a property of the electronics. That is why this test need to be done with indicators as well.  During a longer resting time, perhaps under (even minor) drifts of temperature as well as during temperature tests it probably comes to tensions within mechanic components and their material (especially within the metal body of load cells). This may lead to non-representative weighing results from the initial measurement. It may even happen that the error limits are not kept. By pre-loading the instrument internal tensions are supposed to relax, and the instrument is set to a “regular” state, which it would have during normal use. We should consider that R60-1, 2.10.7.3 (warm-up time) even requires a pre-loading before power is switched on. | We should consider allowing a preloading also before the warm-up test provided the instrument is still switched off (power off, disconnected from any power supply) when the pre-loading is being performed. This prevents a warm-up even within the short time needed for a pre-loading. | Agreed. |
| 0310  AU | 2 | 5.1.11 |  | te | But no details of how to interpret the MPE requirements, especially when unloading. The EUT meets MPE of higher range does not mean it could meet the MPE of lowest range. |  | Not accepted as no proposal submitted. |
| 0311  FR | 2 | 5.1.2 |  | te | 10 e is an example | It is necessary to start the test with a load equal to exit the zero-tracking | This comment appears to be applicable to 5.1.5. Accepted if applied to 5.1.5.  *Note:* it also applies to 5.2.3.2. |
| 0312  CA | 2 | 5.1.5 |  | ed | Response to comment about the use of “say” | Recommend the use of the word “approximately” | See response to 0311. |
| 0313  NO | 2 | 5.1.5 | 1 | te | It is better to use … with a load equal to 10.e | Delete the word say. | See response to 0311. |
| 0314  CA | 2 | 5.1.7 |  | ed | Response to editors comment. 3.7.1 is referenced in title since to be sure of the accuracy of the simulator is the same as if weights were used. The reference is to the requirements of the weights. | None. | Noted. |
| 0315  DE | 2 | 5.2.2 |  | Ed / Te | Zero indicating device (see 6.7.5, Part 1)  “For instruments fitted with a zero indicating device and digital indication, adjust the instrument to about one scale interval below zero; then by adding weights equivalent, for example, to 1/10 of the scale interval, determine the range over which the zero indicating device indicates the deviation from zero.” | The wording might be misunderstood. In fact, the instrument need not be “adjusted” to a scale division below zero. Instead, the load shall be so adapted that the instrument shows an indication of “-1 *d*” without any load on it. To that end small weights adding up to “1 *d*” are put on the load receptor, the instrument is set to zero and the weights are removed again. The instrument should indicate “-1 *d*”.  According to 6.7.5 (Part 1) the zero indicating device shall provide a signal when the deviation from zero is not more than 0.25 *e*. Additional small weights of 0.1 *e* are not sufficient to determine that range. Instead, small additional weights of not more than 0.01 *e* must be used. | Agreed. |
| 0316  CECIP | 2 | 5.2.2 |  | te | This test is not possible for instruments with d less than 10 mg. | Add “This test applies only to instruments with d ≥ 5 mg.” | Agreed. Text should say: “This test applies only to instruments with d ≥ 10 mg.” |
| 0317  CECIP | 2 | 5.2.3 |  | te | This test is not possible for instruments with d less than 10 mg. | Add “This test applies only to instruments with d ≥ 5 mg.” | See comment 0316. |
| 0318  FR | 2 | 5.2.3.1 |  | te | The case of instruments equipped with zero-setting device and zero-tracking device is not developed and shall be clarified because in subsequent verifications, the zero-tracking device can not be switched off. It seems necessary to adapt the test 5.2.3.1 and 5.2.3.2. However, after determining the changeover point, for the instrument with zero-tracking device, the new determination of additional load for indication changes is the same test than 5.2.3.2; Is the end of the test relevant?  For instrument with zero-tracking device, returning to zero hold is sufficient to validate the test, without determining the error. | To discuss. | For consideration. |
| 0319  FR | 2 | 5.2.3.2 |  | te | Can this test be done with the extended indication? (After test it is the same result.) | To discuss. If the proposal is accepted, please indicate this test can be done with the extended indication | For consideration. |
| 0320  DE | 2 | 5.3 |  | Ed | Setting to zero before loading  a)  „For instruments with non-automatic zero-setting, weights equivalent to half a scale interval are placed on the load receptor, and the instrument is adjusted until the indication alternates between zero and one scale interval. “ | Unprecise wording.  The instrument is not being adjusted. Perhaps, the zero (point) could be. What really is to be done is turning the setting screw (or the like) of a non-automatic zero-setting device until the indication permanently alters between zero and a scale division larger than zero. The word “adjust” has a different meaning in the context of metrology than in normal day-to-day use. Perhaps it could be replaced with a different word, such as “regulate” or “tune”. | Agreed. |
| 0321  CECIP | 2 | 5.4.1 |  | te | “The test loads selected shall include Max and Min (Min only if Min ≥ 100 mg)”  It is unclear what to do in cases when Min < 100 mg. | New wording, details to be discussed:  The test loads selected shall include Max and Min.  If Min < 100 mg then a value of xxx mg shall be chosen instead. | Agreed. |
| 0322  CECIP | 2 | 5.4.1 |  | te | “and values at or near those at which the maximum permissible error (mpe) changes.”  Unclear if all or some change values shall be tested | Discuss if ALL change values shall be tested | Agreed. |
| 0323  CECIP | 2 | 5.4.1 |  | te | “and values at or near those at which the maximum permissible error (mpe) changes.”  Unclear which mpe to apply as “near” can mean below and above the change point. | “and values at or near those at which the maximum permissible error (mpe) changes and apply the lower mpe value.” | Partially agreed. |
| 0324  CECIP | 2 | 5.4.1 |  | ed | when loading or unloading weights  Add comma after “weights” | when loading or unloading weights, | Agreed. |
| 0325  CECIP | 2 | 5.4.1 |  | te | “progressively increased or progressively decreased.”  Unlear what “progressively” means. If it means “avoiding to touch zero indication, then write this | Unclear, an improved wording cannot be provided. | Agreed. |
| 0326  CECIP | 2 | 5.4.1 |  | ed | “It is recommended to apply the same procedure as far as possible during initial verification and subsequent metrological control. For further details, see R 76-5.”  The content of this phrase should be moved from the test methods to the according sections about initial verification and subsequent control but should be deleted from the methods section | Delete two sentences from part 2. | Not agreed. The method applies to testing at type approval, plus initial verification and subsequent metrological control. |
| 0327  NO | 2 | 5.4.3 | 1 | te | It is better to use … with a load equal to 10.e | Delete the word say. | Agreed. |
| 0328  CA | 2 | 5.4.3 | 2 | ed | Response to comment about the use of “say” | Recommend the use of the word “approximately” | Agreed in principle. |
| 0329  CA | 2 | 5.4.3 | 2 | ed | See comment above part I section 3.8 | A new symbol is proposed “Ip ” since “I” is defines as “**indicated weight value**” “Ip ” would be new symbol for indication prior to rounding. | Agreed. |
| 0330  CECIP | 2 | 5.4.3 | 2nd sentence and following equations | te | Is not valid for instruments with e=2d | replace e by d so that it also becomes valid for the case of e=2d | Comment not understood. |
| 0331  CA | 2 | 5.4.5 | 5 | ed | Response to comment about the use of “say” | Recommend the use of the word “approximately” | See response to comment 0328. |
| 0332  FR | 2 | 5.7.3 |  | te | “The load shall be applied to each point of support” seems to be not sufficient. | The load shall be applied to each point of support, with possibly the use of procedure of 5.7.2. | Agreed. 5.7.1 or 5.7.2 as appropriate. |
| 0333  CECIP | 2 | 5.8 |  | Ed/te | All “d” in the entire paragraph must be replaced by “e” | All “d” in the entire paragraph must be replaced by “e” | Please supply technical justification. |
| 0334  DE | 2 | 5.8.2 | 1st paragraph | Te | Digital indication  „This test applies only to type examination and to instruments with *d* ≥ 5 mg.  A load plus sufficient additional weights (say 10 times 1/10 *d*) shall be placed on the load receptor.“ | With d = 5 mg, weights of a nominal value of 0.5 mg had to be added. Such weights, however, are normally not available. (see also OIML R111, Table 1) | Agreed. Changed to d ≥ 10 mg |
