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Brussels, 31 March 2009
Ref. 6/09

Subject: Exemption Request for Annex II

Dear *Klaus Koegler*,

The Automotive Industry needs to undertake greatest efforts to ensure the ambitious EU CO₂ target for passenger cars.

A multitude of different measures is needed to achieve this target, and all efficient approaches need to be considered. Besides approaches as new combustion engine concepts, reductions in vehicle weight, reductions in mechanical friction, improved aerodynamics and total energy management, also the thermoelectric generator (TEG) seems to be one promising route in some applications.

There are various instances where the use of thermoelectric devices can be used to reduce the CO₂ emissions of a vehicle, for instance by using such a device in the exhaust pipe where the loss of the heat in the exhaust gas can be converted into electrical energy or for seat cooling where the air-conditioning load can be reduced. It can also be expected that more applications will come to light in the future.

With a thermoelectric generator (TEG), the loss of heat in the exhaust gas can be converted into electrical energy. The recuperated thermal energy is then used to reduce the load of the alternator in the ancillary belt drive of the engine. This leads to a reduction in fuel consumption and a reduction in CO₂ emissions from vehicles.

In 2008, Prof. Töpfer awarded the "ÖkoGlobe" for the development of the TEG for series applications. This award only takes into account the environmental impact of an innovation and demonstrates the environmentally conscious handling of the subject "Mobility" within the automotive industry.

In the case of seat cooling, which is generally provided by a duct extension from the air-conditioning system, effective use a thermoelectric device can result in a significant reduction of air-conditioning load. This reduction leads to a reduction in CO₂ emissions when compared to current systems.

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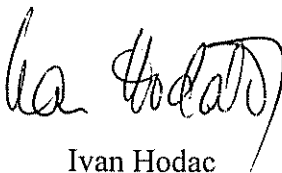
In both the cases cited above, technical and supply reasons make the use of lead telluride (PbTe) with a Pb content of about 40 %wt as a thermoelectric material for the TEG currently unavoidable. All alternative materials are either commercially not yet available in the necessary quality or are ineffective at the required temperature range, as the accompanying study (confidential document in Appendix 1) shows. However, the study suggests that a replacement or removal of Pb-containing materials by material developments in the coming years is realistic.

However an exemption (Appendix 2) within Annex II of ELV Directive 2000/53/EC for "Lead in thermoelectric materials in electrical applications to reduce CO₂ emissions" is necessary to achieve the ambitious targets of the automotive industry for a further CO₂ reduction within the upcoming medium term vehicle launches. This exemption is provided for vehicle types approved before 31 December 2018 and for spare parts for the aforementioned vehicles.

Industry suggests coupling this exemption with an end-of-life dismantling requirement in accordance with Article 6.3. A dismantling and recovery concept is prepared and has to be implemented during the development phase.

In this context, the entire automotive industry and related supplier industry, represented by the associations ACEA, JAMA, KAMA and CLEPA, count on your support in granting an exemption under the 4th revision of Annex II to the next adjustment of the Technical Committee of the Commission on 11 May 2009.

Yours truly,



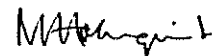
Ivan Hodac
Secretary-General
ACEA



Hiroki OTA
Director-General
JAMA



Wan HUH
Executive Director
KAMA



Lars Holmqvist
Secretary-General
CLEPA

Cc: Artemis Hatzi Hull, DG ENVI

Attachments :

- (1) Müller, E: Thermoelectric Materials Maturity for technological application, DLR, Cologne, 2009 (password: tellur81)
- (2) Justification: Lead containing thermoelectric materials in electrical applications.

We will be happy to provide you with additional information for an evaluation as required.