

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Item 2 (a) of the provisional agenda

Explosives and related matters: tests and criteria for flash compositions

Comments on the modification of the US Flash Composition Test proposed by the United States of America (ST/SG/AC.10/C.3/2013/24)

Transmitted by the expert from Japan

Background

1. A modified DDT Test for flash compositions was proposed by the United States of America (USA) and has been discussed at the meetings of the Sub-Committee on the Transport of Dangerous Goods (TDG). As a result of discussion, the modified DDT Test was recognized as a candidate of alternative to the HSL flash composition test and designated as “US flash composition test” (see UN/SCETDG/41/INF.67).
2. Japan has contributed to the establishment of an apparatus specification of the US flash composition test and also showed the potential of an indentation depth of a witness plate as a parameter for the test criteria (see UN/SCETDG/41/INF.42).
3. At the plenary meeting of the 42nd Sub-Committee on TDG, it was adopted that further work will be undertaken during the forthcoming biennium on the US flash composition test before being formally accepted as alternative to the HSL flash composition test.
4. To the 43rd Sub-Committee on TDG, the USA submitted a proposal of modification of the US Flash Composition test, in which a recommended steel grade for the witness plate was shown and a condition “the average depth of the indentations from the 1.0 mm thick steel witness plates exceeds 15 millimetres” was added to the test criteria.

Discussion

5. The expert from Japan supports the USA’s recommendation of steel grade for the witness plate because the recommendation was based on the careful study on the dependency of indentation depth of the witness plate on its material properties. Also, the methodology of indentation depth measurement described in the proposal is recognized to be simple enough to be employed by other testing organizations.
6. However, in order to achieve high compatibility between US- and HSL-flash composition tests, the test criteria proposed by the USA based on twelve data of comparison between US- and HSL- tests is considered to be rather premature.
7. The expert from Japan thinks that further comparisons between these two tests for the variety of compositions are necessary before determining the final criterion for the US

flash composition test. Japan has an intention to provide such comparison data in this biennium.

Proposal

8. The Sub-Committee is invited to discuss the view from the expert from Japan that further comparisons between US- and HSL-flash composition tests for the variety of compositions should be conducted in this biennium before determining the final criterion for the US flash composition test.
