

International Legal Metrology Update

for the 2021 NCWM Annual Meeting (Virtual)



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Load Cells

OIML TC9:

Instruments for Measuring Mass and Density
(U.S. is Secretariat)

- **OIML R 60 *Metrological Regulation for Load Cells* was most recently published in 2018.**
- **Based on the results of 2020 survey conducted within TC9, the CIML has approved a project to do a minor revision (called an “update”) on R60.**
- **This update project is expected to be both started and completed in 2021, and drafts of the update will be distributed when they are available.**



NIST Office of Weights and Measures Contact: **John Barton**



Software

OIML TC5/SC2 (Germany is the Secretariat)

- **OIML D 31 “General Requirements for Software-controlled Measuring Instruments” has gone into immediate revision following approval at the CIML meeting in Bratislava, October 2019.**
- **New guidance was developed in the following subject areas with their associated subgroups:**
 - **Machine Learning – Subgroup 1.**
 - **Remote Verification – Subgroup 2.**
 - **Terminology – Subgroup 3.**
- **The project group met virtually 10-12 May 2021 to go over comments on the most recent WD and present the subgroup progress.**



NIST Office of Weights and Measures Contact: **Katya Delak**



Software

OIML TC5/SC2 (Germany is the Secretariat)

- **Some minor issues remain to be addressed on the annex drafts prepared by the subgroups.**
- **The convener anticipates issuing a CD this September.**



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Active Electrical Energy Meters

OIML TC12/p1 (Australia is the Secretariat)

- R 46 “*Active Electrical Energy Meters*” is undergoing revision.
- **A Project Group meeting occurred through a series of virtual meetings this past May (2021).**
- **The PG meeting addressed comments to 4WD as well as guidance that was developed on electric vehicle charging stations, which was developed by subgroup 2 (led by the Netherlands).**
- **Other project subgroups have not met, and a path forward was discussed at the meeting:**
 - **Quantities and Harmonics – Subgroup 1. This is a combination of Fundamental vs. Harmonic Power and Reactive Energy subgroups.**
 - **Smart Street Lighting – Subgroup 3.**
 - **Remote Displays and Meters with Modular Components – Subgroup 4.**



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Non-Automatic Weighing Instruments

OIML TC9/SC1 (Germany and France are Co-Secretariats)

- **An International Project Group is working to revise OIML R76 (2006) “*Non-Automatic Weighing Instruments.*”**
- **Subgroups have been tasked with reformatting and updating the Recommendation, and also implementing the modular approach.**
- **Another subgroup is updating R76 software requirements and developing the associated new test procedures.**
- **A new annex has been drafted that attempts to provide an overview of requirements and test procedures for verifications and inspections ... this additional guidance on R76 was requested by the CEEMS countries.**
- **The US submitted comments on the 1WD revision of R76 (Part 1) in Oct 2020.**



NIST OWM Contact: **Ralph Richter**



Automatic Weighing Instruments

(Automatic instruments for weighing road vehicles in motion and axle loads)

OIML TC9/SC2 (UK is Secretariat)

- **A new revision of R134 is expected to address:**
 - Requirements on “Low speed” and “High Speed” WIM systems;
 - **Additional requirements for legal applications;**
 - **Dispersion of results, safety factor; and**
 - **Requirements on vehicle speed control systems.**
- **Second Working Draft of R 134 was circulated in April 2020.**
- **A virtual meeting was held in April 2021 to discuss the comments submitted in relation to the 2WD, including the weightment of axles or axle groups. A 3WD is expected by end of July 2021.**

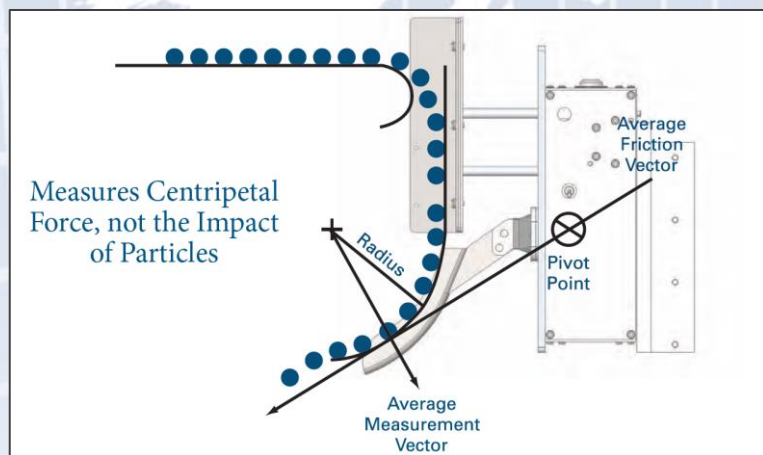


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Automatic Weighing Instruments (Arched Chute Type)

OIML TC9/SC2 (U.K. is Secretariat)



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- **CIML adopted new OIML Recommendation R150**
“Continuous Totalizing Automatic Weighing Instruments of the Arched Chute Type”
- **Devices measures centripetal force on an arched chute to determine weight of bulk commodities.**
- **Available for free download at www.OIML.org/ under publication tab.**



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Automatic Catchweighing Instruments

OIML TC9/SC2 (U.K. is Secretariat)

- Project Group to revise OIML R 51 met online May 18-19, 2021.
- Agreed to continue with revision process for OIML R 51 “Automatic Catchweighing Instruments”
- These include “weigh-labelers,” “checkweighers” and “onboard weighing systems” for wheel loaders and garbage trucks.
- A 3rd Working Draft will be developed and circulated by Fall of 2021.



