

**96th Annual Meeting of the
National Conference on Weights and Measures**

**July 17 – 21, 2011
Missoula, Montana**

**Addendum Sheets to the Interim Report of the
Specifications and Tolerances (S&T) Committee**

Reference
Key Number

300 INTRODUCTION

The Specifications and Tolerances Committee (hereinafter referred to as “Committee”) submits its Interim Report to the National Conference on Weights and Measures. The Report consists of the Interim Report offered in Publication 16, “NCWM Committee Reports,” and this Addendum. Page numbers in tables below refer to pages in Publication 16.

Presented below is a list of voting and information items. Voting items are indicated by the suffix **V** or, if the voting item is part of the Consent calendar, by the suffix **VC**. If the item is informational, it is indicated by the suffix **I**; if the item is withdrawn, it is indicated by the suffix **W**. Items marked with a **D** after the key numbers are developing issues. The developing designation indicates an item has merit; however, the item is returned to the submitter for further development before any action at the national level. The Committee’s Final Report is proposed to be grouped in the following order:

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*Appendix C will not be printed in the hardcopy of Publication 16 for the meeting attendees. The appendix can be viewed online at: <http://www.ncwm.net>, or at the NIST Weights and Measures Website at: <http://www.nist.gov/pml/wmd/pubs/pub16-11.cfm>.

Consent Calendar Items

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Withdrawn Items

The following items are withdrawn (W) and require no formal action of the NCWM:

Reference

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320	SCALES	24
320-1	W T.N.4.5.1. Time Dependence: Class II, III, and IIII Non-automatic Weighing Instruments.....	24

Informational and Developing Items

The following items are informational (I) or under development (D) and require no formal action of the NCWM:

Reference Key Number	Title of Item	Publication 16 Page No. S&T -
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331	VEHICLE-TANK METERS (VTM)	29
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Details of All Items

In Order by Reference Key Number

310 GENERAL CODE

310-1 VC Provision for Sealing Electronic Adjustable Components

After discussing the comments from the 2011 NCWM Annual Meeting open hearings and the proposed changes from WMD, the Committee agreed to modify the Item Under Consideration to read as follows:

The current language in paragraph G-S.8. states: “A device shall be designed with provision(s) for applying a security seal that must be broken, or for using other approved means of providing security (e.g., data change audit trail available at the time of inspection), before any change that detrimentally affects the metrological integrity of the device can be made to any electronic mechanism.”

Thus, for parameters protected by physical means of security, once a physical security seal is applied to the device, it should not be possible to make a metrological change to those parameters without breaking that seal. Likewise, for parameters protected by electronic means of security, it should not be possible to make a metrological change to those parameters without that change being reflected in the audit trail. Since this philosophy addresses provisions for protecting access to any metrological adjustment, the philosophy should be applied consistently to all electronic device types.

Add the following text to the Background/Discussion:

During the open hearings at the 2011 NCWM Annual Meeting, WMD suggested making the following changes to Committee’s interpretation of G-S.8. as shown in NCWM Publication 16 in the “Item Under Consideration” to make clear how that interpretation is intended to apply to electronic devices protected by physical means of security versus electronic devices protected by electronic means of security:

The current language in paragraph G-S.8. requires that a security seal be broken before a metrological change can be made to an electronic device other approved means of security. Thus, for parameters protected by physical means of security, once a physical security seal is applied to the device, it should not be possible to make a metrological change to ~~the device~~ those parameters without breaking that seal. Likewise, for parameters protected by electronic means of security, it should not be possible to make a metrological change to those parameters without that change being reflected in the audit trail. Since this philosophy addresses provisions for protecting access to any metrological adjustment, the philosophy should be applied consistently to all electronic device types.

