



DANGEROUS GOODS PANEL (DGP)

TWENTY-THIRD MEETING

Montréal, 11 to 21 October 2011

Agenda Item 5: Resolution, where possible, of the non-recurrent work items identified by the Air Navigation Commission or the panel:

Agenda Item 5.1: Review of provisions for the transport of lithium batteries

SPARE LITHIUM BATTERIES

(Presented by A. Tusek)

摘要

技术细则第8部分1.1.2 s) 的措辞让人产生混淆，其中包括对装有备用锂电池的便携式电子装置运输的限制。可以对备用锂电池的限制做两方面解释：要么对不低于100瓦的备用锂电池的数量不做限制，或只对两个备用锂电池进行限制，不论额定值大小。

危险物品专家组的行动：请危险物品专家组重新考虑8;1.1.2 s) 的措辞，以便确保规定是明确的。现有和拟议的措词载于本工作文件的附录中。

1. INTRODUCTION

1.1 An issue of interpretation has arisen due to the wording of 8;1.1.2 s) which includes restrictions applied to the carriage of spare lithium batteries for portable electronic devices.

1.2 It is currently possible to interpret the provision in the following ways:

- a) an unlimited number of spare lithium batteries as long as those that are lithium metal have a lithium content of not more than 2 grams and those that are lithium ion have a watt-hour rating of not more than 100 Wh, and no more than two if they are lithium ion batteries being $100 \leq 160$ Wh; or
- b) no more than two individually protected spare batteries per person may be carried.

1.3 The intent is clear in relation to UN 3481 and UN 3091 for lithium batteries packed with equipment in Packing Instructions 966 and 969, respectively, which states the following:

The maximum number of batteries in each package must be the minimum number required to power the equipment, plus two spares.

1.4 The current layout of the provision contained in 8;1.1.2 s) has the text “*No more than two individually protected spare batteries per person may be carried*” as a single sentence at the end of the provision which suggests it applies in all cases (see Appendix A for the current layout).

1.5 Historically these changes were discussed and introduced at DGP/21 and can be traced to the report at DGP/21-WP/86 in Agenda Item 5.4: Review of provisions relating to lithium batteries (<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP21/Report/DGP.21.WP.86.Full.en.pdf>) and DGP/21-WP/47 and DGP/21-WP/77 (<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP21/WPs/index.html>)

1.6 Taking into account the safety issues raised in the Report of DGP/21 and the restrictions imposed on spare lithium batteries in Packing Instructions 966 and 969 it seems that it was intended for this to also apply in 8;1.1.2 s)

1.7 The reason for raising this working paper is because of a recent inquiry in Australia where an airline was approached by a film crew unsure of the interpretation. The camera crew had spare lithium ion batteries all rated at less than 100 Wh and wished to carry more than 50 of these in checked or carry-on baggage.

1.8 If it is accepted that there is no limit to the number of spare lithium batteries with a rating of less than 100 Wh to be permitted in carry-on baggage then the safety of air navigation may be at risk.

1.9 The risk to safety is due to the fire hazard. If a single lithium battery ignites for any reason and causes a sympathetic fire with other lithium batteries in the same checked bag, the resulting fire may be difficult to suppress due to the quantity of lithium batteries involved and the resulting metal fire. However, there are more fire fighting options if this occurs with a carry-on bag.

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附录A

第8部分：1.1.2 S) 的现行措词

第8部分

有关旅客和机组成员的规定

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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)允许作为货物运输的超重行李中的下列危险物品：

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- s) 旅客或机组成员为个人自用并应作为手提行李携带的、内含锂或锂离子电池芯或电池的便携式电子装置（手表、计算器、照相机、手机、手提电脑、便携式摄像机等）。备用电池必须单个做好保护以防短路（放入原零售包装或以其他方式将电极绝缘，如在暴露的电极上贴胶带，或将每个电池放入单独的塑料袋或保护盒当中），并且仅能在手提行李中携带。此外，每一已安装电池或备用电池不得超过以下限制：

—— 对于锂金属电池，锂含量不超过2克；或

—— 对于锂离子电池，瓦时额定值不得超过100 Wh。

经运营人批准，瓦时额定值超过100 Wh但不超过160 Wh的锂离子电池，可以作为备用电池在手提行李中携带，或装在交运行李或手提行李中的设备上。每人不得携带超过两个单独得到保护的备用电池。

附录B

对第8部分：1.1.2 S) 拟议的修订

第 8 部分

有关旅客和机组成员的规定

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- s) 旅客或机组成员为个人自用并应作为手提行李携带的、内含锂或锂离子电池芯或电池的便携式电子装置（手表、计算器、照相机、手机、手提电脑、便携式摄像机等）。

备用电池必须单个做好保护以防短路（放入原零售包装或以其他方式将电极绝缘，如在暴露的电极上贴胶带，或将每个电池放入单独的塑料袋或保护盒当中），并且仅能在手提行李中携带。

此外，每一已安装电池或备用电池不得超过以下限制：

- 对于锂金属电池，锂含量不超过2克；或
- 对于锂离子电池，瓦时额定值不得超过100 Wh。

经运营人批准，瓦时额定值超过100 Wh但不超过160 Wh的锂离子电池，可以作为备用电池在手提行李中携带，或装在交运行李或手提行李中的设备上。

不论以上所示的额定瓦特小时或锂含量，每人每个便携式电子装置不得携带超过两个单独得到保护的备用锂或锂离子电池。

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