JAPAN AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.

Japan Auto Parts Industries Association

Exemption no. 3
"Copper alloy containing up to 4% lead by weight"

In July 2010, as the result of the 5th consultation, we got the following contractor's recommendation:
"The contractor cannot support an extension of this exemption without any expiry date or a review date. It is therefore recommended to continue the exemption and to set a review date 5 years after the revised Annex II comes into force. This period of time should allow industry stakeholders to carry out the necessary research and development work, to gather more fact and evidence based information as well as to encourage the corresponding implementation of the process technology for lead-free copper alloys."
Since then, in response to this recommendation, we, as Automotive Industry, have been carrying out research and development to find out any appropriate alternatives, however, at the moment, we should say that we are still on the way, and we still need to ask for the extra time for our development.

Leaded copper alloy is an important material for automotive parts. It is used for automotive parts such as safety, emission-control components etc., which requires precise shape machining (micro-machining). Copper alloy material mostly contains 3 to 4% lead for machining purpose and some other requirements on applications.

JAMA and JAPIA continuously conducted investigation to find out any possible alternative material technologies to reduce/eliminate lead from the copper alloy after 2010. Then JAMA/JAPIA conducted some testing as reported with recent available samples as for possible candidate to consider.

Major summary from the latest testing is as following;

Si:
- Material has no significant change from 2010 when we tested.
- The latest test showed that machining and conductivity are still not acceptable.

0.2% leaded alloy:
- Similar material to EU CuZn38/42 is not available in Japan.
- 0.2% leaded alloy is only available as lab level sample.
- JAMA/JAPIA conducted test with this, but the result showed machining is not acceptable, as result in EU for CuZn38/42.

As the report shows, alternative material for the copper alloy which can meet the automotive parts requirement is not available yet in Japan, though investigation and testing were promoted there some years.

JAMA and JAPIA continue to find alternative technology. Since no alternative material technology is available yet, in general, development including material and component validation as well as process development may take more than five years.

From current material technology level, it need to extend exemption for leaded copper alloy.

Finally, as the result of our 4 years research and development work, we should ask to extend the exemption to continue our work to find appropriate alternatives. Regarding the required time frame, we sincerely ask the contractor to refer to the ERA report provided in the meeting on 19th September 2014, stating "Extended exemption review periods to at least eight years", and to continue this exemption with a review date at least eight years later.