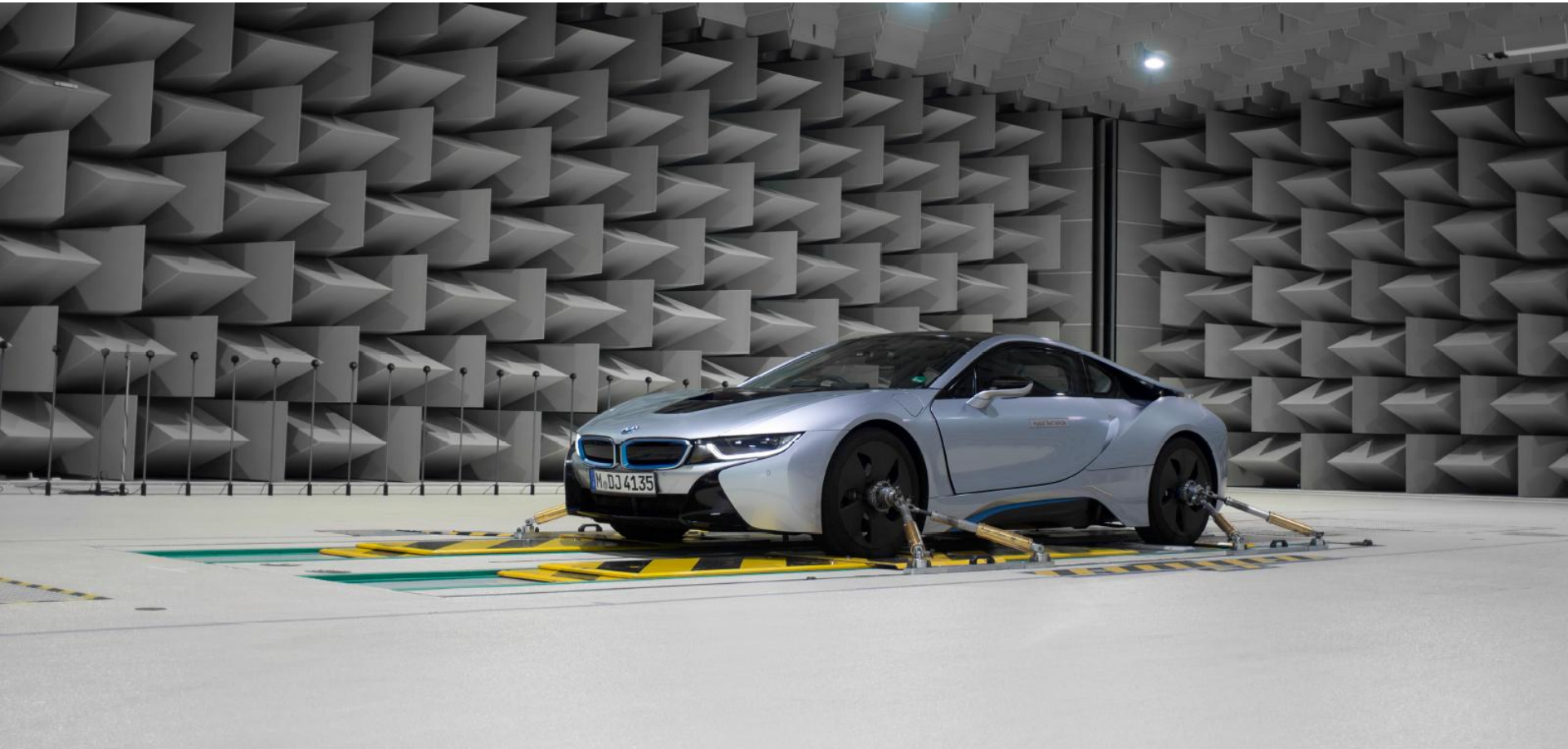




ISO 362-3

Indoor-testing of pass-by noise

Informal document **GRB-60-09**
(60th GRB, 1-3 September 2014,
agenda item 16)



Project leader B.Meinl, BMW Group



Indoor-testing of pass-by noise

Objective and Scope

Why this new Standard?

to provide a basis to obtain the official recognition of an Indoor-pass-by-test for type approval

Scope:

This standard specifies an engineering method for measuring the noise emitted by road vehicles of categories M and N by using a semi anechoic chamber.

The specifications are intended to achieve an acoustical correlation between testing the exterior noise of road vehicles in a semi anechoic chamber and the outdoor testing as described in ISO 362-1.

This standard provides all necessary specifications and procedures of the indoor-testing to obtain results which are comparable to typical run-to-run variations of measurements on today's type approval test tracks.



