



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Atlantic City, United States, 4 to 8 April 2011

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2013-2014 Edition

2.8: Part 8 — Provisions Concerning Passengers and Crew

SMALL CYLINDERS CONTAINING A DIVISION 2.2 GAS

(Presented by D. Brennan)

SUMMARY

The carriage by passengers of small cylinders containing a Division 2.2 gas for applications such as bicycle tyre inflation is creating challenges for operators. This paper proposes a revision to Part 8 to address the carriage of such cylinders.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Part 8 of the Technical Instructions has had a long-standing provision that permits passengers and crew members to carry, with the approval of the operator, in checked or carry-on baggage, a self-inflating life-jacket fitted with up to two small cylinders of carbon dioxide or other Division 2.2 gas, plus two spare cylinders.

1.2 This provision has been widely used by merchant mariners and sailors for many years. Of recent times though there have been an increased number of other applications that also use small cylinders of carbon dioxide or other Division 2.2 gases. These include motor-cycle and equestrian safety vests that inflate to protect the wearer should they fall off the motor-cycle or horse. In addition, there are also a large number of inflation kits / devices for bicycle tyres.

1.3 The latter though are not addressed under the provisions of Part 8, which causes significant difficulties for operators and operator personnel where a passenger with a self-inflating life jacket is permitted to carry up to four small gas cylinders, but another passenger with a bicycle and a tyre inflation kit is not permitted to carry the same type of small gas cylinder as there is no provision for this application in Part 8.

1.4 As part of the development of this working paper some research was conducted to determine the type and size of the gas cylinders on offer for tyre inflation kits. The cylinders used in the kits are non-refillable cylinders that range in size from 12 g to 45 g CO₂ gas mass. This equates to a cylinder water capacity of 21 mL to 79 mL. The 45 g CO₂ cartridges are for inflation of motor cycle or all-terrain vehicle tyres. All of the gas cartridges used for bicycle tyre inflation contain 12 g to 25 g of CO₂, which equates to between 21 mL and 44 mL water capacity, which meets the provisions of Special Provision A98 in terms of cylinder size.

1.5 Based on these considerations it is proposed to make specific allowance in Part 8 for small cylinders containing a Division 2.2 that meet A98 to be permitted in passenger and crew baggage.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to revise Part 8;1.1.2 as follows:

- r) with the approval of the operator(s), no more than two small cylinders of carbon dioxide or another suitable gas in Division 2.2, per person, fitted into a self-inflating life-jacket for inflation purposes, plus no more than two spare cartridges. Other devices containing no more than four small cylinders of carbon dioxide or other suitable gas in division 2.2, per person may be carried with the approval of the operator, provided that each cylinder has a water capacity of no more than 50 ml;

Note.— For carbon dioxide a gas cylinder with a water capacity of 50 mL is equivalent to a 28 g cartridge.

2.2 Alternatively the DGP-WG may prefer to simply revise Part 8;1.1.2 r) as follows:

- r) with the approval of the operator(s), no more than ~~two~~ **four** small cylinders of carbon dioxide or another suitable gas in Division 2.2, per person, ~~fitted into a self-inflating life-jacket for inflation purposes, plus no more than two spare cartridges;~~

— END —