| 0335  DE | 2 | 5.8.2 | 2nd paragraph | Te | “A load plus sufficient additional weights (say 10 × 1/10 d) shall be placed on the load receptor.”  Apart from the wording being not very precise, a load of 10 times 0,1 *d* may not be sufficient. The crucial point is that you add 0,1 *d* again and again until the indication starts oscillating between the present indication and the following possible indication step. | Proposal for new wording:  “Add load and further small loads of 0.1 *d* (or smaller) until the indication starts oscillating between the initial indication and the next possible indication step (initial indication plus 1 *d*).” | Agreed. |
| 0336  CA | 2 | 5.8.2 | 5 | ed | Response to comment about the use of “say” | Recommend the use of the word “approximately” | Agreed. |
| 0337  DE | 2 | 5.11 |  | Te | Creep and zero return behaviour may significantly variate depending on the temperature. Thus, as per R60 that test is prescribed to be performed not only at reference temperature but also at the temperature extremes of the temperature range of the load cell. | We should discuss about performing the test at reference temperature and at the upper at lower temperatures of the temperature range of the instrument.  Moreover, we must keep in mind that the error limits differ between R60 and R76! | For consideration by the PG. |
| 0338  CECIP | 2 | 5.12 |  | Ed | "Stable equilibrium is considered to be achieved when no more than two adjacent values are indicated, one of which being the printed value"  This is in fact a definition of "stable equilibrium" which in turn is missing in the definitions section | Consider moving as a new definition to the appropriate section. | Sentence deleted here as covered in R 76-1. |
| 0339  CECIP | 2 | 5.12 |  | Ed | " For instruments with differentiated scale divisions, this paragraph applies to e rather than to d."  Unclear what is meant by "paragraph" | Replace "paragraph" by "statement" | Partially agreed. |
| 0340  CECIP | 2 | 6.1 |  | Ed | Tilting (only class II, III and IIII instruments)  Remove brackets from headline. This part (2) describes methods regardless of their application or restrictions | Tilting | Agreed. |
| 0341  CECIP | 2 | 6.1 |  | Ed | "In practice the tests (no-load and loaded) described in 6.1.1.1 and 6.1.1.2 can be combined as follows."  This is unclear as the following text gives no clear instruction about "combining" | Delete the whole sentence. | Not agreed. The text describes no load and two test loads. |
| 0342  CECIP | 2 | 6.1.1.1 |  | Ed/te | "The zero indication is noted"  Should be "any" indication in this situation | "The indication is noted" | Agreed. |
| 0343  NO | 2 | 6.1.3 |  | te | Is this clause intended to be used for NAWI on board ship also? | This is applicable for weighing instrument on board ship | Mobile instruments to be reviewed. |
| 0344  CECIP | 2 | 6.3.1 |  | Te | "The change of temperature shall not exceed 1 °C/min d"  Amend "rate of change" | The rate of change of temperature shall not exceed 1 °C/min d | Agreed. |
| 0345  CECIP | 2 | 6.3.1 | Last sentence | te | “… relative humidity…” is wrong | It needs to be replaced by “absolute” | Agreed. |
| 0346  CECIP | 2 | 6.4.1 | Note | Ed | "Shall" is not allowed in a Note. | Remove "shall" from Note. | Agreed. |
| 0347  UK | 2 | 6.4.1, 6.4.4, etc. |  | ed | The terms “Variations of AC mains voltage”, “Voltage variations of a 12 V or 24 V road vehicle battery” are used in the title | Propose aligning titles with titles in OIML D11 2004, for example, with “AC mains voltage variation” in 12.2, “Power from external 12 V and 24 V road vehicle batteries” in 14.2, etc. | Agreed. |
| 0348  CA | 2 | 6.4.2 | 5 | ed | Response to editor adding a note for clarity instead of extremely long title | Agree with changes | Noted. |
| 0349  CA | 2 | 6.4.3 | 5 | ed | Response to editor adding a note for clarity instead of extremely long title | Agree with changes | Noted. |
| 0350  AT | 2 | 6.4.4 | Line 1 | ed | "...refer to [21].": Reference not highlighted or marked otherwise, unlike all other refs. in this document. | - | Noted. Reference to be checked. |
| 0351  AT | 2 | 7 | Figure 11 | ed | Temperature range: “+40 °C/–10 °C“. Normally it is written as “–10 °C/+40 °C“ elsewhere in the text. | Swap temperature values | Agreed. |
| 0352  DE | 2 | 8.3 | 2nd paragraph | Te | This paragraph requires a device to be connected to each DIFFERENT type of interface. While this may be sufficient to check whether a specific interface is susceptible to electrical disturbances, it does not necessarily mean the worst case. At least with the test on susceptibility to radiated fields the EUT must be equipped with the maximum number of interfaces (interface boards) to which peripheral devices or at least a suitable cable must be connected. Each cable forms an antenna which absorbs part of the electromagnetic field. The HF currents absorbed add within the EUT. So, a maximum number of “antennas” means the worst case. | New wording:  “If the instrument can be equipped with interfaces, the maximum possible number shall be available on the instrument tested. To each interface a peripheral device or at least a suitable cable (length not mor than 3 m) shall be connected during the tests on radiated electromagnetic fields test as per 8.3.5. For all other EMC tests applying the disturbances to each different interface is sufficient.” | D 11 PG to be consulted. |
| 0353  AU | 2 | 8.3.1 |  | te | The test should be repeated at each nominal frequency for the power system, eg, 50 Hz and/or 60 Hz | The test shall be performed at nominal frequencies marked on the instrument or power supply. | D 11 PG to be consulted. |
| 0354  CECIP | 2 | 8.3.2 |  | Te | "Level 2" is unclear. It apparently refers to a classification from IEC, but this is unclear and not referenced | Add a footnote or reference to "level 2" similar to the occurrence in 8.3.4 | Agreed. Check which standard. |
| 0355  AT | 2 | 8.3.4 | 2nd to last line | ed | Typing: "non- conductive" | Remove space: "non-conductive" | Agreed. |
| 0356  AU | 2 | 8.3.5 |  | te | Is the upper limit of the frequency range listed in the test severity sufficient to account for growing noise at higher frequencies. | Propose frequency range be adjusted to 80 MHz-3000MHz. | Latest edition of standard to be checked. See D 11 revision. |
| 0357  CECIP | 2 | 8.3.5 | - | Ed. | The wording “since wave” is wrong. | Change to “sine wave”. | Agreed. |
| 0358  UK | 2 | 8.3.5 Immunity to radiated electromagnetic fields |  | te | The Test severity: Frequency range: 80 MHz-2 000 MHz | Propose the frequency range to 3 000 MHz to allow for higher frequencies of devices such as phones, etc. | Latest edition of standard to be checked. See D 11 revision. |
| 0359  AU | 2 | 8.3.7.1 |  | te | ISO 7637-2 (2004) is not latest edition |  | Latest edition of standard to be checked. See D 11 revision. |
| 0360  CECIP | 2 | 8.3.7.1 | Table | Ed. | Test 2a pulse | Chage to “Test pulse” and move “2a” to second line. | Agreed. |
| 0361  FR | 2 | 9.1 |  | ge | This part deals with testing procedure and requirements. Requirements shall be moved to part 1. | Separate metrological and technical requirements of part 9.1 and put them in part 1, 5 and 6. | Agreed. Moved to R 76-1, 5.9.2. |
| 0362  CA | 2 | 9.1 9.2.2 10.1.111.1.1 |  | ed | Cross references in table have not been completed and no note was added . | This comment is just ensure that xref will be updated before final draft. | Agreed. Need to update R 76-1 references |
| 0363  DE | 2 | 9.2.2 |  | Ed | Table 12  Clauses from old R76-1 in first column. | Insert clauses of CD1 of new R76-1. | Agreed. Need to update R 76-1 references |
| 0364  DE | 2 | 9.2.2 |  | Ed | Table 12, second and third to last row (item “B.3.7”):  Columns shifted and contents distributed over two lines. | Insert clauses of CD1 of new R76-1. | Agreed. |
| 0365  AU | 2 | 9.2.2 | Table 12 | ed | The first column R76 clause reference are incorrect, it is referred to R76 2006 ed. Also the second last row, there is alignment issue. | The references need to be updated. | Agreed. Need to update R 76-1 references |
| 0366  AT | 2 | 9.2.2 | Table 12 | ed | Table Caption missing a Title text | Add table caption | Agreed |
| 0367  AT | 2 | 9.2.2 | Table 12 | ed | Second to last row: entry seems to be shifted, and missing corresponding R 76-1 clause. | Shift entry, add clause | Agreed. |
| 0368  CECIP | 2 | 9.2.2 | Table 12 | Ed. | B.3.7 | Correct this line. | Agreed. |
| 0369  DE | 2 | 9.2.3 |  | Ed | Paragraphs 2 and 3 must be merged to one single paragraph. |  | Agreed. |
| 0370  AU | 2 | 9.2.3 | 2nd paragraph | ed | The second and third paragraphs should be one paragraph |  | See comment 0369. |
| 0371  DE | 2 | 9.2.4 |  | Ed | “… maximum number of verifications scale intervals, e, with…” | “*e*” should be in *italics* as in the other places where it appears. | Agreed. |
| 0372  CECIP | 2 | 9.2.7 | - | Ed. | Reference is made to Table C.2.2 | Reference has to be made to item 9.2.2 | Agreed. |
| 0373  AU | 2 | 9.2.7 | 2 nd paragraph | ed | C2.2 reference is incorrect. | See Table 12 under 9.2.2 | Agreed. |
