

# PMP – Particle Measurement Program Informal Working Group

## Task Force 2– Brake Dust Sampling and Measurement

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**Meeting #1 – Wednesday 13 September 15:00 – 16:00**

### **Minutes of Meeting – Draft Version**

**1. Welcome and Tour de table:** Participants: AVL (Christos DARDIOTIS on behalf of Thanasis MAMAKOS and Michael ARNDT), BMW (Rasmus LEICHT – Ulrich KUHN), Brembo (Francesco RICCOBONO – Mattia ALEMANI), CARB (Sonya COLLIER – John COLLINS), DEKATI (Mikko MOISIO – Ville NIEMELA), Ford (Jarek GROCHOVICZ – Marcel MATHISSEN), General Motors (Matthew ROBERE), HORIBA (Dmytro LUGOVYY), JARI (Hiro HAGINO), JRC (Theodoros GRIGORATOS), LINK Engineering (Carlos AGUDELO – Radek MARKIEWICZ), Opel (Max VOTTELER – Reinhold ENDERS), TMD Friction (Ilja PLENNE), TSI (Jurgen SPIELVOGEL – Stephan PERCOT), TU Ilmenau (David HESSE – Klaus AUGSBURG), TU Ostrava (Michal VOJTSEK). Details regarding AUDI (Sebastian GRAMSTAT) were also provided to the group.

All partners briefly presented themselves and described their experience in relation to brake emissions and testing as well as the expectance of their companies from the participation to the TF2.

**2. Organization of the Meetings:** Meetings will be held every second Thursday at 14.00 CET starting from Thursday 21<sup>st</sup> of September. The invitation has already been circulated for the whole year. For people attending the meetings in strange hours (i.e. CARB at 5.00 am and JARI at 21.00 pm) individual phone calls with JRC could be arranged after the meetings and upon request for informative purposes.

**3. Discussion on the scope of the TF:** TG (JRC) briefly presented the scope of the TF2 and provided some recommendations regarding the way forward. In brief, the three steps which have been identified as crucial for the development of the commonised methodology for brake particles sampling and measurement were described. Some information regarding the first step and the on-going work of the TF1 was provided. Afterwards, a description of steps 2 and 3 along with their individual sub-points followed. The presentation closed with a recommendation from JRC's side to proceed in the following meetings with the presentation from the partners of existing systems/test rig configurations and the relative instrumentation. The presentation is attached to the current document.

DL – HORIBA asked from TF1 to communicate some crucial technical parameters which will be applied for sampling brake particles (i.e. temperature and humidity of the incoming air). This is an aspect to be discussed when the TF2 enters the technical details.

CA – LINK proposed to include in the scope of the TF2 some kind of guidelines regarding the validation of the system to be developed as well as the standardization of the metrics. In principle this is in-line with the aim of the group and will again be discussed in the group when the scope is clearly defined.

JG – Ford agreed on the proposed way forward and suggested that partners who have recently presented their systems in different forums (i.e. PMP, EuroBrake, SAE Brake Colloquium) do the same here in order to better understand the current status. It was

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commonly agreed that this would be the best way forward. MM – Ford asked some clarifications regarding these presentations. It was commonly agreed that they should be focused on the set-up and other functioning parameters than on specific testing conditions, cycles, etc.

**4. Other issues:** It was agreed that – at least in the beginning – documents can be exchanged through email.