

PMP – Particle Measurement Program Informal Working Group

Task Force 2– Brake Dust Sampling and Measurement

Meetings #12-14 – (Thursday 19 April, 2018, 14:00 – 15:00 / Thursday 26 April, 2018, 14:00 – 15:00 / Thursday 10 May, 2018, 14:00 – 15:00)

Minutes of Meetings – Draft Version

1. Tour de table: Participants: AUDI-(SG) Sebastian GRAMSTAT; AVL-(TM) Thanasis MAMAKOS; AVL-(MA) Michael ARNDT; BAM-(SS) Stefan SEEGER; BMW-(KL) Katharina LAMMEL; BREMBO-(MA) Mattia ALEMANI; CARB-(SC) Sonya COLLIER; DEKATI-(MM) Mikko MOISIO; Ford-(JG) Jarek GROCHOWICZ; Ford-(CS) Christian SCHMIDT; Federal Mogul-(MM) Marcus MORBACH; General Motors-(MR) Matt ROBERE; HORIBA-(DL) Dmytro LUGOVYY; HORIBA-(YO) Yoshinori OTSUKI; ITT-(AS) Agusti SIN; JARI-(HH) Hiro HAGINO; JRC-(TG) Theodoros GRIGORATOS; Link-(CA) Carlos AGUDELO; Opel-(OB) Olaf BAUSCH; TMD Friction-(IP) Ilja PLENNE; TSI-(SP) Stephan PERCOT; TU Ilmenau-(DH) David HESSE; TU Ostrava-(MV) Michal Vojtsek.

2. Structure of the work: TG briefly presented the current version of the structure of the work document. The current version of the document comprise of 9 Chapters.

Chapter 1: “Introduction, rationale, and scope”. A new item has been added (list of topics not addressed) in order to avoid future implications. Chapter 1 has been already concluded with contribution from all partners (reference to the definition of the scope).

Chapter 2: “Nomenclature, definitions, and terminology”. There is a question regarding the definition of brake PN which should be adjusted on our scope.

Action: JRC, CARB and NA SAE (CA and MR) will collect information and prepare the chapter. CARB will start drafting the chapter with the aim to have a first draft prepared by the next PMP meeting. Contribution from other members is required.

Chapter 3: “Brake dynamometer capabilities”. Link will prepare a first draft design of the chapter with the support of GM. There is the aim to have a first draft prepared by the next PMP meeting. TG explained that several overlaps are expected through different chapters and will only be addressed later as the work (and therefore the document) progresses. Experimental data from all partners will be required after the preparation of the draft from Link – GM.

Action: Link to call a first meeting among the interested partners for the preparation of the chapter. Link- GM will prepare a first draft design of the chapter and feedback to be provided from all partners.

Chapter 4: “Sampling system”. This item will use input from TF1. TF1 work is very closely related to items 4.1 and 4.2. The cycle will be communicated before the next EuroBrake and the drafting of this chapter will start after the next PMP Meeting.

Action: Collection of the data for this item will be handled by JRC in collaboration with TF1. Data and feedback is expected from all partners. JRC will contact group members for related data.

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Chapter 5: “Brake emissions mass measurement system”. Brembo and Dekati volunteered to jointly steer this chapter. TSI also offered their expertise. There is the aim to have a first draft prepared by the next PMP meeting. In any case after the first drafting of the chapter, experimental data will be required from all members.

Action: Brembo to call a first meeting among the interested partners for the preparation of the chapter.

Chapter 6: “Brake emissions number measurement system”. Again there is the proposal to use specifications from exhaust measurements as starting point. Several partners volunteered to steer the chapter. Decision will be made before the next TF2 Meeting.

Action: JRC will need to communicate the partners to steer this chapter before the next PMP Meeting. First meeting among the interested partners to be confirmed.

Chapter 7: “System calibration, validation, and sign-off”. TG mentioned that it is premature to discuss this chapter and it is possible that the content will be modified as the work progresses. Several comments have been included in the text as footnotes.

Action: No action is required for the time being.

Chapter 8: “Appendixes”. TG asked if it makes sense to start drafting some text on the size distribution measurements. The group unanimously agreed that it makes sense to start with the rest of the chapters and come to this later on as experimental data will be required. Once more there will be no need to re-invent the wheel but only focus on the best practices.

Action: No action is required for the time being.

The updated document of the structure will be circulated before the next TF2 Meeting.

3. EuroBrake 2018 and PMP Meeting: TG asked the TF2 to declare if they would like to present to the next PMP Meeting in Ispra (17 May). Half of the meeting will be dedicated to technical presentations and the other half to more political discussions. TG also informed about the workshop on brake emissions organized after the EuroBrake2018 (Hague – 25.05.2018).