| 0374  DE | 2 | 9.3 |  | Ed | Items 12.1 to 12.2.6 are not part of R76-1 as mentioned in first paragraph (“…. following R 76-1 requirements:”)  Last line is obviously the title of the following sub-clause and thus must be deleted. |  | Agreed. Need to check R 76-1 references (for 12.1 to 12.2.6). |
| 0375  AU | 2 | 9.3 | Last paragraph | ed | 9.3.1 Temperature and performance tests should be deleted. |  | Agreed. |
| 0376  CA | 2 | 9.3.1 , 9.3.1.1 9.3.3.2.4 |  | ed | Unclear why K is used instead of °C | Since the interval is the same it could be change if no one is opposed but probably came from another source so I would leave as s since there is no consequence. | Noted. |
| 0377  DE | 2 | 9.3.3.1 |  | Ed | Is titled “cope” instead of “scope”. | Replace “cope” with “scope”. | Agreed. |
| 0378  CECIP | 2 | 9.3.3.1 | Headline | Ed. | cope | Change to “scope” | See response to 0377. |
| 0379  AT | 2 | 9.3.3.1 | Title | ed | Typing: title “cope” | Capitalize: “Cope” | See response to 0377. |
| 0380  CA | 2 | 9.3.3.1 | title | ed | Title has the word “cope” | Replace with “Scope” | See response to 0377. |
| 0381  CA | 2 | 9.4.110.4.111.4.1 | 1 | ed | Proposal to replace reference to B3 to OIML-CS PD-05 Edition 4, Annex A. | Seems to be correct reference | Noted. |
| 0382  AU | 2 | 9.4.2 |  | ed | The reference to checklist in 9 remarks on tests is incorrect | Example: In the R 76-4 checklist | Partially agreed. The checklist is specified in R 76-4, but a reference to the checklist should not be included in the test report. |
| 0383  AU | 2 | 9.4.2 |  | ed | The reference to Form in 10 measurement results | Forms from R 76-3. | Agreed. |
| 0384  AU | 2 | 9.4.2 |  | ed | The reference to checklist in 11 Technical requirements is incorrect | Checklist from R 76-4. | Partially agreed. The checklist is specified in R 76-4, but a reference to the checklist should not be included in the test report. |
| 0385  FR | 2 | 9.4.2 |  | ge | This part deals with the content of the test report. It shall be moved to part 3 | Move to part 3. | Not agreed. This a requirement and the Test Report Format is purely a reporting of results. |
| 0386  DE | 2 | 9.4.2 |  | Ed / Te | Under “summary of examination” pi = 0.5 is given as if being the only option. However, pi may vary from 0.3 to 0.8 even with an indicator. | Replace “pi = 0.5” with “pi = 0.x” | Agreed. |
| 0387  CECIP | 2 | 9.4.2 | 9 | Ed | a load cell of the type .... and a printer of the type was connected. | Change to “a load cell of the type .... and a printer of the type… was connected”. | Agreed. |
| 0388  FR | 2 | 10.1 |  | ge | This part deals with testing procedure and requirements. Requirements shall be moved to part 1. | Separate metrological and technical requirements of part 9.1 and put them in part 1, 5 and 6. | Agreed. Moved to R 76-1, 5.9.x. |
| 0389  DE | 2 | 10.1.1 |  | Ed | Clauses from old R76-1 in first “column” | Insert clauses of CD1 of new R76-1. | Agreed. Clause numbers to be updated. |
| 0390  AU | 2 | 10.3 | 2nd last and last paragraphs | ed | Reference to checklist is in correct | checklist of R 76-4 | Partially agreed. The checklist is specified in R 76-4, but a reference to the checklist should not be included in the test report. |
| 0391  FR | 2 | 10.4.2 |  | ge | This part deals with the content of the test report. It shall be moved to part 3 | Move to part 3. | Not agreed. This a requirement and the Test Report Format is purely a reporting of results. |
| 0392  FR | 2 | 11.1 |  | ge | This part deals with testing procedure and requirements. Requirements shall be moved to part 1. | Separate metrological and technical requirements of part 9.1 and put them in part 1, 5 and 6. | Agreed. Moved to R 76-1, 5.9.x. |
| 0393  AU | 2 | 11.3 | 2nd last and last paragraphs | ed | Reference to checklist is in correct | checklist of R 76-4 | Agreed. |
| 0394  AU | 2 | 11.4.2 |  | ed | The reference to checklist in 9 remarks on tests is incorrect | Example: In the R 76-4 checklist | Partially agreed. The checklist is specified in R 76-4, but a reference to the checklist should not be included in the test report. |
| 0395  AU | 2 | 11.4.2 |  | ed | The reference to Form in 10 measurement results | Forms from R 76-3. | Noted. R 76-3 is already referenced. |
| 0396  AU | 2 | 11.4.2 |  | ed | The reference to checklist in 11 Technical requirements is incorrect | Checklist from R 76-4. | Partially agreed. The checklist is specified in R 76-4, but a reference to the checklist should not be included in the test report. |
| 0397  FR | 2 | 11.4.2 |  | ge | This part deals with the content of the test report. It shall be moved to part 3 | This part deals with the content of the test report. It shall be moved to part 3 | Not agreed. This a requirement and the Test Report Format is purely a reporting of results. |
| 0398  AU | 2 | 12 |  | ge | 5.8.4.3 durability is missing in modular approach ie, Endurance test for instrument Max <= 100 kg is not required. |  | Not sure what the proposed change is meant to be. |
| 0399  AU | 2 | 12..4 | Form: Compatibility check | te | 6(b) NLC or Z=Emax/(2x DR)>= Max/e1. This can be interpreted as the calculation is passed when either condition is met. This is inconsistent with clause 12.6 where it requires that NLC to be used only when DR is unknown. | 6b) Z=Emax/(2x DR)>= Max/e1  If DR is unknown, NLC>= Max/e1 | Agreed. |
| 0400  AU | 2 | 12.1 |  | ed | Q Correction factor T+ should be T+ |  | Agreed. |
| 0401  DE | 2 | 12.1 |  | Ed | Weighing instruments  “Connecting system, 6-wire-system:  *L* (m) Length of connecting cable.  *A* (mm²) Cross section of wire.  *Q* Correction factor.” | Looks as if the correction factor Q is assigned to the data of the 6-wire-system. Q should be located on top of data related to the 6-wire-system. | Agreed. Connecting system text moved to be below correction factor text. |
| 0402  AT | 2 | 12.1 | Line 13 from bottom | ed | Typing: "Q = (Max+ DL + IZSR + NUD + T+) / Max". Also, the plus sign in "T+" (additive tare) used to be superscript in the version of 2006. | Insert space: “Max +”, and possibly change T+ back to T+ throughout all documents? | Agreed. |
| 0403  AT | 2 | 12.1 | Line 6 | ed | Typing: “(Max1, Max+, …, Max in the case of a multi-interval)” | Replace “Max+” with “Max2” | Agreed. |
| 0404  AU | 2 | 12.2 |  | te | Not all digital load cells comply with R76-2 clauses 8.3.1 to 8.3.6, eg digital load cells are approved to R60 2000 ed. | For digital load cells R76-2 clauses 8.3.1 to 8.3.6 shall be met. | To be discussed. See comment 0113. |
| 0405  DE | 2 | 12.2 |  | Te | The statement of this clause must be questioned because the rules with regard to creep / zero return differ between R76 and R60. | See our remarks on R76-1, 5.8.4.1 and 5.9.2.4 | To be discussed. See comment 0113. |
| 0406  DE | 2 | 12.2.1 |  | Ed / Te | Table 13, Instruments of class IIII  Also load cells of class C can be used. | Insert “C” | Agreed. |
| 0407  AU | 2 | 12.2.5 |  | ed | Emin format should be consistent | *Emin* | Agreed. |
| 0408  AU | 2 | 12.2.6 |  | te | Clause 12.2.6 acceptable solution where DR is no known. The worst case DR value is always known, ie, 0.5 v (DRworst) =0.5 x Emax/nLC. In 12.2.6 acceptable solution for multi-interval instrument, NLC>= Max/e1 issatisfied. It implies that the worst case DR is used. For multiple range instrument, if the worst case DR is used, the condition would be NLC>= 0.5xMaxr/e1. The condition of 0.4 x Maxr/e1 is historically used but as you can see from the above there is inconsistence between application of DR value in multi-interval and multiple range instrument. | Where DR is not known, the condition nLC ≥ 0.5 × Maxr / e1 is satisfied. | Agreed. |
| 0409  DE | 2 | 12.2.6 |  | Ed / Te | Second before last paragraph reads:  “DR × *E* / *E*max ≤ *e*1ꞏ× *R* / *N*, or DR / *E*max ≤ *e*1 / Max“  As last paragraph of R76-1, 5.8.4.2 indicates, the index shall be “i”, not “1” because “ei” refers to the weighing range in operation immediately after the instrument has been unloaded (and not been set to zero). After a zero operation the requirement on the further drift within 5 minutes, however, then refers to e1.  (See our remarks on 12.4.) | Replace “1” with “i” in this equation. | Agreed. |
| 0410  AU | 2 | 12.2.6 | 5 paragraph | te | multiple range instrument DR/Emax<=e1/Max. Max for multiple range should be Maxr | DR/Emax<=e1/Maxr | Agreed. |
| 0411  AT | 2 | 12.3.3 | Line 1 | ed | Typing: “*T*max“ | Change to “*T*max“ | Agreed. |
| 0412  CA | 2 | 12.4 12.6.112.6.2 | 3) | ed | In response to editor’s comment “This symbol had a dot under the right hand side in the pdf?” | I believe te dot signified “approximately” . The sum of the fraction pi may not exactly equal 1. Example of an indicator and load cell tested as modules with fraction of 0.7. When added in quadrature it comes to 0.98. | Noted. |
