

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

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### Sub-Committee of Experts on the Transport of Dangerous Goods

#### Fifty-eighth session

Geneva, 28 June-2 July 2021

Item 5 (c) of the provisional agenda

Transport of gases: miscellaneous

## Special Packing Provisions for goods of Class 2 – 4.1.6.1.8 Requirements for valve protection

### Related to ST/SG/AC.10/C.3/2021/6

Transmitted by the European Industrial Gases Association (EIGA)

### Introduction

1. EIGA submitted document ST/SG/AC.10/C.3/2021/6 on valve protection caps and valve guards.
2. ISO/TC 58/SC 3 “Cylinder Design” support this paper, though propose to use the term “*permanent protective attachments*”, instead of “permanent protection attachment”.
3. The international and English-speaking experts believe that the term “*permanent protective attachments*” is the correct one to use because “*protective*” is an adjective, whereas “*protection*” is a subject. ISO/TC 58/SC 3 will introduce “*permanent protective attachments*” in all SC3 standards as a common text.

### Proposal

4. The amended text for 4.1.6.1.8 is shown below, new text is underlined and in italics and deleted text is ~~struck through~~. The changes agreed for 4.1.6.1.8 at the December 2020 Meeting as given in ST/SG/AC.10/C.3/114/Add.1 are already taken into account.

"4.1.6.1.8 Valves shall be designed and constructed in such a way that they are inherently able to withstand damage without release of the contents or shall be protected from damage which could cause inadvertent release of the contents of the pressure receptacle, by one of the following methods:

- (a) Valves are placed inside the neck of the pressure receptacle and protected by a threaded plug or cap;
- (b) Valves are protected by caps or guards. Caps shall possess vent-holes of sufficient cross-sectional area to evacuate the gas if leakage occurs at the valves;
- (c) Valves are protected by shrouds or permanent *protective attachments* ~~guards~~;
- (d) Pressure receptacles are transported in frames, (e.g. bundles); or
- (e) Pressure receptacles are transported in an outer packaging. The packaging as prepared for transport shall be capable of meeting the drop test specified in 6.1.5.3 at the packing group I performance level.

For pressure receptacles with valves as described in (b) ~~and (e)~~, the requirements of ISO 11117:1998, ISO 11117:2008 + Cor 1:2009 or ISO 11117:2019 shall be met. Requirements for shrouds and permanent **protective** attachments used as valve protection under 4.1.6.1.8 (c), are given in the relevant pressure receptacle shell design standards, see 6.2.2.1. ~~for valves~~ Valves with inherent protection used for refillable pressure receptacles shall meet the requirements of ~~annex A clause 4.6.2~~ of ISO 10297:2006 or ~~annex A clause 5.5.2~~ of ISO 10297:2014 or clause 5.5.2 of ISO 10297:2014 + A1:2017, or in case of self-closing valves, of ~~annex A clause 5.4.2~~ of ISO 17879:2017 shall be met. For pressure receptacles with self-closing valves with inherent protection, the requirements of annex A of ISO 17879:2017 shall be met. For valves with inherent protection used for non-refillable cylinders, the requirements of clause 9.2.5 of ISO 11118:2015 or of clause 9.2.5 of ISO 11118:2015 + A1:2019 shall be met."

Last paragraph for metal hydride storage systems remains unchanged.

## Justification

5. The proposal seeks to clarify the requirements for valve protection and does not add any additional requirements to the regulations.
  6. The correct term to use is “*protective*” as an adjective, whereas “protection” is a subject.
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