国 际 民 用 航 空 组 织

DGP/23-WP/62
23/8/11

工 作 文 件

危险物品专家组（DGP）

第二十三次会议

2011年10月11日至21日，蒙特利尔

议程项目2： **拟定对《危险物品安全航空运输技术细则》（Doc 9284号文件）的修订建议，以便纳入2013年 — 2014年版**

雪崩救援背包

（由M. Paquette和瑞士的观察员提交）

摘要

本文件提议修改技术细则第8部分1.1.2q）有关旅客或机组携带雪崩救援背包的规定，即包括不包含烟火触发装置的雪崩救援背包和提及能源数量而不是气瓶的容量。

危险物品专家组的行动：请危险物品专家组按照附录所述，修改现有规定允许携带非烟火触发装置，并考虑修订第8部分以便对气瓶内的能源数量而不是气瓶容量做出规定。

1. INTRODUCTION

1.1 The present provision of Part 8 for the avalanche rescue backpack states:

> q) with the approval of the operator(s), one avalanche rescue backpack per person equipped with a pyrotechnic trigger mechanism containing not more than 200 mg net of Division 1.4S and a cylinder of compressed gas of Division 2.2 not exceeding 250 mL. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpack must be fitted with pressure relief valves;

1.2 **Pyrotechnic trigger:** Since the provision for avalanche rescue backpacks was introduced in the Technical Instructions, advances in technology have been made to avalanche airbags systems. These new systems no longer use a pyrotechnic trigger but a mechanical system with a cable and a spring, therefore, representing a lower risk in transport. As these new systems represent approximately 50 per cent of the worldwide market, a revision of the existing provision should be considered to allow a non-pyrotechnic trigger mechanism.

1.3 **Water capacity of cylinder:** We have come across a manufacturer who produces one model with a cylinder with a water capacity of 360 mL. This cylinder was selected to contain the same quantity of gas but at a lower pressure. The easy solution, in this instance, would be to increase the water capacity of the cylinder in the provision for avalanche rescue backpacks. However, we believe there is a need to limit the quantity of energy.

1.3.1 The existing provision for avalanche rescue backpacks was written based on the only system available at the time. It refers only to the water capacity of the cylinder rather than the quantity of energy. The quantity of energy is described as the product of the working pressure and water capacity. In this case, the system used a cylinder with a water capacity of 249 mL containing a class 2.2 gas at a working pressure of 30000 kPa (300 bar) — representing an energy of 7470 kPa.Litre (74.7 bar.Litre).

Energy	=	Working Pressure	X	Water Capacity
(kPa.Litre)		(kPa)		(Litre)

1.3.2 Since the introduction of this provision, new avalanche airbags systems that use a similar energy have appeared on the market in Europe and in the United States. These systems contain a cylinder with a water capacity greater than 249 mL but contain the same quantity of energy. One system uses a cylinder with a water capacity of 360 mL with a pressure of 20700 kPa (207 bar) representing an energy of 7452 kPa.Litre (74.52 bar.Litre). This energy is lower than the energy of the cylinder that is accepted today.

Energy	Working Pressure	Water Capacity
7470 kPa.Litre	30000 kPa	0.249 L
7452 kPa.Litre	20700 kPa	0.360 L

1.3.3 We have become aware of another system with a working pressure of 34000 kPa (340 bar) and a water capacity of 235mL resulting in an energy of 7990 kPa.Litre (79.90 bar.Litre). Therefore, we have proposed to limit the quantity of energy to 8000 kPa.Litre.

Energy	Working Pressure	Water Capacity
7990 kPa.Litre	34000 kPa	0.235 L

— — — — — — — —

附录

第8部分

有关旅客和机组成员的规定

第1章

旅客或机组成员携带危险物品的规定

……

1.1 旅客或机组成员携带的危险物品

……

1.1.2 在不妨碍各国为了航空保安所实行的其他限制的情况下，除了7;4.4 或7;4.5（酌情而定）的事故征候报告规定以外，本细则的规定不适用于由旅客或机组成员携带的或放在转运中已与物主分离的行李（如丢失行李或错运行李）中，或放在1;1.1.4.1 g)：

……

日用消费品

……

q) 经运营人批准，每人可携带一件雪崩救援背包，可内装含有净重不超过200 mg 的1.4S 项物质的烟火或非烟火引发装置和一个含有~~不超过250 mL的~~2.2 项压缩气体的气瓶，其工作压力和水容量乘积不得超过8000 kPa.L（8B bar.L）。这种雪崩救援背包的包装方式必须保证不意外启动，背包内的空气袋必须安装减压阀；

— 完 —