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Federation of the Swiss Watch Industry FH

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V. Réf / Ihr Zeichen / Your Ref :
N. Réf / Unser Zeichen / Our Ref : *2021l0041*

Biel/Bienne, 24 February 2020

Position paper of the Federation of the Swiss Watch Industry FH on the requests for the renewal of exemptions 6(a)/6(a)-I, 6(b)-II and 6(c), from Directive 2011/65/EU (RoHS).

Dear Sir/Madam,

We refer to the public consultation on the requests for the renewal of exemptions 6(a)/6(a)-I, 6(b)-II and 6(c), from Directive 2011/65/EU (RoHS), and thank you for giving us the opportunity to comment on this issue.

1. The Federation of the Swiss Watch Industry FH and the Swiss watch industry

The Federation of the Swiss Watch Industry FH (hereinafter referred to as FH), based in Biel/Bienne, Switzerland, is the leading trade association of the Swiss watch industry. The FH is a private, professional and non-profit association that currently has more than 450 members representing over 90 per cent of all Swiss watch manufacturers (including finished products, watch movements and components).

The FH represents and protects the commercial, legal and political interests of the Swiss watch industry, both in Switzerland and abroad.

With around 57,500 persons employed in the sector, the Swiss watch industry represents the bulk of the European watch industry. Moreover, it is a major client, possibly the largest, of the European watch component supply industry.

The EU is a traditionally important market for Swiss watch exports. In 2020, the Swiss watch industry exported over 4.2 million watches with a total value of CHF 4.6 billion to European Union Member States.

Indirectly, tens of thousands of jobs in the retail trade in the European Union are dependent on the Swiss watch industry and the sale of its products.

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2. Questions for stakeholders of relevance to all exemptions

I. The applicant has requested the renewal of an exemption currently listed in RoHS Annex III (see exemption specific page accessible through the links above):

a. Do you agree with the scope of the exemption as proposed by the applicant?

We support the following requests from the RoHS Umbrella Industry Project ("the Umbrella Project"):

- Exemption 6(a)/6(a)-I: Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight ;
- Exemption 6(b)-II: Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4% by weight ;
- Exemption 6(c): Copper alloy containing up to 4% lead by weight.

b. Please suggest an alternative wording and explain your proposal, if you do not agree with the proposed exemption wording.

We fully agree with the scope as proposed and more generally, we endorse the scientific comments submitted by the Umbrella Project in their position paper.

c. Please explain why you either support the applicant's request or object to it.

No equivalent technical and qualitative alternatives to lead brass, steel and aluminium alloys are available for watch movement components. Tests of alternative lead-free alloys have shown that without the addition of lead as a chip breaker the components lack the necessary precision and dimension.

In addition, lead-free alloys are harder to work and their electrical conductivity is also worse. The absence of lead in the alloys not only increases the time needed to machine the materials but also results in greater wear of the tools themselves.

The scope of the three exemptions, as proposed by the applicant, covers the industrial uses of the watch industry.

II. Please provide information concerning possible substitutes or elimination possibilities at present or in the future so that exemption could be restricted or revoked:

a. Please detail substitution and elimination possibilities and for which part of the applications in the scope of the requested exemption they are relevant.

The addition of lead not only improves the machinability of alloys but in parallel also their workability and electrical conductivity. This gives leaded alloys favourable machinability, but also properties provided by lead in the finished component, such as electrical conductivity and slide functionality for parts with closely fitted sliding surfaces.

The watch industry has already substituted a long time ago lead alloys in external watch components. For internal components of the watch movement, substitution is more challenging. This is especially the case for the smallest and the thinnest movement components.

Some watch manufacturers are experimenting and testing with alternatives for certain internal components, especially some of flat format. But there is still a long way to go to fully substitute all internal components containing lead.

b. Please provide information on research to find lead-free alternatives (substitution or elimination) that may cover part or all of the applications in the scope of the exemption request at present or in the future.

Actually, research concerning lead-free alternatives for the watch industry is mainly focused on the substitution of internal brass components, because the volumes used are much higher than those for internal components made of steel or aluminium.

In 2019, the second phase of a study started concerning alternatives for lead in brass. Conducted under the umbrella of the Swiss Association for Horological Research (ASRH), this project brings together a large number of watch brands with the common task of finding technical solutions.

c. Please provide a roadmap of such on-going substitution/elimination efforts and research (phases that are to be carried out), detailing the current status as well as the estimated time needed for further stages.

A first study was conducted by the ASRH from 2013 to 2018. This has allowed to identify some promising substitute alloys. The second phase is yet focused on the machining conditions and the possibilities to use them to produce lead free internal watch components.

The study conducted by the ASRH is motivated by the need for a result and has no specific deadline. Once alternatives have been found for leaded brass, research will however still have to be carried out for steels and aluminium alloys (exemptions 6(a)/6(a)-I and 6(b)-II).

At the same time, many Swiss watch manufacturers carry out researches themselves. Current alloys are the result of a long evolution and have been adapted over time to many different constraints, such as ageing or shocks, to which the various movement components are exposed. Therefore, in order to substitute lead alloys, a certain number of tests are necessary to ensure that the new solutions give at least equivalent performance in functional terms to the current ones, and this over a period of several years or even decades to meet the long life of Swiss quality watches. In addition, aesthetic aspect is of prime importance for the watchmaking industry, and this point should also be considered for the evaluation of alternative alloys.

In addition to the task of finding the appropriate substitution alloy for each component, it is also necessary to adapt the supply chain, the process conditions, and sometimes even acquire new machinery to adapt the manufacturing process to the new alloy; this requires time and comfortable financial resources.

For some components, it is possible that no commercially available alloy meets the specifications. It will then be necessary to persuade the metallurgical industry to produce new grades, a difficult task due to the relatively small volumes used by the watchmaking industry.

Therefore, the search for alternative movements and components is effectively in progress, but requires more time for a full accomplishment.

III. Please provide any further information and/or data that you think is of importance to substantiate your views.

According to the European regulation (EC) No 1907/2006 (REACH), Annex XVII entry 63 is related to lead and its compounds. Paragraphs 1-6 are specific to jewellery articles, including wrist watches. Paragraph 4 provides however for some exemptions, of which especially this one is specific to the watch industry:

> *By way of derogation, paragraph 1 shall not apply to:*
> *[…]*
> *(b) internal components of watch timepieces inaccessible to consumers;*

Please note that entry 63, paragraph 8 specifies an exemption for articles within the scope of the RoHS directive, and may give the false impression that the RoHS lead exemptions are unrelated to the REACH one. But the specification of paragraph 8 only applies to articles covered by paragraph 7 and therefore the exemption for articles within the scope of the RoHS directive does not apply to quartz watches, which are covered by paragraphs 1-6 of the REACH restriction, as previously mentioned.

In conclusion, it is essential that quartz watches continue to benefit from the exemptions 6(a)/6(a)-I, 6(b)-II and 6(c), to avoid important conflicts between REACH and RoHS.

We thank you for your consideration of our statements and will of course be pleased to provide you with further information.

Yours faithfully,

Jean-Daniel Pasche
President

Yves Bugmann
Head of legal division