Gordon Johnson, Gilbarco, Inc.; Dmitri Karimov, speaking on behalf of MMA; and Darrell Flocken, speaking on behalf of the SMA, supported the language in Pub 16. Mr. Johnson and Mr. Karimov requested additional time for review of the language suggested by WMD. Mr. Flocken, speaking on behalf of Mettler-Toledo, indicated support for the amendments as suggested by WMD.

310-2 D G-S.1. Identification. – (Software)

Add the following text to the Background/Discussion:

During the 2011 NCWM Annual Meeting open hearings, the Committee heard from WMD relative to whether or not the status of this item should be changed to Developing in order to provide the Software Sector (SS) additional time to more fully develop the item based on the following points:

1. The current proposal is not developed enough for consideration by the S&T. Based on the diversity of comments heard on this issue, WMD believes the item is not close to a vote and that considerable work still needs to be done to develop the item before it could be considered for vote by the NCWM.
2. WMD interprets the current proposal to require software be marked with a nonrepetitive serial number when in fact it is not the intent of the SS to require such marking. Thus, it is believed that the language in current proposal will need modification to resolve this issue.
3. The draft of the March 2011 SS Summary reported that several SS members envision G-S.1. being developed further to the extent that G-S.1.1. may not be needed.

NIST Technical Advisor Richard Harshman reported that SS Co-Chairman Jim Pettinato stated that a key point agreed upon by members of the SS was that the software version/revision identifier should be accessible through the user interface. When asked about the possibility of changing the status of the item to Developing, Jim indicated that he intends to poll members of the SS to determine whether or not they agree that the status should be changed.

Darrell Flocken, representing SMA, indicated that he believes the SS is intending to propose a change to the current item and looks forward to the further development of this item based on the work of the SS. Dmitri Karimov, speaking on behalf of the MMA, agreed with the comments made by Mr. Flocken.

The Committee discussed the comments offered by WMD and SMA. After considering those comments, the Committee agreed to change the status of this item to Developing because the item is lacking enough information for full consideration and a full proposal has yet to be developed.

310-3 VC G-A.6. Nonretroactive Requirements (Remanufactured Equipment)

Add the following text to the Background/Discussion:

The Committee heard support for the proposed language in the Item Under Consideration.

320 SCALES

320-1 W T.N.4.5.1. Time Dependence: Class II, III, and IIII Non-automatic Weighing Instruments

No change.

320-2 VC T.N.4.7. Creep Recovery for Load Cells

Add the following text to the Background/Discussion:

The Committee heard support for the proposed language in the Item Under Consideration.

321 BELT-CONVEYOR SCALE (BCS) SYSTEMS

321-1 VC N.3.1.3. Check for Consistency of the Conveyor Belt Along Its Entire Length

The Committee considered the alternate language forwarded by Bill Ripka, Chairman of the USNWG, and agreed that the new language is clearer. Consequently, the Committee modified the language in the Item Under Consideration to read as follows:

N.3.1.3. Check for Consistency of the Conveyor Belt Along Its Entire Length. – ~~After a zero-load test with flow rate filtering disabled, the totalizer shall not change more than plus or minus (± 3 d) 3.0 scale divisions from its initial indication during one complete belt revolution. During a zero-load test with all operational low-flow lockout disabled, the absolute value of the difference between the maximum and minimum totalizer readings indicated on the totalizer during any complete revolution of the belt shall not exceed 0.12% of the minimum test load.~~

Note: The end value of the zero-load test must meet the ± 0.06 % requirement referenced in the “Test for Zero Stability.”

(Added 2002) (Amended 2004 and 2011)

The Committee also agreed that the amended language now correctly associates the term “absolute value” with the change in totalizer readings rather than the reference to “0.12% of the minimum totalized load.”

331 VEHICLE-TANK METERS (VTM)

331-1 VC S.2.6. Thermometer Well, Temperature Determination.

Modify the proposal to reflect a non-retroactive date of January 1, 2012.

Add the following text to the Background/Discussion:

During the open hearings the Committee clarified that the proposed paragraph should become effective as of January 1, 2012. The Committee heard support by the MMA for the proposal, including the 2012 effective date.