Indoor-testing of pass-by noise

Motivations

- New regulatory requirements require new tools for better understanding of noise emission physics
- Independence from outdoor climatic conditions
 - Improve the test efficiency for manufacturers and type approval authorities
 - Improvement of the reproducibility
- creating the basis for a virtual type approval test in the future



Indoor-testing of pass-by noise

History

04/2010 Adoption as 'New Work Item' by ISO-Sekretariat and B.Meinl (BMW Group) as projekt-leader, D.Moore)

designation of
connected to ISO/TC 43/WG 42 (convenor

06/2010 1st meeting of the working group in Munich

05/2012 Adoption of the '1st Committee Draft'

10/2013 Approval of the 2nd CD

08/2014 Start of the DIS balloting



Indoor-testing of pass-by noise

Contents

In general the content is based on ISO 362-1

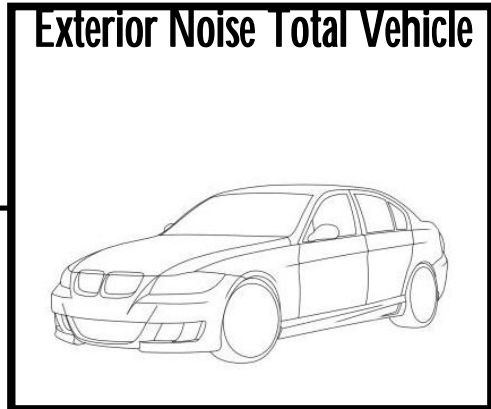
Special attention is directed to the following topics:

- Instrumentation
- Test room requirements
- Dynamometer requirements
- Test procedures
- Test method

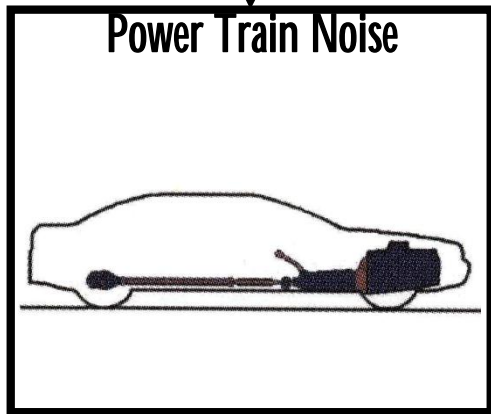


Indoor-testing of pass-by noise

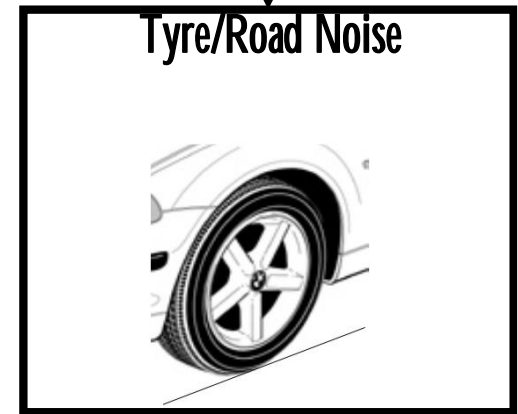
Test method - General



direct measurement



Indoor and outdoor

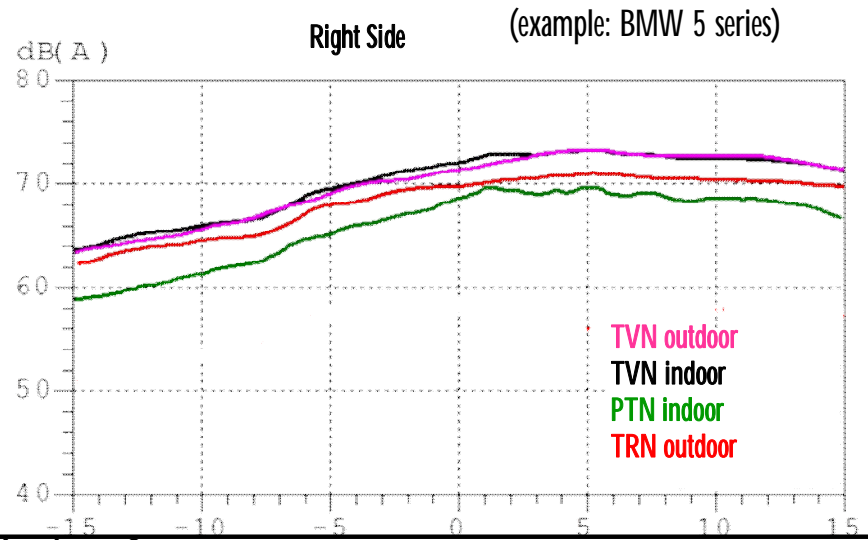
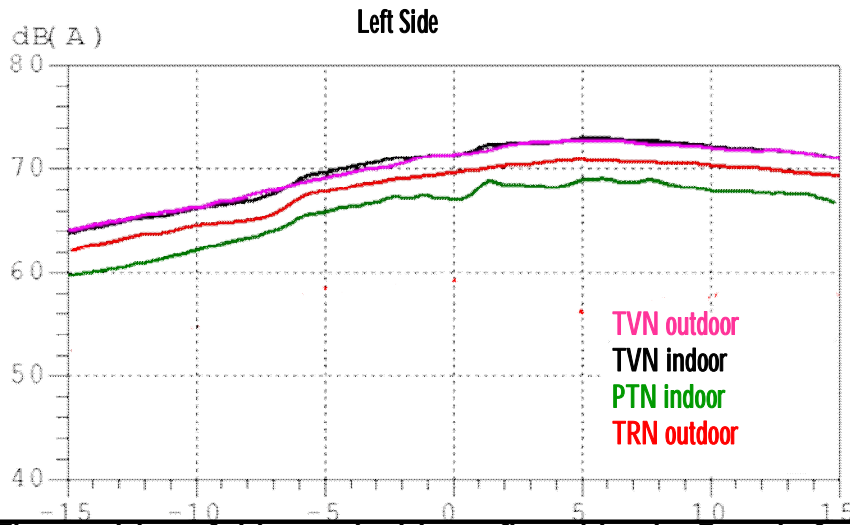


