



危险物品专家组 (DGP)

第二十八次会议

2021 年 11 月 15 日至 19 日，虚拟会议

议程项目 2: 管理航空特有的安全风险和查明异常情况 (编号: REC A DGS 2023)

2.2: 如有必要, 拟定对《危险物品安全航空运输技术细则》(Doc 9284 号文件) 的修订提案, 以便纳入 2023 年-2024 年版

针对旅客携带的锂电池供电的便携式胰岛素冷藏器的规定

(由 P.Guo 提交)

摘要

本工作文件建议在《技术细则》表 8-1 关于旅客或机组成员携带的危险物品的规定中增加锂电池供电的便携式胰岛素冷藏器。

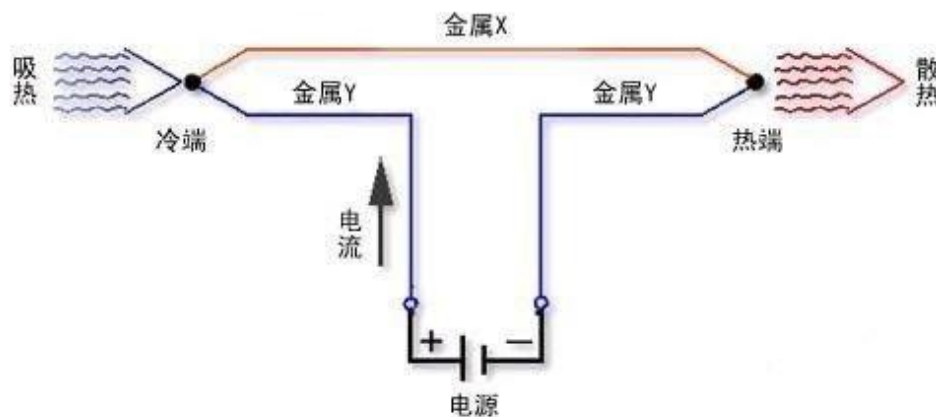
危险物品专家组的行动: 请危险物品专家组考虑在《技术细则》表 8-1 关于旅客或机组成员携带的危险物品的规定中增加锂电池供电的便携式胰岛素冷藏器, 如本工作文件附录所示。

1. INTRODUCTION

1.1 Some passengers may carry portable insulin refrigerators powered by lithium batteries on board aircraft. Portable insulin refrigerators are used to store medicine such as insulin that needs to be kept at certain temperatures. At present, lithium batteries used in portable refrigerators are about 10200 mAh, which is about 51 Wh with the output voltage of 5 V. Examples of insulin refrigerators are shown in the figure below:



1.2 This type of insulin refrigerator is an electronic semiconductor refrigerator, which can be powered by external power source or a lithium battery. The electronic semiconductor refrigerator uses special semiconductor materials to achieve the ultimate goal of cooling and heating through different current flows. By this cooling method, the electronic semiconductor refrigerator can cool and heat with the operating temperature range of 5°C to 65°C. Therefore, the electronic semiconductor refrigerator can be classified as a battery-powered portable electronic device. The working principle of the electronic semiconductor refrigerator is shown in the figure below:



1.3 The provisions to aid recognition of undeclared dangerous goods in Part 7;6 of the Technical Instructions indicate that refrigerators may contain liquefied gases or an ammonia solution. It is quite possible to mistake this type of lithium battery-powered insulin refrigerator as “refrigerators”, and there are no relevant provisions for dangerous goods carried by passengers or crew in Table 8-1. As a result, this lithium battery powered portable insulin refrigerator may be mistaken as a “refrigerator” and denied carriage by the passenger on board the aircraft.

1.4 In view of the reasonable need for passengers to keep insulin cool and the fact that such lithium battery powered potable insulin refrigerators are portable electronic devices, small portable refrigerators should be permitted on board.

2. **ACTION BY THE DGP**

2.1 The DGP is invited to consider adding lithium battery powered insulin refrigerators to the provisions for dangerous goods carried by passengers or crew contained in Table 8-1 of the Technical Instructions as shown in the appendix to this working paper.

附录

对《技术细则》第 8 部分的拟议修订

第 8 部分

有关旅客和机组成员的规定

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第 1 章

旅客或机组成员携带危险物品的规定

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表 8-1. 关于旅客或机组成员携带的危险物品的规定

危险物品	位置		需经运营人批准	限制
	交运行李	随身行李		
电池				
.....				
≠ 4) 由以下电池驱动的代步工具（如轮椅）： — 非防漏型电池； — 防漏型湿电池； — 干电池； — 镍金属氢化物电池；或 — 锂离子电池	是	(见e)	是	a) 供由于身患残疾、健康或年龄问题或暂时性的行动困难（如腿断了）而行动不便的旅客使用； b) 旅客应当提前与每一运营人做好安排，并提供所安装电池的型号信息和代步工具的操作信息（包括如何使电池绝缘的指示）； c) 如果是干电池或镍金属氢化物电池，每个电池必须分别符合特殊规定 A123 或 A199。 d) 如果是防漏型湿电池： i) 每一电池必须符合特殊规定 A67；和 ii) 每位旅客最多可以携带一个备用电池。 e) 如果是锂离子电池： i) 每一电池类型必须符合联合国《试验和标准手册》第 III 部分第 38.3 小节规定的每项试验的要求； ii) 当代步工具未对电池提供充分保护时： — 必须遵循制造商的指示将电池卸下；

危险物品	位置		需经运营人批准	限制
	交运行李	随身行李		
				<ul style="list-style-type: none"> — 电池不得超过 300 Wh; — 必须保护电池两极以防止短路（使电极绝缘，例如在暴露的电极上贴胶带）； — 必须保护电池免受损坏（例如将每个电池放入一个保护袋中）；和 — 电池必须在客舱中携带； <p>iii) 最多可携带一个不超过 300Wh 的备用电池，或两个各不超过 160Wh 的备用电池。备用电池必须在客舱中携带。</p>
5) 电池供电的半导体冷藏器	是	是	否	<p>电池供电的半导体冷藏器，例如胰岛素冷藏器，在使用锂电池供电时，必须满足锂电池供电的便携式电子装置的要求。</p>
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