

PMP – Particle Measurement Program Informal Working Group

Task Force 2– Brake Dust Sampling and Measurement

Meeting #15 – Thursday 12 July, 2018, 14:00 – 15:00

Minutes of Meeting – Final Version

1. Tour de table: Participants: AUDI-(SG) Sebastian Gramstat; AVL-(TM) Thanasis Mamakos; BMW-(KL) Katharina Lammel; BREMBO-(FR) Francesco Riccobono; DEKATI-(MM) Mikko Moisio; Ford-(MM) Marcel Mathissen; HORIBA-(DL) Dmytro Lugovyy; ITT-(AS) Agusti Sin; JARI-(HH) Hiro Hagino; JRC-(TG) Theodoros Grigoratos; Link-(CA) Carlos Agudelo; Link-(RM) Radek Markiewicz; TMD Friction-(IP) Ilja Plenne; TMD Friction-(AP) Andreas Paulus; TSI-(SP) Stephan Percot; TSI-(RA) Bob Anderson; TU Ilmenau-(DH) David Hesse.

2. Feedback to Chapters 1-6: TG introduced the main topics of concern and disagreement among the TF2 members.

Concerns were raised regarding the structure document itself. TG explained that the purpose of the document is to reflect upon the current state of knowledge and that the document in its final version will be different both in terms of structure and content. The document in its final form will describe the respective experimental parts in detail. DL raised the issue of multiple ISO references. Some of the ISO references in Chapter 5 could be removed. Only several are required for the description of the procedure, the rest are describing well-known systems. There is a consensus that for the time being it makes no sense to further elaborate on the document. TG asked TF2 members to feel free to further work on the documents if they would like to do so.

TG mentioned that little feedback has been provided from TF2 members to the individual chapters. TG will try to make a consolidated version in the next weeks and send it over to the TF2 for feedback. It seems that some more detailed descriptions will be required in Chapters 5 and 6 for the upcoming testing campaigns.

3. Discussion on the way forward: Some TF2 members raised concerns regarding the overall approach. TG mentioned that the WLTP novel cycle will be released soon and many of TF2 members will test it. TG proposed to go on with this activity and use the results of the different campaigns to understand the status and decide on technical aspects. MM asked if the proposed activity will be similar to that of TF1 – the difference will be that TF2 measurements will take place in brake emissions specific dynos. DL and TM raised concerns regarding the comparability of the measurements of different labs and the measurement of volatiles – ***a minimum of common specifications for the testing needs to be agreed to reduce the variability.*** Furthermore, some aspects could be covered by absolutely comparable results (i.e. labs capable of measuring both total and solid particles with the same set-up and testing conditions and reporting the difference). TM asked if the final methodology will be WLTP novel cycle specific – TG answered that this is the mandate but in principle it should work for all real-world cycles. However, there is a question regarding cycles developed for other purposes (i.e. AK Master). Finally, there was a question about the timeline of the activity. TG responded that the method should be developed by the end of 2019. This does not include the validation of the method which can take place at a later stage.

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Main open questions still remain the consideration or not of the volatiles for the proposed methodology and the inclusion of the Diffusion Chargers as a possible technology for the measurement of PN concentrations. TG explained that each technology that will be included in the final proposal should be validated.

It was agreed that in order for this approach to work TF2 should agree on a minimum of specifications to be followed by everyone during the testing. A preliminary list has been prepared by TG and circulated to the TF2 members for elaboration.

4. Discussion on the minimum specifications: TG quickly presented a preliminary list of parameters that should be commonly defined. The list was distributed to the TF2 members after the meeting and feedback has already been received from several partners. A consolidated version will be circulated when the document is completed.