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Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods**

Bern, 18–22 March 2019

Item 5 (b) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:
new proposals****Carriage of gas according to special provision 653****Transmitted by the Government of Switzerland*,*****Summary*

Executive summary:	The carriage of gas cylinders under special provision 653 shall fulfil a limited set of requirements. To guarantee the safety during carriage, it is necessary to also require the appropriate filling of the cylinders.
Action to be taken:	Amend special provision 653 of Chapter 3.3.
Related documents:	TRANS/WP.15/AC.1/2005/53, ST/SG/AC.10/C.3/2018/71 .

Introduction

1. Special provision (SP) 653 of Chapter 3.3 allows the carriage of four asphyxiant gases in cylinders under facilitated conditions. The minimum set of requirements to guarantee

* In accordance with the programme of work of the Inland Transport Committee for 2018-2019, (ECE/TRANS/WP.15/237, annexe V, (9.2)).

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safety during carriage include requirements for the construction, testing and packing of the cylinders.

2. At the fifty-fourth session of the Sub-Committee of Experts on the Transport of Dangerous Goods, the European Industrial Gases Association (EIGA) proposed to introduce SP 653 of RID/ADR/ADN into the UN Model Regulations. The proposal in document ST/SG/AC.10/C.3/2018/71 was not adopted but the discussions pointed out a number of concerns on the minimum requirements that should apply to the carriage of such cylinders.

3. Switzerland believes that the absence of requirements relating to the filling of the cylinders, including the lack of qualification and training of filling staff, impairs seriously the safety during carriage.

4. This concern is particularly relevant for CO₂ (liquified gas) where non-qualified staff is more likely to overfill cylinders. A recent incident in Switzerland showed that a cylinder compliant with regards to construction and testing requirements could however leak during carriage. This can occur as the pressure of CO₂ rapidly increases with a small increase in temperature, such as that caused by the heating of a vehicle. In that particular incident, the overpressure that formed in an overfilled 2L-cylinder during carriage in a passenger car resulted in the bursting of the safety valve, the rapid spread of gaseous CO₂ in the vehicle and the loss of consciousness of the four passengers.

5. We therefore believe that the requirements relating to the filling should be introduced into SP 653.

Proposal

6. Amend the first indent of special provision 653 of Chapter 3.3 as follows:

" – The provisions for construction, ~~and~~ testing **and filling** of cylinders are observed;".

Justification

7. The technical conditions for the filling of cylinders such as those provided in packing instruction P200 enhance the safety of carriage.
