Response to "1st Questionnaire Annex IV Exemption No. 37 (renewal request)"

Exemption for *"* Lead in platinized platinum electrodes used for conductivity measurements where at least one of the following conditions applies:

Name and contact details of applicant:

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Questions

1. Please provide a list of manufacturers of the platinized platinum electrodes, who currently benefit from the above mentioned exemption.

[JBCE answer]

It is difficult to give all manufactures of the platinized platinum electrodes(PPE), there are however at least YOKOGAWA, DKK-TOA and HORIBA.

2. The application does not provide any information as to efforts being undertaken to research possible alternatives for lead in this application. Please note in this respect that according to annex V of the directive, an application for exemption (for its renewal, amendment or revoke) must contain such information:

a. Please specify what efforts are planned to enable substitution within the coming years.

[JBCE answer]

The elimination of lead in the plating solution has been studied by many electrochemists for several decades, however there are no research paper to eliminate or substitute the substance. It is difficult for PPE manufacturer to research and develop the technology. However, we should continue to investigate whether there is any progress on the technology. If the substitution technology is established, then so PPE manufactures move on to the phase to development the application.

b. In this respect please provide information as to:

i. possible substance substitutes, in which lead can be replaced by another compound within the electrodeposition process;

[JBCE answer]

As of today, there is no substance substitute.

ii. possible technology alternatives, which eliminate the use of lead (i.e. other measurement methods); and

[JBCE answer]

There is no substitute measurement method that meets the application requirements.

iii. An estimated time or time range should be provided for research to be conducted in the future in search of alternatives;

[JBCE answer]

Once a substitute or alternative is found, it is necessary for a certain time to ensure full model changes.

3. The application specifies that PPE are "necessary for the measurement of wide range, high accuracy, high reliability for high concentration of acid and alkali". This detail only accounts for items (a) and (b)(I) & (b)(ii) of the existing exemption formulation. Please explain if items (b)(iii) and (c) can be omitted from the exemption, so that the scope of the exemption more accurately describes applications for which the electrodes are in use.

[JBCE answer]

The item (b) (iii) "corrosive solutions containing halogen gas" is necessary because many metals react readily with halogen gases in water because solutions including halogen gases such as fluorine, chlorine, bromine, iodine etc., have strong oxidative power and cause metal to corrode. For example, when chlorine dissolves in water, mixture of chlorine, hydrochloric acid and hypochlorous acid are made and the mixture cause metals like SUS and titanium to corrode. Therefore PPE which is made of platinum is used because of its high resistivity, as a precious metal, to avoid such corrosion.

The item (c) "Measurements of conductivities above 100 mS/m that must be performed with portable instruments" is also needed. It is because that measurement of conductivity higher than 100S/m with portable equipment (Electromagnetic induction type is not realistic because a power source is needed).

4. As part of the evaluation, socio-economic impacts shall also be compiled and evaluated. For this purpose, please provide details in respect of the following in relation to all EEE placed on the EU market through this exemption (i.e., not just by JBCE members):

a. Please estimate the related volume of EEE concerned and the respective amount of Pb to be avoided should the exemption not be granted.

[JBCE answer]

There is no information on volume of EEE nor Pb in total(not only applicant). Also, from the view point of competition law, it is difficult to find it out by companies or organization.

b. Please estimate possible amounts of waste to be generated through a forced substitution should the exemption not be granted. In this respect, please clarify if such a scenario would result in limitations to further use and maintenance of certain equipment (e.g. equipment placed on the market in the past, refurbished equipment, etc.).

[JBCE answer]

There is no information on the amounts of waste in total(not only applicant) as well as 4 a.

c. Please estimate possible impacts on employment in total, in the EU and outside the EU, should the exemption not be granted. Please detail the main sectors in which possible impacts are expected – PPE manufacturers, manufacturers of measurement equipment in which the PPE is used, supply chain, retail, etc.

[JBCE answer]

There is no information on the impacts on employment in total(not only applicant) as well as 4 a.

d. Please estimate additional costs associated with a forced substitution should the exemption not be granted, and how this is divided between various sectors (e.g. private, public, industry: manufacturers, suppliers, retailers).

[JBCE answer]

There is no information on the additional cost in total(not only applicant) as well as 4 a. Also, depending on the user, what kind of sample is to be measured with the PPE and what to measure is different.