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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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LISTING, CLASSIFICATION AND PACKING

Fuel cell cartridges containing hydrogen in metal hydride

Submitted by the observer from Switzerland

The observer from Switzerland would like to raise a few questions related to fuel cell cartridges in general and make some comments to document ST/SG/AC.10/C.3/2006/50 in order to stimulate the discussion in the Sub-Committee.

Definition

We suggest to insert in 1.2.1 a definition saying that a fuel cell cartridge is a receptacle (and therefore a packaging, see definition of aerosol).

Text from SP 328 could be inserted in this definition.

Would it be adequate to specify a maximum capacity for each type of fuel cell cartridges?

Drop test according to SP 3AA:

- Is it applicable to the single fuel cell cartridge and to the equipment containing the cartridge?
- What is meant with the wording "…shall be shown to pass a 1.2 meter drop test"? Is a type approval from a competent authority required? What conditions have to be fulfilled to consider the test as successful?
- Is a SP the right place for such technical requirement? To our knowledge in the Model Regulation only SP 238 contains requirements for testing purposes (UN 2800 BATTERIES...).

Internal pressure test according to SP 3AA:

- What conditions have to be fulfilled to consider the test as successful?

Internal pressure test according to SP 3BB:

According to SP 3BB Cartridges containing liquefied flammable gases should be capable of withstanding a pressure of up to 1'500 kPa at 55 ^{o}C. Does it mean that each cartridge shall be tested prior to filling? Or is a batch testing sufficient?

We would suggest moving these technical requirements to chapter 6.2 where provisions should be inserted for fuel cell cartridges in the same way it was done for aerosol dispensers.

P004:

- If a cartridge is - according to definition - a receptacle (therefore a packaging), then P004 applies to the outer packaging (same principle as P 003 for aerosols)
- What is meant with "equipment"? The fuel cell or the electronic device the fuel cell is supposed to feed?
- Is it adequate to apply the same packing instruction for cartridges and for cartridges contained in equipment or packed with equipment?

Additional requirements

Would it be adequate to consider special provisions for:

- Protection against inadvertent discharge similar to SP 190 for aerosol dispensers ?
- Transport of waste cartridges similar to SP 327 for aerosol dispensers ?

- For the type test we suggest the fire test as proposed in INF.11 by Canada for all fuel cell cartridges. In addition, the tests proposed in ST/SG/AC.10/C.3/2005/16 should be discussed.
- For fuel cell cartridges containing hydrogen a permeation test should be discussed.
- We did not find any information about production/batch testing.

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