| 0413  DE | 2 | 12.4 | 6 c) | Ed / Te | „Emax / (2 x DR) ≥ 0.4 x Maxr / e1“ | As per R76-1, 5.8.4.2 the correct formula is:  „nLC or Z ≥ Emax / DR ≥ Maxr / 0.5 × ei“  The index “i” must be that of the weighing range applicable. That was wrong with the 2006 version as well and contradicted 3.9.4.2, last paragraph. When unloading the instruments after having been loaded with Max of the highest weighing range, e.g., ei = e3 for a 3-ranges instrument.  The equation above is derived from  „DR / *E*max ≤ 0.5 × *e*i / Maxr“ (see R76-1, 5.8.4.2, last paragraph)  e1 must only be observed within the following 5 minutes after unloading. During these 5 minutes it may not drift by more than 0.5 e1. (see R76-1, 5.8.4.2, last paragraph)  Only if DR is unknown,  „*n*LC ≥ 0.4 × Maxr / *e*1”  applies. | Agreed. |
| 0414  AU | 2 | 12.4 | Form: Compatibility check | te | 6b) Max for multi-interval is Max not Maxr | *Max/e1* | Agreed. |
| 0415  AU | 2 | 12.4 | Form: Compatibility check | te | 6(c) Z=Emax/(2x DR)>= 0.4x Maxr/e1 is incorrect. As stated in 12.2.6 for multiple range instrument DR/Emax<=e1/Maxr, ie , Z=Emax/(2x DR)>= 0.5x Maxr/e1, not 0.4x Maxr/e1.as listed in 6(c). | 6c) Z=Emax/(2x DR)>= 0.5 x Maxr/e1 | Agreed. |
| 0416  AU | 2 | 12.4 | Form: Compatibility check | te | 6(c) NLC or Z=Emax/(2x DR)>= 0.4x Maxr/e1. This can be interpreted as the calculation is passed when either condition is met. This is inconsistent with clause 12.6 where it requires that NLC to be used only when DR is unknown. | 6c) Z=Emax/(2x DR)>= 0.5 x Maxr/e1  If DR is unknown, NLC>= 0.4 x Maxr/e1 | Agreed. |
| 0417  NZ | 2 | 12.4 | Form: Compatibility check | te | 6b:  The criteria is different when DR is known compared to that DR is unknown. | 6b:  Separate the calculations.   * Z=Emax/(2x DR) ≥ Max/e1 * nLC ≥ Max/e1, if DR is unknown | Agreed. |
| 0418  NZ | 2 | 12.4 | Form: Compatibility check | te | 6c:  The criteria is different when DR is known compared to that DR is unknown. | 6c:  Separate the calculations.   * Z=Emax/(2x DR) ≥ 0.5 x Max/e1 * nLC ≥ 0.4 x Max/e1, if DR is unknown | See responses to 0413, 0415 and 0416. |
| 0419  AT | 2 | 12.4 | several | ed | 12.4,12.6.1,12.6.2: "multi range" | Change to "multiple range", or at least consistent naming throughout parts. | Agreed. |
| 0420  AT | 2 | 12.6.1 | 2nd List | ed | Last entry of List “Indicator”: Typing “(L/A)max” | Subscript: “(L/A)max” | Agreed. |
| 0421  DE | 2 | 12.6.2 |  | Ed | Industrial scale with three measuring ranges (Example no. 2)  “maximum capacity Max = 5 000 kg” | Because it is a multiple-range instrument, it should read Max3. | Agreed. |
| 0422  AU | 2 | 13.2.1 |  | ed | Software Test Report Format (see R 76-3) should be R 76-4 |  | Agreed. |
| 0423  CECIP | 2 | 13.2.1 | - | Ed. | Error! Reference source not found. | Check references. | Agreed. |
| 0424  CECIP | 2 | 13.2.1 | - | Ed. | Error! Reference source not found. | Check references. | See response to 0423. |
| 0425  CECIP | 2 | 13.2.1 | DescriptionResult | ed | “Software Test Report Format (see R 76-3).” – R 76-3 does not contain any software test report format. | Refer to R 76-4 if that was meant. | See response to 0422. |
| 0426  CA | 2 | 13.2.1 | Section called “description” | ed | Paragraph contains link error: “see **Error! Reference source not found**.11.2.1..” | Correct reference or re-establish link | See response to 0423. |
| 0427  NO | 2 | 13.2.2 | 1 | ed | Missing a definition of significant defects | No idea what significant defect means. | Agreed. Definition from D 31, 3.1.46 to be added |
| 0428  AT | 2 | 13.3 | Table 1 | ed | Typing: in entry “6.3.4.6“: "calulation" | Change to "calculation" | Agreed. |
| 0429  CECIP | 2 | 13.3 | Table 1 | Ed. | Error! Reference source not found. | Check references. | Agreed. |
| 0430  CA | 2 | 13.3 | Table 1 | ed | Row in paragraph labelled 6.3.4.4 and 6.3.5.2 contains link error: “see **Error! Reference source not found**.11.2.1..” | Correct reference or re-establish link | Agreed. |
| 0431  CA | 2 | Annex B |  |  | Response to comment “Is this annex necessary or useful? Other Recommendations don’t have this.” | Index is slightly useful but now all the terms can be search using software so not needed as much as in the past. I would suggest removal | Noted. Annex B has been deleted. |
| 0432  JP20 | 2 | BIBLIOGRAOHY |  | ed | The numbers in the bibliography must be modified. | Please modify the number in the bibliography. | It is not clear what needs to be modified. |
| 0433  CA | 3 |  |  |  | No comments at this time. |  | Noted. |
| 0434  CECIP | 3 | Introduction | Paragraph 4 | te | “… use of the “Test report format” is mandatory.” | should be provided as an electronic template on the OIML web page to harmonize the report | Noted. The provision of electronic templates on the OIML website will be considered by the BIML. |
| 0435  DE | 3 | 2 |  | Ed | “**TEMPERATURE EFFECT ON NO-LOAD INDICATION (R 76-2, 6.3.2)**” | Head column of table: “Temp” should read “Temp.”  “ΔTemp. = difference of Temp. for two consecutive tests at different temperatures”  “difference of Temp.” – “temp.” should be in lower case | Agreed. |
| 0436  DE | 3 | 5 |  | Ed | **REPEATABILITY (R 76-2, 5.10)**  “Load (weighing 11-20)” is located too close to the first box. | Should be clearer assigned to the second box. Shift it to the right. | Agreed. |
| 0437  DE | 3 | 5 |  | Ed | **REPEATABILITY (R 76-2, 5.10)**  “*E*max – *E*min (weighing 11-20)” is located too close to the first box. | Should be clearer assigned to the second box. Shift it to the right. (starting under numbers column) | Agreed. |
| 0438  DE | 3 | 5 |  | Ed | **REPEATABILITY (R 76-2, 5.10)**  “mpe” is located too close to the first box. | Should be clearer assigned to the second box. Shift it to the right. (starting under numbers column) | Agreed. |
| 0439  DE | 3 | 6.1 |  | Ed | **Zero return (R 76-2, 5.11.2)**  Check if a) ∣Δ(*P*30 – *P*0)∣ ≤ 0.5 *e*  b) ∣Δ(*P*35 – *P*30)∣ ∣≤ *e*1 (for multiple range instruments only) | Yellow marked boxes under a) and b) can be deleted. | Agreed. |
| 0440  CECIP | 3 | 6.1 | Table | Ed. | Formatting is not correct | Correct formatting of table | Agreed. |
| 0441  DE | 3 | 7 |  | Ed | **STABILITY OF EQUILIBRIUM (R 76-2, 5.12)**  Lines of second and third table are partly missing. |  | Agreed. |
| 0442  CECIP | 3 | 7 | Table | Ed. | Formatting is not correct | Correct formatting of table | Agreed. |
| 0443  DE | 3 | 8 |  | Ed | **TILTING (R 76-2, 6.1, 6.1.1-6.1.3)**  Lines of boxes and tables are partly missing. |  | Agreed. |
| 0444  CECIP | 3 | 8 | Table | Ed. | Formatting is not correct | Correct formatting of table | Agreed. |
| 0445  DE | 3 | 10 |  | Ed | **WARM-UP TIME (R 76-2, 6.2)**  Check if ∣*E*L – *E*0∣ ≤ ∣mpe∣ | Yellow marked box can be deleted. | Agreed. |
| 0446  DE | 3 | 11 |  | Ed | **VOLTAGE VARIATIONS (R 76-2, 6.4)**  Lines of boxes are partly missing. |  | Agreed. |
| 0447  DE | 3 | 12.1 |  | Ed | **AC mains voltage dips and short interruptions (R 76-2, 8.3.1)**  Boxes for noting the voltage: “V” is located on the left instead of on the right. |  | Agreed. |
| 0448  DE | 3 | 12.2 |  | Ed | **Electrical bursts (R 76-2, 8.3.2)**  Boxes for noting the voltage: “V” is located on the left instead of on the right. |  | Agreed. |
| 0449  DE | 3 | 12.2 |  | Ed | **Electrical bursts (R 76-2, 8.3.2)**  **b) I/O circuits and communication lines**  Lines of the table are missing. |  | Agreed. |
| 0450  AU | 3 | 12.2.1 |  | te | Add a frequency box for recording the power frequency tested. |  | Partially agreed. Repetition frequency is specified in the standard. Box added. |
| 0451  CECIP | 3 | 12.2.b) | Table | Ed | Formatting is not correct | Correct formatting of table | Agreed. |
| 0452  DE | 3 | 12.3 |  | Ed | **Surges (R 76-2, 8.3.3)**  **b) Any kind of power supply**  Boxes to “Kind or type of power supply” are located too far on the right. |  | Agreed. |
| 0453  DE | 3 | 12.3 |  | Ed | **Surges (R 76-2, 8.3.3)**  **b) Any kind of power supply**  As 8.3.3 of (new) R76-2 suggests, surges shall be applied to signal lines, control lines and the like as well. A form for the tests on signal lines, control lines, and the like, is missing. Could be adopted from R61-3 (4.5.2). | Add form for surge on signal lines, control lines (interfaces) and the like. | Agreed. |
| 0454  AU | 3 | 12.4 |  | te | Tables now requires both positive and negative polarities to be tested. But IEC standard only requires to test most sensitive polarity. |  | Not agreed. The corresponding table in R 76‑2:2006 requires positive and negative polarities to be tested. |
| 0455  DE | 3 | 14 |  | Ed | **SPAN STABILITY (R 76-2, 8.4)**  **Measurement no. 1: Initial measurement**  If ∣(*E*L – *E*0)max – (*E*L – *E*0)min∣ ≤ 0.1 *e*, the loading… | Delete yellow marked box. | Agreed. |
| 0456  DE | 3, 4 |  |  | Ge | Test report for software test is listed in the checklist of part 4 | Move test report format to part 3 | Not agreed. Software evaluation is part of the type evaluation process conducted by the OIML Issuing Authority and so should be retained in Part 4. |
| 0457  DE | 4 |  |  | Ge |  | Make clear which of the given information have to be delivered in the proposed format and which have to be given but without any requirements regarding the format. | To be considered. |