331-2 I T.4. Product Depletion Test

Add the following text to the Background/Discussion:

The Committee reiterated its need for data to evaluate the impact of any proposed tolerances changes. The Committee asks that the following test data be submitted to assist the Committee in making this assessment:

- make and model of the meter,
- marked maximum flow rate of the meter,
- actual delivery rate during the product depletion test,
- test draft size, and
- error (in cubic inches or percent) for the product depletion test.

For information on submitting data, contact the NIST Technical Advisor, Tina Butcher by e-mail at tina.butcher@nist.gov or by phone at (301) 975-2196. The Committee also plans to distribute a request on WMD's Director's list serve for jurisdictions to submit data.

Dmitri Karimov, speaking on behalf of the MMA, indicated that the MMA continues to be concerned about the impact of any proposed changes on smaller meter sizes, particularly meter sizes that are less than 1.5 inches.

The Committee looks forward to receiving additional proposals and requested data by November 1, 2011 so that the information can be considered at the 2012 NCWM Interim Meeting and the item can remain on the Committee's agenda.

336 WATER METERS

336-1 VC Appendix D- Definition of Utility-Type Water Meters

Add the following text to the Background/Discussion:

The Committee heard support for the proposed language in the Item Under Consideration.

342 FARM MILK TANKS

342-1 VC N.5.1. Verification of Master Metering Systems

Modify the proposed language in the Item Under Consideration to read as follows:

N.5.1. Verification of Master Metering Systems. – A master metering system used to gauge a milk tank shall be verified before and after the gauging process. A master metering system used to calibrate a milk tank shall be verified before starting the calibration and re-verified at least every quarter of the tank capacity, or every 2000 L (500 gal), whichever is greater. **The process of re-verifying the master metering system at every quarter of the tank, or every 2000 L (500 gal) may be waived if the system is verified using a NIST traceable prover with a minimum of two tests immediately before and one test immediately after the gauging process and that each test result is within 25 % of T.3. Basic Tolerance Values.**

(Added 2001)(Amended 2012)

Add the following text to the Background/Discussion of this item:

The Committee considered alternate language that would clarify the process of verifying that a meter is performing within the 25% of T.3. Basic Tolerance Values. The Committee felt that this language would improve consistency in applying N.5.1.

During the opening hearing, Richard Koeberle, Federal Milk Market Administrator, offered support for the above modified language.

360 OTHER ITEMS

360-1 I International Organization of Legal Metrology (OIML) Report

No change.

360-2 D Developing Items

- **Part 2.20. Weigh-In-Motion Vehicle Scales for Law Enforcement – Work Group**

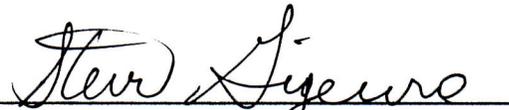
Add the following text to the Background/Discussion of this item:

Rick Harshman provided an update on the progress of the WIM Work Group.

- **Part 3.30. Liquid-Measuring Devices (LMD) – Item 1: Price Posting and Computing Capability and Requirements for a Retail Motor-Fuel Dispenser (RMFD)**

Add the following text to the Background/Discussion of this item:

Jeff Humphreys, Chairman of the NCWM Task Group on RMFD Price Posting, provided an update on the progress of the group.



Mr. Steve Giguere, Maine, Chairman
Mr. Kenneth Ramsburg, Maryland
Mr. Paul Moyer, Nebraska
Mr. Doug Deiman, Alaska
Mr. Brett Gurney, Utah

Mr. Ted Kingsbury, Measurement Canada, Technical Advisor
Ms. Tina Butcher, NIST, Technical Advisor
Mr. Steve Cook, NIST Technical Advisor
Mr. Richard Harshman, NIST, Technical Advisor

Specifications and Tolerances Committee