

ISO 16254 Technical Measurement Development

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Summary

- The Society of Automotive Engineers (SAE) Cooperative Research Program (CRP) final report on FMVSS 141 measurement uncertainty has been published.
 - There are common testing elements between FMVSS 141 (US) and R138 (UN) regulations.
- ISO TC43/SC1/WG42 has reviewed the report of the SAE CRP and the SAE CRP recommendations for ISO 16254.
 - WG42 has prepared a Committee Draft (CD) document incorporating the CRP recommendations for 16254.
 - The CD ballot will conclude in spring 2022.
 - ISO 16254 is the technical basis for R138.
 - The ISO development timing will support GRBP's full review of regulation 138

Technical Updates

- The areas under study by ISO and SAE have been communicated in **GRBP-69-26** and **GRBP-70-09**.
- Updates are targeted in two areas:
 1. Measurement uncertainty reduction
 2. Improving the relevance of reported results to pedestrian safety

Measurement uncertainty reduction

- Revised background noise criteria for testing.
- Additional microphone locations.
- Revised processing of overall and 1/3 octave sound pressure levels.

Improving the relevance of reported results to pedestrian safety

- Reduction in measurement uncertainty improves the confidence that a vehicle has the intended sound levels required for pedestrian safety as experienced by the pedestrian.
- The new metric of Tonal Loudness improves confidence the frequencies used for “Frequency Shift” are audible to a pedestrian.

SAE CRP documents

- SAE CRP overview summary https://sd.iso.org/documents/ui/#!/browse/iso/iso-tc-43/iso-tc-43-sc-1/iso-tc-43-sc-1-wg-42/library/5/7412941_LL/SAE%20CRP%20Draft%20Final%20Report%20-%20July%202021
- SAE CRP final report <https://sd.iso.org/documents/open/7d07891c-f5c7-413f-9f88-501919fe8345>

Thank you

- Questions?