| 0458  DE | 4 |  |  | Ge |  | It would be helpful to get a proposal for the structure of the “describing annex” of a certificate similar to the structure given in WELMEC guide 8.3 | To be considered. |
| 0459  RO | 4 |  |  | ge | The checklist could be included in the Test Report Form (R76-3) and could be excluded from the Type Evaluation Report Form (R76-4). | The Checklist – to be included in Part 3 and excluded from Part 4.  I propose to keep only the Summary of the Checklist in Part 4. | Not agreed. The checklist is part of the evaluation conducted by the OIML Issuing Authority during type approval so should be retained in the new Part 4 (to align with OIML B 6-1). |
| 0460  UK | 4 |  |  | ed | Why repeating application number etc at the top of many of the first pages? |  | Noted. Some headings have been deleted and some pages consolidated. |
| 0461  CA | 4 |  |  |  | No comments at this time. |  | Noted. |
| 0462  DE | 4 |  | Checklist | Ed | **Error message in text to 6.2.7.3**  **“**If support of **Error! Reference source not found.** or **Error! Reference source not found.** is part of the remote  verification procedure… |  | Agreed. Reference corrected. |
| 0463  DE | 4 |  | Checklist | Ed | Numbers 6.3.8.x on “software updates” shall all read 6.3.**7**.x. |  | Agreed. |
| 0464  DE | 4 |  | Checklist | Ed | Numbers 6.3.9.x on “remote verification capability” shall all read 6.3.**8**.x. |  | Agreed. |
| 0465  CECIP | 4 | Introduction | Last sentence | te | “… use of the “Type evaluation report format” is mandatory.” | should be provided as an electronic template on the OIML web page to harmonize the report | Noted. The provision of electronic templates on the OIML website will be considered by the BIML. |
| 0466  AU | 5 |  |  | ge | Verification procedure should be informative, not mandatory. |  | Agreed. |
| 0467  DE | 5  1 | 6.3.8.36.3.8.4 |  | Ge | Description of remote verification in part 5 missing | Discussion in PG whether remote verification should be included in part 5 | To be discussed. |
| 0468  DE | 5 |  |  | Ge | As the procedures used for verification of instruments the guidance given in part 5 can only be “informative”. | Include a clear description about the meaning of this part and its **ONLY guidance character**. | Part made “informative”. |
| 0469  DE | 5  1 | 6.3.8.36.3.8.4 |  | Ge | Description of remote verification in part 5 missing | Discussion in PG whether remote verification should be included in part 5 | Duplicate comment. |
| 0470  CA | 5 |  |  |  | No comments at this time. |  | Thank you! |
| 0471  FR | 5 | 1 |  | ge | The introduction states “The applicable error limits and tests to be carried out during type approval and initial verification of a weighing instrument are described in OIML R 76-1” is not complete. The MPE for subsequent verifications are given in part 1, 5.5.2. | Please clarify the scope of part 1, 10 (see our comment for part 1, 10) and harmonize the content between part 1 and 5. | To be discussed. R 76-1, 8.3 and 8.4 to be re-introduced in Part 1. |
| 0472  FR | 5 | 1 |  | te | The introduction states the verification is limited to weighing accuracy and for example, price computation is not covered. The scope of verification has to be discussed because price to pay is a primary indication (part 1, 7.2.1). That would mean that for price-computing instruments for direct sales to the public, the verification does not check primary indications. | Clarify the scope of the verification. | To be discussed. R 76-1, 8.3 and 8.4 to be re-introduced in Part 1. |
| 0473  AU | 5 | 2 |  | ge | Clarification to title and Table 1 heading to cover type approval, verification, and inspection activities. | Change section Title to “Metrological control activities” | Changed to “Verification and in-service inspection”. |
| 0474  AU | 5 | 2 |  | ge | Listing type approval under verification activities is inconsistent. | See table in Appendix 1 for suggested alternative classifying activities and authorised persons. | Agreed in principle. Line on type approval also deleted. |
| 0475  FR | 5 | 2 |  | ge | The table on verification activities contains a line for type evaluation or approval. Are these controls in the scope of part 5? | Clarify the scope of part 5. | Line on type approval deleted |
| 0476  FR | 5 | 2 | Table 1 | te | The description of the verification activities shall be only informative because depends on national regulations. | Please add a sentence to indicate this part is only informative and depends on national regulations. | The whole of part 5 is informative. |
| 0477  JP21 | 5 | 2 | **Table 1** | ed | We would like to add reverification in the Verification activity. | Correct “Subsequent verification” to “Subsequent verification and reverification”. | To be explained in part 1. |
| 0478  PL | 5 | 2 | Table 1 | te | Table 1 contains verification activities including “type evaluation or approval” which does not match the table. | Delete first row. | Agreed. |
| 0479  FR | 5 | 3 |  | te | What is the “verification catalogue”? The organization for verifications depends on national regulations. It some countries, the verifications are realized by private companies. | Please delete the second paragraph of the note. | Paras 2 and 3 of the note deleted. Para 1 of note included in main text. |
| 0480  FR | 5 | 3 |  | te | The third paragraph of the note is not adapted. A verification shall check the metrological characteristics of an instrument. A verificator can not know what is the real use of the instrument and what the use will be after the verification. | Please delete the third paragraph of the note. | See comment 0479. |
| 0481  FR | 5 | 3 |  | te | Part 1 does not give guidance on the general conditions to realise initial verification. | Please insert the paragraphs R76:2006, 8.3, 8.3.1 to 8.3.4 if they are not reintroduced in part 1. | Agreed. |
| 0482  AU | 5 | 3 | Note | ge | In the Note, it is suggested verification testing may be conducted at a reduced load on account of usage conditions. It is Australia’s view that Verification testing should align as close as practicable to test descriptions in the recommendation, and that instruments are tested appropriately according to their type.  The example appears to give permission to not follow the OIML procedure as stated in R-76-2, 5.10. | The following should be removed or amended: *The cost of the verification should be covered by the prices fixed in the verification catalogue. The handling of heavy weights and other logistics can be time-consuming and the verification costs must be reasonable.*  *For example, for a weighing instrument of 1000 kg capacity which is essentially used for weighing containers between 100 kg and 300 kg ………………………… as specified in R 76-2, 5.10*  Suggested alternative is either to remove this text and example and only leave the first part of the note with additional text:  *The verification procedure can be optimised depending in the type of instrument and the application. Seek guidance from your national regulator.* | See comment 0479. |
| 0483  AU | 5 | 3 | Note | ge | Reference to cost of a verification should not be the reason testing is not done correctly. |  | See comment 0479. |
| 0484  CECIP | 5 | 3 | Note | te | Though the idea of a risk-based/process-related upper limit is supported, this would need a lot of further explanations/guidance:   * Who decides what the “essentially” used range is and who will control this? * Can the instrument in the example be considered to be verified over the complete weighing range or only up to 100 kg? | Delete note “For example,……” or elaborate details how allowed reduction of the range will be determined and controlled and what the consequences are. | See comment 0479. |
| 0485  PL | 5 | 3 | Note: third sentence | te | The example allows use of 300 kg mass instead of 800 kg as specified in EC 45501 and in R 76-2. It is incomprehensible. | Delete sentence. | See comment 0479. |
| 0486  FR | 5 | 3.1 | Table 2 | te | The word “record” in the line named 2 is not adapted. The software and the modules (if applicable) shall be inspected, not only recorded. The instrument shall comply with its certificate and modules shall comply with their certificates. | Please replace “record” by “inspect”. | See comment 0487. |
| 0487  FR | 5 | 3.1 | Table 2 | te | The list of the tasks shall comply with the list of test in R76:2006, 8.3.3 | Please correct the list of the tests accordingly. | Agreed – 8.3.2 and 8.3.3. |
| 0488  CECIP | 5 | 3.1 | Table 2 | te | No 7 “test range of zero setting” does not change with time; it should be tested only for type approval, not during each verification | Delete No 7 for subsequent verification | Not agreed. 3.1 is about initial verification. |
