

Meeting Minutes PMP Webconference

23rd Nov 2022, 12:00-15:00 CET

DRAFT

0. Introduction & Welcome

ca. 65 participants were welcomed by Barouch Giechaskiel (BG, JRC, PMP Chairman) and Rainer Vogt (RV, OICA/Ford/Technical Secretary PMP).

1. Review Meeting Minutes last PMP meeting 04.10.2022

RV reviewed the meeting minutes of last PMP Meeting on 04.10.2022 which are available at the UNECE website. Comments may be sent to RV/BG within the next two weeks.

Theo Grigoratos (JRC, TG) explained the need for two further PMP meetings:
1st Meeting to close family building concept, and non-friction braking open points
2nd Meeting to review the full GTR text

2. JRC presentation on Regen Braking Procedure

TG presented on the topic. TG explained the JRC view on the OICA proposal. i.e. there is currently no validated model available, which would allow for third party testing (other points – see presentation).

TG explained the rationale and details of the new JRC proposal (See presentation).

TG explained, how the friction brake share coefficients would be applied.

JRC used the “worst case” observations in the data set.

Further data was requested from the TF-4 until Nov 30.

The intention is to finalize the analysis and the factors by 15.12.

A further elaboration of a procedure applicable on an individual friction brake share coefficient can be introduced as a formal PMP task.

Carlos Agudelo (LINK, CA) commented that for Brake Force Distribution a clause is applied that if the vehicle individual factor is not available the GTR default values are to be applied. This is simple and the same concept could be applied for energy shares.

TG commented that no method is available and questioned if it can be written in the GTR in the time frame of a few weeks? CA replied that BFD definition is also not described.

3.) OICA presentation on Non-Friction Braking

Marcel Mathissen (OICA/Ford), MM) presented on behalf of OICA (see presentation).

TG appreciated the data set and initial conclusions. Can P/T parameters be derived?

TG asked for more detailed evaluation.

RV raised the point that a definition of the “mild hybrids” is needed.

TG: JRC will work on a proposal. OICA is welcomed to propose a definition.

4.) OICA presentation on Brake families

Jürgen von Wild (OICA/BMW, JvW) presented on behalf of the OICA (see presentation) the concept with details and examples.

Ravi Vedula (LINK, RVe,) asked how to get the position on the x-axis?

JvW replied that the x-axis is defined by the product of BFD and vehicle mass which are both known.

Philip Eichler (UBA, PE) asked about linearity of brake particle emissions with mass x BFD is needed for the interpolation? JvW confirmed that linearity data is available. Could be added.

TG commented that this makes sense for OEMs; maybe not possible for CLEPA.

JvW, and Heinz Bacher (OICA/BMW, HB) commented the OICA concept could also be applied to aftermarket.

JvW: EU-7 calls for lifetime of a vehicle. This means that the replacement parts need also to fulfil.

5.) CLEPA presentation on Brake Families

Alburno Paolo (CLEPA, AP) presented on behalf of the CLEPA team the family concept proposal:

- Create groups of 6 weight classes for front and rear brake: 12 families.
 - Materials are: Cast Iron / coated cast iron / carbon ceramic / aluminum alloy
 - The worst case is defined by brake energy per pad area during WLTP Brake trip 106 (i.e deceleration from 133 km/h to 34 km/h)
- For details see presentation.

Jarek Grochowicz (OICA/Ford, JG) asked if there is data that energy / area effects the emission, maybe Pad volume could be relevant?

AP answered that not data is available, but by experience the specific energy is proportional to mass loss of pad.

Sebastian Gramstat (OICA/AUDI, SG) commented that brake designs are not considered, but important parameter.

AP: For material definition, like NAO, and low met, ceramic CLEPA is working on.

TG: Usually a GTR is on a system level, i.e. the entire brake system, and not on individual pieces.

BG: commented that usually aftermarket is treated in separate regulations.

Not clear how to proceed.

HB: How to deal with front and rear brakes?

TG: Implementing Regulation (for example EU-7) could request front/rear brake values.

JvW: the OICA concept provides front and rear brake emission values

5.) Information on a proposed project on Non-Exhaust (particle) emissions from road traffic

Andreas Nowak (PTB, AN) informed about a proposed project on non-exhaust emissions from road traffic for the 2023 European Partnership on Metrology Programme. More information – see presentation.

BG asked if the project could foresee calibration of PN systems especially in the μm range.

6.) AOB

JG asked if small corrections are possible on the GTR?

BG: yes, it is possible. Submit suggestions to JRC.

BG: Approval by PMP of GTR needs to be achieved before submission to UNECE (ideally by Dec 20).

Next potential dates for PMP WEBEX: 13.12 and 20.12