Outdoor only

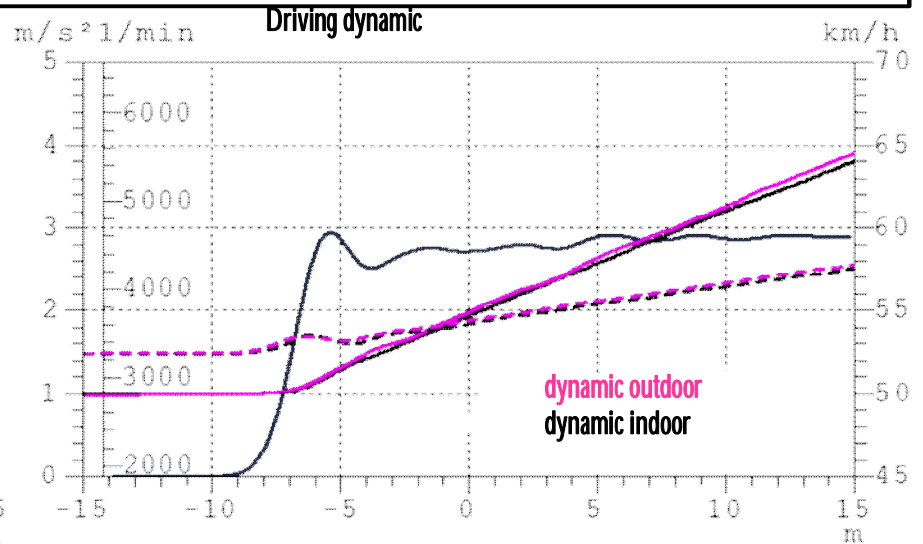
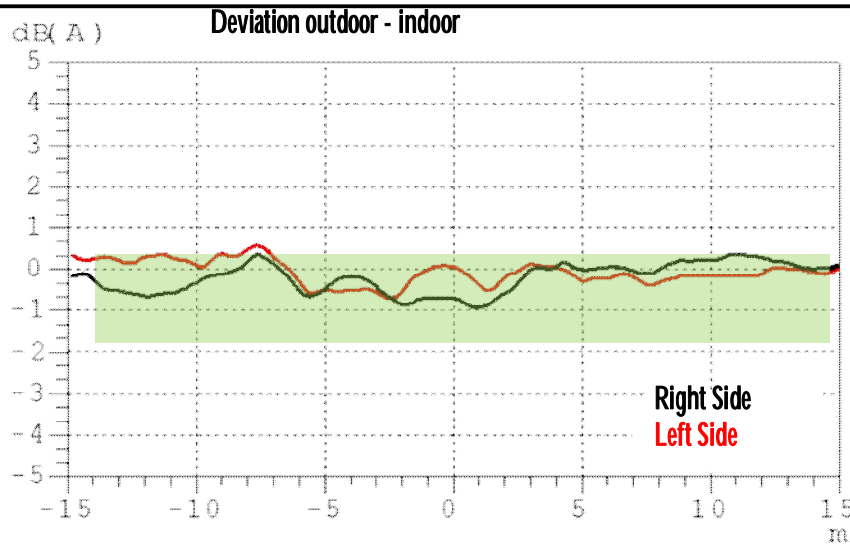


Indoor-testing of pass-by noise

Indoor – Outdoor Comparison



The precision of this standard is confirmed by the Fraunhofer Institute Stuttgart.





Indoor-testing of pass-by noise

future work

- Incorporate GRB comments to the standard
- Expected ISO final publication in second half of 2015 of ISO 362-3
- Provide a proposal to GRB for including this standard to appropriate regulations as directed by GRB



Indoor-testing of pass-by noise backup

**Thank you for
your attention!**