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Multi-dimensional Measuring Instruments

OIML TC7/SC5 (Australia is Secretariat)

- **There has been significant interest to maximize harmonization between OIML R129 “Multi-dimensional Measuring Instruments” and the US requirements for these instruments.**
- **Canada served as Co-Convener with Australia on this project and hosted a meeting of the Project Group in Ottawa in May 2019.**
- **All international comments received on the 4th CD of OIML R129 were resolved and the CIML Preliminary Ballot was distributed in May 2020.**
- **OIML R129 received final CIML approval in Nov 2020 and was published in Dec 2020.**



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Dynamic Measuring Systems for Liquids other than Water

OIML TC8/SC3 (US and Germany are Co-Secretariats)

**OIML R117 (540 pages) received final
CIML approval in October 2019 and
was published in April 2020**



NIST Office of Weights and Measures Contact:
Ralph Richter

**The complete measuring systems now
fully covered by R117 (and also now part
of the OIML-CS) include:**

- Fuel dispensers and blend dispensers
- LPG dispensers
- Measuring systems on road tankers
- Measuring systems for unloading ships' tanks
- Measuring systems for liquefied gases under pressure
- Measuring systems for milk, beer, and foaming potable liquids
- Measuring systems on pipelines and systems for loading ships
- Measuring systems intended for the fueling of aircraft
- Measuring systems for bunkering
- Measuring systems for liquefied natural gas (LNG)



Traffic Speed Meters

OIML TC 7/SC 4/p 3

(Slovenia and Switzerland are the Co-Conveners)

- **A Project Group is working to revise OIML R91 “*Equipment for the measurement of the speed of vehicles.*”**
- **This Recommendation covers metrological/technical requirements and test procedures for devices such as radar and lidar. Speed measurement technologies have made dramatic advancements over the years, and the current R91 has become quite outdated.**
- **International comments received on the 2WD have been resolved and the 3WD was distributed for Project Group review in May 2021, with comments due at the end of August 2021.**



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Exhaust Soot Particle Number

OIML TC 16/SC 1/p 4 (Germany is the Convener)

- **This project is motivated by public pressure and increased scrutiny of diesel emissions in Europe.**
- **Last Project Group meeting was in Nov 2019. The scope of the project has not been clarified.**
- **The project has not progressed since its first meeting.**
- **The USNWG Project group members include representatives from U.S. regulatory bodies (EPA, CARB), automotive manufacturers, and technical experts associated with the development of instruments for particulate measurement.**
- **A USNWG white paper/unified position is on hold until the project scope has been clarified.**



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OIML Certification System

OIML-CS

- The OIML Certification System (OIML-CS) has two Schemes:
 - **Scheme A: advanced level of the OIML-CS where accreditation or peer assessment is used as the basis for demonstrating compliance with the requirements of the OIML-CS**
 - **Scheme B: introductory level of the OIML-CS where “self-declaration” is used as the basis for demonstrating compliance with the requirements of the OIML-CS (almost completed)**
- **A “Management Committee” and “Review Committee” oversees all aspects of the OIML-CS.**
- **The fifth annual meeting of the Management Committee was held virtually in March 2021. C. Ehrlich and R. Richter attended.**
- **NCWM/NTEP has signed a Declaration to be a Utilizer for R 60 (load cells), as it was a Utilizing Participant under the MAA (132 NTEP Load Cell Certificates to date based on MAA and CS)**



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OIML Certification System

OIML-CS

- 37 OIML Recommendations are now in OIML-CS Scheme A, including:
 - OIML R 21 (Taximeters)
 - **OIML R 46 (Active Electrical Energy Meters)**
 - OIML R 49 (Water Meters)
 - **OIML R 51 (Automatic Catchweighing Instruments)**
 - OIML R 59 (Moisture Meters for Cereal Grains and Oilseeds)
 - **OIML R 60 (Load Cells)**
 - OIML R 61 (Automatic Gravimetric Filling instruments)
 - **OIML R 76 (Non-automatic Weighing Instruments)**
 - OIML R 85 (Level gauges for Stationary Storage Tanks)
 - **OIML R 106 (Automatic Rail-Weighbridges)**
 - OIML R 117 (Dynamic Measuring Systems for Liquids other than Water)
 - **OIML R 129 (Multi-dimensional Measuring Instruments)**
 - OIML R 137 (Gas Meters)
- See OIML web site (www.oiml.org) for other details.





CIML and RLMO Meetings

The 55th CIML Meeting was held virtually during the week of 20-22 October 2020.

- Some Key Topics decided since then were:

- 56th CIML Meeting and 16th OIML Conference in Oct. 2021 (Virtual); Move to hybrid virtual meetings for the future?
 - Will use online voting tools real time
 - State Department participation (quadrennial budget)
 - ‘Remain silent’ plan about certificate #s on instruments
 - E-Learning is gaining increased attention;
 - RLMO RT Interim Meetings held; Smart Meters focus
- The 27th APLMF Meeting was held virtually on 3-4 December 2020.
 - Malaysia has taken over as APLMF Secretariat;
 - Great interest in digitalization in legal metrology (and elsewhere);
 - Regional training remains the main focus;
 - SIM LMWG getting more active (Colombia has Chair).



OIML web site: www.oiml.org



Thank You