| 0489  AU | 5 | 3.2 |  | ge | Why does the process require taking a photo on the first of the Subsequent verifications? should this not be an action done at the Initial verification? If the markings are not correct on the first verification it maybe some time before the first subsequent verification is performed. There may be confusion on who is doing what verification.  What is the purpose of taking the photo after the Type Evaluation and the Initial verification? What is done with the photo after it is taken? | Suggest removal of requirement to collect photographs of instruments.  Or alternatively, add third dot point from Clause 3.2 (Take photos of the weighing instrument, indication and descriptive marking) to Clause 3.1 and remove from Clause 3.2. | Agreed. Sections 3.2 and 3.3 combined and edited. |
| 0490  FR | 5 | 3.2 |  | te | What is the need to make a difference between the first and the other subsequent verifications? It would be easier to have only a paragraph for subsequent verifications. | We propose to merge the paragraphs 3.2, 3.3 and 3.4. | See comment 0490. |
| 0491  FR | 5 | 3.2 |  | te | The verification data base or register is not mandatory. It depends on national regulations. | Add if applicable. | See comment 0490. |
| 0492  FR | 5 | 3.2 |  | te | It seems there are not tests for the first subsequent verification and only a visual inspection. | Please specify the tests to be done for the first subsequent verification, if the first and other subsequent verifications are not merged. | See comment 0490. |
| 0493  FR | 5 | 3.3 |  | te | The sentence “Assuming the same authorised body is in charge, the administrative tasks already carried out at first subsequent verification are no longer required” is not true, it depends on national regulations. Moreover, even if it is the same body, the verification shall determine if the instrument has not been modified. | The tasks 1 to 4 has to be realized for each subsequent verification. In particular, the conformity of sealings shall be checked. | See comment 0490. |
| 0494  FR | 5 | 3.3 |  | te | The list of the tests of subsequent verifications shall be reviewed. The opinion “are supposed to work identically” is not sufficient in legal metrology. The goal of the verification is to check the instrument complies with requirements. | Please delete “are supposed to work identically as long as the instrument has not been modified.” | See comment 0490. |
| 0495  FR | 5 | 3.3 |  | te | For example, the application of the instrument or the absence of modification/adjustment of the level sensors can not be guaranteed by the verificator. The list of the tasks shall be discussed. The simplifications in the note has to be discussed. | List of the tests to discussed | See comment 0490. |
| 0496  JP22 | 5 | 3.3 |  | ed | We would like to propose to modify the title of 3.3 | Add underlined sentences:  ***3.3 Tasks to be carried out at any subsequent verification and in-service inspection*** | New section to be created. |
| 0497  JP23 | 5 | 3.3 |  | te | We would like to change in the note.  For any subsequent verification, tasks 3 and 4 are necessary to account for possible changes in location, installation of instruments and environmental conditions. | Correct "Tasks 1, 2, 3, 4 ....." to "Tasks 1, 2 ....." | See comment 0490. |
| 0498  JP24 | 5 | 3.3 |  | te | We would like to add a reference to the note. | Add underlined sentences:  *The repeatability test (10) can be carried out with a reduced load corresponding to the application instead of 0.8 × Max; (see explanation in the note to clause 3)* | See comment 0479 |
| 0499  CECIP | 5 | 3.3 | First sentence | ed | should not depend on the authorized body... information taken at the first subsequent verification should be available for all authorized bodies (on a digital database) | Change sentence to “assuming the information of the administrative tasks taken at the first subsequent verification are available, …” | See comment 0490. |
| 0500  CECIP | 5 | 3.3 | Note, first bullet point | te | Though the idea of a risk-based/process-related upper limit is supported, this would need a lot of further explanations/guidance:   * Who decides what is “corresponding to the application” and who will control this? * Can the instrument in the example be considered to be verified over the complete weighing range or only up to a reduced Max? | Delete first bullet point of the note “The repeatability test (10)….” or elaborate details how allowed reduction of the range will be determined and controlled and what the consequences are. | See comment 0490. |
| 0501  CECIP | 5 | 3.3 | Note, last bullet point | te | Though the idea of a risk-based/process-related upper limit is supported, this would need a lot of further explanations/guidance:   * Who decides when a measuring range may be reduced and who will control this? * What would be the consequences concerning the reduction of the measuring range on the range that may be considered verified? | Delete last bullet point of the note “The measuring range may be reduced.” or elaborate details how allowed reduction of the range will be determined and controlled and what the consequences are. | Last bullet deleted. |
| 0502  CECIP | 5 | 3.3 | Note, second bullet point | te | This contradicts definitions 3.3.2.6 and 3.3.2.7 of part 1 – only multi-interval instruments have partial weighing ranges.  “Points” is ambiguous. | Change to “…but at least three loads for each partial weighing range (for multi-interval instruments) or for each weighing range (multiple range instruments), respectively; | Agreed but this is in the third bullet. |
| 0503  PL | 5 | 3.3 | Note: first bullet | te | Use of reduced load smaller than 0,8xMax. Incompatible with EC 45501 and in R 76-2. | Delete sentence. | Agreed (but EN 45501 not relevant). |
| 0504  PL | 5 | 3.4 |  | te | In Poland, in the case of large truck scales, before the verification time, the installer frequently changes the indicator, pretending that the scale is newly installed (in conformity assessment). This way, verification by the state inspector is avoided. | Add a recommendation condemning the replacement of the indicator in order to avoid verification. | Although the concern is understood, this should not be in an OIML Recommendation. |
| 0505  CECIP | 5 | 3.4 |  | te | “modification” and “repair” is too vague and listing examples will lead to misinterpretations | Replace the first two sentences by “A secured weighing instrument must be re-verified and sealed after significant modification or significant repair. A “significant” modification or repair is one of the following cases: | Agreed in principle, text modified. |
| 0506  DE | 5 | 3.4 | Note 4 | Te | “A typical example is a 60 t weighbridge used for weighing trucks, which are in any case limited to 40 t due to national regulations.” | Although the example seems to be well chosen, the reality is different. Truck drivers and their entrepreneurs are by no means kept from excessively overloading trucks by laws. In Germany the police often detect trucks bearing a load of double payload allowed as per the technical documents. That means that a truck of which the maximum total load should not exceed 40 t may have a real weight of nearly 60 t. As non-automatic weighing instruments are often used to determine the overload of a truck, it must be expected that the weighing range above 40 t will be used. So, the mere fact that as per legal regulations a load should not be greater than a certain amount cannot guarantee that it is being used at loads being significantly higher than the expected load. | Note 4 deleted. |
| 0507  CECIP | 5 | 3.4 | Note 4 | te | It should be specified how reduction of an instrument shall be marked on the instrument. | Add explanation about necessary marking in case of a reduced measuring range. | See comment 0506. |
| 0508  CECIP | 5 | 3.4 | Second bullet point of list | te | To require a re-verification after each internal adjustment is completely impractical and contradicts the principle of internal adjustments. | Remove bullet point “internal adjustment for improvement of weighing accuracy” from list | Disagree. Please provide explanation of why it is “completely impractical” |
| 0509  AU | 5 | 4 | Figure 2, 3, & 4 | ge | Calibrated racks (Figure 2), Van (Figure 3) and Truck (figure 4) layouts should be clearly labelled as suggestions not recommendations as it may appear that if adopted such layouts will become mandatory. |  | Agreed. “Example of a” added. |
| 0510  AU | 5 | 4 | Table 3 | ge | Concern over the use of ‘calibrated racks’ as well as reference standards in Table 3.  Reference weights without reference to their accuracy may cause confusion. | See appendix 2 for suggested alternative table to Table 3 - Typical equipment for verification. | Agreed. Added as a note. |
| 0511  AU | 5 | 4 | Table 3 | ge | Equipment sections of the table do not state sufficient masses to achieve the maximum capacity state. Consider adding additional wording – ‘Additional masses when combined to equal to the full capacity of the instrument’. |  | Agreed. Added as a note |
