Organización de Aviación Civil Internacional

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NOTA DE ESTUDIO

GRUPO DE EXPERTOS SOBRE MERCANCÍAS PELIGROSAS (DGP)

VIGESIMOQUINTA REUNIÓN

Montreal, 19 - 30 de octubre de 2015

Cuestión 2 del orden del día: **Formulación de recomendaciones sobre las enmiendas de las *Instrucciones Técnicas para el transporte sin riesgos de mercancías peligrosas por vía aérea* (Doc 9284) que haya que incorporar en la edición de 2017-2018**

RADIOBALIZAS DE EMERGENCIA PARA LOCALIZACIÓN QUE TRANSPORTAN LOS PASAJEROS

(Nota presentada por B. Firkins)

Por falta de recursos, sólo se han traducido el resumen y el apéndice

RESUMEN

En esta nota se proporciona información acerca de las radiobalizas de emergencia para localización, su función como aparatos salvavidas, las baterías de metal litio con que funcionan, las restricciones para su transporte por los pasajeros o la tripulación, y una propuesta de incorporar condiciones adicionales con respecto al transporte de estos aparatos por los pasajeros y la tripulación con el propósito de mantener la seguridad operacional de la aviación.

Medidas recomendadas al DGP: Se invita al DGP a formular cometarios y a considerar la aceptación de la enmienda propuesta, conforme al apéndice de esta nota.

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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APÉNDICE

PROPUESTA DE ENMIENDA DE LA PARTE 8 DE LAS INSTRUCCIONES TÉCNICAS

Parte 8

DISPOSICIONES RELATIVAS A LOS PASAJEROS Y A LA TRIPULACIÓN

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Capítulo 1

DISPOSICIONES PARA MERCANCÍAS PELIGROSAS TRANSPORTADAS POR LOS PASAJEROS O LA TRIPULACIÓN

Partes de este capítulo resultan afectadas por las discrepancias estatales US 15; véase la Tabla A-1

1.1 MERCANCÍAS PELIGROSAS TRANSPORTADAS POR LOS PASAJEROS O LA TRIPULACIÓN

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Tabla 8-1. Disposiciones relativas a mercancías peligrosas transportadas por los pasajeros o la tripulación

Artículos u objetos	*Ubicación*			*Se requiere aprobación del explotador*	*Se debe informar al piloto al mando*	*Restricciones*
	Equipaje facturado	*Equipaje de mano*	*En la persona*			
Artículos de uso médico						
. . .						
19) Aparatos electrónicos portátiles (como relojes de pulsera, calculadoras, cámaras, teléfonos celulares, computadoras portátiles, videocámaras)						

Artículos u objetos	*Ubicación*			*Se requiere aprobación del explotador*	*Se debe informar al piloto al mando*	*Restricciones*
	Equipaje facturado	*Equipaje de mano*	*En la persona*			
Aparatos electrónicos portátiles (incluidos los dispositivos médicos) que contienen pilas o baterías de metal litio o de ión litio (los objetos que contienen pilas o baterías de metal litio o de ión litio cuyo propósito primordial es proporcionar energía para el funcionamiento de otro dispositivo, deben portarse como baterías de repuesto de conformidad con lo dispuesto en la casilla siguiente)	Sí	Sí	Sí	No	No	a) para uso personal de los pasajeros o la tripulación; b) deberían llevarse en el equipaje de mano; c) ninguna batería debe sobrepasar lo siguiente: — para las baterías de metal litio, un contenido máximo de 2 gramos de litio; o — para las baterías de ión litio, una capacidad nominal de 100 Wh;
Aparatos portátiles personales de emergencia para localización que contienen pilas o baterías de metal lito con más de 2 gramos pero no más de 8 gramos de litio	No	Sí	Sí	Sí	No	a) para uso personal de los pasajeros o la tripulación; b) las baterías y las pilas deben ser de un tipo que satisfaga las condiciones de cada una de las pruebas del *Manual de Pruebas y Criterios* de las Naciones Unidas, Parte III, subsección 38.3

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