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工 作 文 件

危险物品专家组（DGP）

第二十五次会议

2015年10月19日至30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2017年 — 2018年版**

旅客携带的紧急定位信标

（由B. Firkins提交）

摘要

本文件提供了关于紧急定位信标、它们作为救生设备的作用、提供电源的锂金属电池、对旅客或机组携带它们施加的限制的信息以及在施加附加条件以维护航空安全的情况下放宽对旅客或机组携带这些设备的限制的提案。。

危险物品专家组的行动：请危险物品专家组发表意见，并考虑接受本工作文件附录所提出的修正案。

1. INTRODUCTION

1.1 Personal locator beacons (PLBs), emergency location transmitters (ELTs) and emergency position indicating radio beacons (EPIRBs) are emergency locating beacons which are used by people in distress to request emergency assistance, and aid in the subsequent detection and location of themselves, boats and aircraft and people in distress. Generally, EPIRBS are registered to vessels such as ships and ELTs to aircraft, although it is commonplace to treat ELTs as being synonymous with EPIRBs. PLBs are “registered” to individuals. When activated, both EPIRBs and PLBs emit a coded message via the 406 MHz distress frequency, which is relayed via the COSPAS/SARSAT satellite network, to a ground-based Rescue Coordination Centre.

1.2 Statistics indicate that these devices have assisted in over 28,000 rescues since 1982. With advances in technology and affordability these devices are increasing in popularity and passengers are carrying them as part of their personal baggage on adventure holidays. As the device may not be activated for many years; but is still required to function when needed, they are usually fitted with a lithium metal

battery as these have a long electrical storage life. They also tend to be manufactured to survive in a harsh operating environment e.g. robust and durable.

1.3 A growing number of EPIRBs and PLBs are powered by lithium metal batteries that exceed the current 2 g limit, and therefore cannot be legally carried as part of the passenger provisions in Part 8 of the ICAO Technical Instructions. The methods for passengers to legally carry these devices in a personal capacity, are either to consign them as cargo (UN 3091) which is a cumbersome and bureaucratic process and may not be practical or available; or they travel without the battery (if it can be removed) and buy them at destination – which could be difficult in some of the remote locations of the world that attract these adventure-bound travellers.

1.4 Discussions with a number of manufacturers, retailers and aircraft operators have revealed that even though passengers are being advised that non-medical devices powered by lithium metal batteries with a lithium metal content between 2 g – 8 g are not permitted by airlines, they are still being carried.

1.5 A number of retailers provide safety data sheets (SDS) which detail the chemistry of the lithium metal battery and content of lithium metal, and those which fall within the current provisions for portable electronic devices will often be declared as permitted for carriage by passengers on aircraft; whilst those that do not meet the passenger provisions are usually silent. Following up with manufacturers and retailers has shown that they are aware of the restrictions, and if asked will provide an honest response to their customers, yet they are still reluctant to label their product or provide comment in the SDS that the batteries used in their device exceed the 2 g limitation and are therefore not permitted under the normal provisions for carriage by passengers.

2. EXISTING PROVISIONS

2.1 Part 8; Table 8-1; item 8 of the Technical Instructions, deals specifically with portable medical electronic devices, and permits the carriage of portable medical electronic devices and larger lithium metal batteries.

> "8) Portable medical electronic devices (automated external defibrilators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) containing lithium metal or lithium ion cells or batteries"

Where the fourth entry is

"Portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh"

2.2 This is not an appropriate entry to consider for EPIRBs and PLBs.

2.3 Part 8; Table 8-1; item 19 deals with more general portable electronic devices containing batteries:

> "19) Portable electronic devices (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders)"

"Portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries…"

With the condition that:

> "c) each battery must not exceed the following:
>
> —for lithium metal batteries, a lithium content of not more than 2 grams"

2.4 There is no provision in Part 8 of the Technical Instructions for general PEDs, powered by lithium metal batteries, which exceed 2 g but not 8 g of lithium metal.

3. PASSENGER PROVISIONS: LIFE SAVING AND MEDICAL PURPOSES

3.1 Part 8 permits the carriage of battery powered 'portable medical electronic devices' and cites examples of Automated External Defibrillators (AED) and Continuous Positive Airways Pressure (CPAP) devices.

3.2 Conceptually, an AED is generally a lithium metal battery powered, life-saving device; whilst a CPAP or oxygen concentrator is usually a lithium ion powered medical for preventive purposes.

3.3 That is, a CPAP is a medical device, which is used as a preventive measure, in reasonably foreseeable medical conditions; and to prevent the passenger having an in-flight medical emergency. An AED is a device, which is often unused and only operated after a person is suspected of having had a cardiac-related event.

3.4 Within the medically-related items that passengers may take as dangerous goods, there are other, non-battery operated preventive items such as portable oxygen cylinders and medicinal articles.

3.5 Part 8 also includes certain devices, containing dangerous goods, which are not battery powered and which have a life-saving purpose for the adventure-based traveller, such as avalanche rescue backpacks and inflatable life jackets.

4. THE PROPSAL

4.1 Passengers are carrying emergency personal location beacons, powered by lithium metal batteries exceeding 2g, on aircraft today; and will continue to do so as they consider them a potential lifesaving tool. Rather than continue to perpetuate an ineffectual prohibition, it is proposed that provision should be made to enable the lawful carriage of these devices, but in a way that enables the airline to manage and monitor the risk i.e. through requiring the approval of the Operator.

4.2 The provision should be constructed so to continue in the context of being "for the personal use of the passenger or crew member". The bulk transportation of EPIRBS/PLBs for an entire ship's crew or hiking party, should be via the normal cargo provisions; but there is a reluctance to limit them to one per passenger.

4.3 A number of enquiries received by the Civil Aviation Safety Authority of Australia have been in respect of requests to carry EPIRBs/ELTs for the ship/aircraft that the passenger has purchased or will command. Therefore the proposal in Appendix A has been constructed around facilitating the carriage of EPIRBs and ELTs, and not restricting it just PLBs.

4.4 As these emergency locating beacons are designed to have a long shelf life; it is not proposed to make any provision for the carriage of spare lithium metal batteries.

4.5 With this philosophy in mind and given that an EPIRB/PLB is used in life-saving situations it is a timely opportunity to amend Part 8 to catch up with these technological advances.

5. ACTION BY THE DGP

5.1 The DGP is invited to comment upon, and consider accepting, the proposed amendment as shown in the appendix to this working paper.

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附录

技术细则第8部分的建议修订

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

本章部分内容受国家差异条款US 15的影响，见表A-1

1.1 旅客或机组成员携带的危险物品

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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

用品或物品	位置			需经运营人批准	必须向机长通报	限制
	交运行李	手提行李	随身携带			
医疗必需品						
19) 便携式电子装置（例如手表、计算器、照相机、手机、手提电脑、便携式摄像机）						
内含锂金属或锂离子电池芯或电池的便携式电子装置（包括医疗装置）（内含锂金属或锂离子电池芯或电池且其主要用途是为另一装置供电的物品，必须按照下面一项，作为备用电池予以运载）	是	是	是	否	否	a) 旅客或机组成员为个人自用携带； b) 应作为手提行李携带； c) 每一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；

用品或物品	位置			需经运营人批准	必须向机长通报	限制
	交运行李	手提行李	随身携带			
内含锂金属电池芯或锂离子电池超过2克但不超过8克的个人便携式应急定位装置	否	是	是	是	否	a) 旅客或机组成员为个人自用携带； b) 电池和电池芯的所属类型必须符合联合国《试验和标准手册》第III部分38.3小节规定的每项试验的要求。

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