| 0512  AU | 5 | 4 | Table 3 | ge | Table 3 combined with Section 5 Table 4 adds an extra step in recommending equipment used. Suggest using a table which explicitly states what an appropriate set of equipment is for each class of instrument, instead of for the instrument’s capacity. An example based on the Australian test procedures is attached.  Added example expedites need to compare uncertainty in parts per million as user can take a set of equipment, user knows will typically be appropriate for the instrument class they are testing. | See Appendix 3 for suggested alternative table with clearer examples of recommended equipment: | Agreed. Suggested table used to replace tables 3 and 4, and clauses 4 and 5 to be combined. |
| 0513  JP25 | 5 | 4 | **Table 3** | ed | Please make a correction. | Correct "mainly class II & IIII instruments" to "mainly class III & IIII instruments." | See comment 0512. |
| 0514  PL | 5 | 4 | Table 3 | te | The sets of weights are really various. We often use 20 kg, 25 kg, 50 kg standards for smaller scales and 1000 kg, 2000 kg, 2500 kg for truck and rail weighbridges. Sets presented in the table seems rather limited. But the main problem is that you don’t present additional weights of 1/10 e for determining of errors as it is described in R 76-2 5.4.3. | Add additional weights 10 x ......... | See comment 0512. |
| 0515  CECIP | 5 | 4 | Table 3 | te | The listed equipment is not sufficient in some cases or not sufficiently described in other cases:   * First row: With the mentioned weights, usually a maximum test load of 20 kg can be achieved – this is not sufficient for a device with Max=100 kg. * Second row: How much 20 kg weights should there be in each “rack”? Taking the example of Fig. 2, a maximum test load of 260 kg can be achieved – this is not sufficient for a device with Max=500 kg. * Third row: How much 20 kg weights should there be in each “rack”? Taking the example of Fig. 2, a maximum test load of ~1000 kg can be achieved – this is not sufficient for a device with Max=5000 kg. | Rework Table 3. | See comment 0512. |
| 0516  NZ | 5 | 5 | Class of weights to be used – General rule | te | “1/3 of mpe” refers to weighing instrument under test. | The uncertainty or maximum permissible error of reference weights, expressed in weighing units, must be not greater than 1/3 of mpe of the instrument under test for the applied load. | See comment 0512. |
| 0517  CECIP | 5 | 5 | Conclusion | te | 0.5 g is not “negligible” compared to 3 g. | Replace sentence with “…is 0.5 g, i. e. smaller than 1/3 of the mpe of 3 g.” | See comment 0512. |
| 0518  AU | 5 | 5 | General rule | te | 1/3 of mpe refers to instrument. | The uncertainty or maximum permissible error of reference weights, expressed in weighing units, must be not greater than 1/3 of mpe of the instrument for the applied load. | See comment 0512. |
| 0519  AU | 5 | 5 | Table 4 | te | F2 class weights are not suitable for the class 2 instruments with number of verification scale intervals greater than 30000. | Should add a note for clarification, eg, F2 weights may not be suitable for the verification of all the class 2 instruments. | See comment 0512. |
| 0520  CECIP | 5 | 5 | Table 4 | te | Does this table comply with the general rule in all possible cases? If yes, it is redundant and if no, it is misleading/contradicting. | Delete Table 4 – the General rule is sufficient. | See comment 0512. |
| 0521  NZ | 5 | 5 | Table 4 - Weight classes for use with weighing instruments | te | For Class M weights, the third column must refer to error in weights and not uncertainty (see 5.6.1 of R76-1). | Create a separate table for Class III and Class IIII weighing instruments, with column 3 titled “Error of Weights” ≤ 1/3 of mpe of the instrument under test for the applied load | See comment 0512. |
| 0522  CECIP | 5 | 5 | Table below Table 4 | ed | The table below Table 4 does not have a caption | Add caption to the Table. | See comment 0512. |
| 0523  AU | 5 | 5 | Tables and example of M1 weight | te | The use of M1 weight as an example is not appropriate and conflicts with R76-1 clause 5.6.1. The clause states an error of weights, (not uncertainty of weights except class E2 or better), shall not exceed of 1/3 mpe of the instrument.  The third column of uncertainties is not necessary as uncertainties do not require to be considered, except E2 or better. |  | See comment 0512. |
| 0524  CECIP | 5 | 6 | Second bullet point | te | A recommendation for legal metrology should not deal with recommendations for calibration intervals – there are other regulatory documents for that purpose. | Remove second bullet point. |  |
| 0525  AU | 5 | 6 | Table 5 | ge | Table 5 – Recommended Verification intervals  Concern that 500 weighing annually does not constitute “intensive” (<2 weighing per day). Suggest 5000 better reflects intensive usage pattern (>13 weighing per day). | See Appendix 4 for alternative table. | To be discussed. |
| 0526  AU | 5 | 6 | Table 5 | ge | User checking should be encouraged, and continued performance may extend period of verification. | Add note:  4 User checking should be encouraged, the verification interval of an instrument may be extended based on performance. | Agreed. |
| 0527  AU | 5 | 6 | Table 5 | ge | Mobile instruments should be checked for accuracy after relocation. | Add note:  5 Mobile instruments, such as weighing instruments mounted in a vehicle (ref OIML R-76-1 3.1.2.11) or used for weighing road vehicles (ref OIML R-76-1 3.1.2.12), that could be used in different gravity locations between verifications should be check for accuracy after relocation and before use. | Not agreed. This does not affect reverification intervals. |
| 0528  FR | 5 | 6 | Table 5 | te | The verifications interval can not be defined on the base of the use of the instrument or a risk analysis. How a verificatory can know what is the use of the instrument and what will be the use? It seems not realistic to ask request a risk analysis from the end-user. |  | No proposal given. |
| 0529  PL | 5 | 6 | Table 5 | te | Verification interval 2-4 years even for occasionally used scales seems too long. | Two years seems reasonable. | Not agreed. |
| 0530  CECIP | 5 | 6 | Table 5 | te | Though the idea of a risk-based/process-related verification intervals is supported, this would need a lot of further explanations/guidance:   * Who measures how many weighings are performed per year and who will control this? * What happens, if a device is used <500 times p.a. in the first two years but significantly more often in the following years? | Replace first two rows with the following :  Electronic weighing instruments: 1 year to 3 years  Mechanical weighing instruments: 2 years to 5 years  *[BIMLnote: These lines were shown in table form in the comments, but will not collate in this form]* | To be discussed. |
| 0531  CECIP | 5 | 6 | Table 5, Footnotes 1 to 3 | te | The footnotes don’t provide any additional benefit. | Delete footnotes. | Disagree. The footnotes are just advice. |
| 0532  FR | 5 | 6 | Table 6 | te | Calibration intervals for reference weights depend on national regulations.  6 years for class E2, F1, F2 seem to long. | Add a note “The calibration intervals for reference weights depend on national regulations”. | See comment 0534. |
| 0533  PL | 5 | 6 | Table 6 | te | Calibration interval 4-6 years is too long. | We use 2 years for stainless steel E2, F1 and F2 class standards and 1 year for cast iron M class standards. | See comment 0534. |
| 0534  CECIP | 5 | 6 | Table 6 | te | The complete table is on the one hand much too vague (What is “very frequent use”?) and on the other hand gives specific intervals.  A calibration interval of 4 years to 6 years is way too long for E2 weights.  A recommendation for legal metrology should not deal with recommendations for calibration intervals – there are other regulatory documents for that purpose. | Delete Table 6. | Agreed. Note on use of D 10 added for calibration of reference weights. |
| 0535  AU | 5 | 7.1 |  | ge | Tables should be titled |  | Agreed |
| 0536  AU | 5 | 7.1 |  | ge | The second table in sub clause 7.1 should make clear that the results of an in-service inspection is sufficient for a verification. It’s location in clause 7 may cause confusion. | Move sub clause 7.1 to clause 2, with an expanded explanation of an in-service inspection. Define in-service here or in R 76-1. | Disagree. 7.1 does not reference in-service inspection. |
| 0537  JP26 | 5 | 7.1 |  | ed | Please make a correction for “the ±3.0e of MPE”. | Correct "L to L ± e" to "L to L ± 2e" | Agreed. |
| 0538  PL | 5 | 7.1 |  |  | We understand that the basis is the procedure determining of errors described in R 76-2 5.4.3 and it is completely omitted in part 5. Instead you propose procedure 7.1. | As we should keep R 76-2 5.4.3 there should be underlined that 7.1 is an additional procedure. | Agreed. Reference to R 76-2 added. |
| 0539  AU | 5 | 7.2 |  | ge | A repeatability test of 0.8 max is potentially excessive, and in some cases not possible. A 60 t weighbridge would require a 48 t test. This exceeds current on road legislation for load limits in Australia. | For subsequent verification one series of weighings with 0.6 × Max is sufficient | Not agreed. |
| 0540  AU | 5 | 7.4 |  | ge | Text above the images states, ‘A wooden pallet should be systematically used to be close the practical application’ There appears to be some words missing.  Reason for correction: A Pallet is not only made of wood and the application may not use a pallet as such. | Suggested amended text:  A suitable pallet or similar should be used for the testing, that is the same or as close as practical to the application of the weighing instrument. | Agreed. |
| 0541  RU | 5 | 7.4 | figure | ed | load location label is not displayed correctly |  | Agreed. |
| 0542  DE | 5 | 7.5 | Note | Te | There is no basis for the statement of the note, neither in Part 1 nor in Part 2. Moreover, we must consider that for subsequent verification the same error limits should apply as for initial verification. In 5.5.1 of R76-1 (CD1) there is no concession with regard to wider error limits at subsequent verification. These are allowed only with in-service inspection (5.5.2). That is what was stated in the 2006 edition of R76-1 (8.4.1). We must consider that with all weighing instruments recommendations the concept of reduced verification error limits aims at being sure that instruments keep the in-service error limits over the period between two verifications! (see R51-1, 5.4.1 / R61-1, 8.4 / (old) R76-1, 8.4.1 / R106, 5.3.1 / R107, 5.3.1) In CD1 the statement from 8.4.1 of old R76-1 is completely missing. It must be re-inserted in which part ever because we must not abolish a main idea behind the differentiation between verification and in-service error limits. The latter ones are really the crucial ones which must be kept over the whole period of use between two verifications! This is supposed to be achieved when at verifications (also subsequent verifications!) the smaller error limits have been kept. Even if we acknowledge that subsequent verification is up to national legislation, we must keep the statement from old R76-1, perhaps replacing “shall” with “should”. Anyway, application of R76 as part of national metrology rules is up to the governments. So, even if you keep the “shall”, states are free to choose to what extent they use R76 or even use it at all. |  | Note deleted. Also see comment relating to reinstatement of R 76-1:2006, 8.3 and 8.4. |
| 0543  JP27 | 5 | 7.6 |  | te | We would like to revise the text to make the requirements easily understood. | Add underlined sentences:  *Due to their limited surface (typically 500 × 700 mm) and to their high capacity (typically 5 t to 10 t), wheel load scales cannot be tested up to full scale using calibrated weights. Therefore, it must be performed using specific test equipment.*  *Due to their limited dimensions and their high capacity (typically 3 t to 20 t), crane scales can hardly be tested up to full scale using calibrated weights. Therefore, it must be performed using specific test equipment.* | Agreed. |
| 0544  AU | 5 | 7.7 |  | ed | Broken hyperlinks |  | Will be corrected. |
| ~~0545~~  ~~JP28~~ | ~~5~~ | ~~7.7~~ |  | ~~te~~ | ~~Gravity variations need to be marked to show either the zone or the place of use.~~  ~~Therefore~~ *~~g~~*~~local~~ ~~is the gravity zone or the place of use.~~ | ~~Add the underlined expression:~~  *~~g~~*~~local~~~~= local gravity, normally written on the nameplate~~  ~~Delete “, normally written on the nameplate” from the~~ *~~g~~*~~1~~~~.~~  *~~g~~*~~1~~ ~~= gravity value at place of adjustment~~ | ~~To be discussed.~~  **COMMENT WITHDRAWN**  **2024-03-08** |
| 0546  RU | 5 | 7.7 |  | ed | Link to a service that does not work | remove link | See comment 0544. |
| 0547  AT | 5 | 7.7 | Last line | Ed | www-link to a discontinued web service. Most links of the project homepage appear to be broken. | Update/remove link | See comment 0544. |
| 0548  CECIP | 5 | 7.7 | Note | ed | What is the sentence “See additional…” – a note?  However, note that the SIS project is not maintained anymore and the service was discontinued.  National guidance should be provided for authorised bodies (compare to WELMEC gravity information)  Information of how to document gravity information for each individual device could be given | Delete sentence or mark as note and provide another link | See comment 0544. Changed to note. |
| 0549  DE | 5 | 7.8 | b) | Te | From the physical and technical point of view we agree with the statement. However, the requirement can neither be found in old R76 nor in CD1. | A corresponding requirement should be inserted into R76-1. | Agreed. Corresponding requirement to be added to R 76-1. |
| 0550  AU | 5 | 7.8 | Point c | ge | Propose additional text | Suggested additional words – ‘Such as by using reference weights for adjustment at the site where the weighing instrument is to be used.’ | Not agreed. |

# Appendix

Appendix 1 – 1CD OIML R 76-5 2 Table 1 - Metrological control activities

|  |  |  |
| --- | --- | --- |
| Metrological Control Activity | Short Description | Conducted by |
| Type evaluation or approval (see also R 76-1,10.2) | In depth system evaluation, comprehensive functional testing, including influence of environmental conditions such as temperature, humidity, EMC, compatibility checking of modules. | National metrology institute or accredited evaluation body |
| Initial verification | Test carried out on a certified weighing instrument / system covered by the Type Evaluation certificate before its first use. | National metrology institute verification inspector or authorised verifier from an accredited body |
| Subsequent verification | Test carried out periodically, that cover a subset of initial verifications | Verification inspector or authorised verifier from an accredited body |
| In service inspection | Short inspection that could be done at any time, with error limits being twice those of the maximum permissible errors on the initial verification (reference R-76-1-202xE Clause 5.5.2) | Verification inspector or authorised verifier from an accredited body |

Appendix 2 - 1CD OIML R 76-5 4 Table 3 – Typical equipment for verification

|  |  |
| --- | --- |
| Maximum Capacity | Equipment |
| Up to 100 kg | Set of weights from 1 g to 10 kg  Set of additional weights: 2 × 0.1 g, 0.2 g, 0.5 g, 1 g, 2 g, 5 g, 10 g1  With access to further calibrated masses of an appropriate class sufficient to reach the full capacity of weighing instrument. |
| 100 kg to 500 kg | Van equipped with:  · Set of weights from 1 kg to 10 kg  · 1-2 calibrated rack(s) including a set of 20 kg weights  · Sets of additional weights1: 2 × 10 g, 20 g, 50 g, 100 g  With access to further calibrated masses of an appropriate class sufficient to reach the full capacity of weighing instrument. |
| Over 500 kg up to 5000 kg small weighbridge | Small truck equipped with:  · 2-4 calibrated racks, each including a set of 20 kg weights,  · Set of 500 kg weights,  · Sets of additional weights1: 2 × 100 g, 200 g, 500 g, 1 kg  With access to further calibrated masses of an appropriate class sufficient to reach the full capacity of weighing instrument. |
| Over 5 t to 50 t weighbridge for trucks | Truck equipped with:  Set of 500 kg and 1000 kg weights.  Sets of additional weights1: 2 × 1 kg, 2 kg, 5 kg, 10 kg, 20 kg  With access to further calibrated masses of an appropriate class sufficient to reach the full capacity of weighing instrument. |
| 1. These weights are used for determining changeover points of instruments with digital indication and without auxiliary indication (mainly class II & IIII instruments). | |

Appendix 3 - 1CD OIML R 76-5 4 - Appropriate minimum reference standards of measurement (example)

| Instrument class | Minimum reference standards of measurement required |
| --- | --- |
| Classes 1 and 2 | OIML class E2/F1 standards of appropriate denominations or weights. |
| Classes 3 and 4 with 30 kg capacity or less | * A set of OIML class F2/M1 standards as follows:   1 × 50 mg 1 × 100 mg 2 × 200 mg  1 × 500 mg 1 × 1 g 2 × 2 g  1 × 5 g 1 × 10 g 2 × 20 g  1 × 50 g 1 × 100 g 2 × 200 g  1 × 500 g 1 × 1 kg 2 × 2 kg  1 × 5 kg; and   * A set of OIML class M2 standards as follows:   1 × 10 kg 1 × 20 kg |
| Classes 3 and 4 exceeding 30 kg capacity but not exceeding 3 t | * A set of OIML class M1 standards as follows:   1 × 1 g 2 × 2 g 1 × 5 g  1 × 10 g 2 × 20 g 1 × 50 g  1 × 100 g 2 × 200 g 1 × 500 g  1 × 1 kg 2 × 2 kg 1 × 5 kg; and   * A set of OIML class M2 standards as follows:   1 × 1 t; and   * Access to a further 2 t of OIML class M2 standards |
| Classes 3 and 4 exceeding 3 t | * A set of OIML class M1 standards as follows:   1 × 100 g 2 × 200 g 1 × 500 g  1 × 1 kg 2 × 2 kg 1 × 5 kg; and   * A set of OIML class M2 standards as follows:   1 × 1 t 1 × 2 t; and   * Access to further OIML class M2 standards sufficient to test to 20% of the maximum capacity of the instrument. |

Appendix 4 - 1CD OIML R 76-5 4 Table 5 – Recommended verification intervals

|  |  |
| --- | --- |
| **Type of weighing instrument** | **Verification interval** |
| Weighing instrument used intensively (over 5000 weighing per year) | 1 - 2 years |
| Weighing instruments used occasionally (under 500 weighing per year) | 2 - 4 years |