Organización de Aviación Civil Internacional

DGP/27-WP/35*
17/7/19

NOTA DE ESTUDIO

GRUPO DE EXPERTOS SOBRE MERCANCÍAS PELIGROSAS (DGP)

VIGESIMOSÉPTIMA REUNIÓN

Montreal, 16 - 20 de septiembre de 2019

Cuestión 2 del orden del día: **Gestión de los riesgos de seguridad operacional específicos del transporte por vía aérea e identificación de anomalías**

2.2: **Formular propuestas de enmienda de las *Instrucciones Técnicas para el transporte sin riesgos de mercancías peligrosas por vía aérea* (Doc 9284), si se considera necesario, para su incorporación en la edición de 2021-2022**

TRANSPORTE DE BATERÍAS DE LITIO EN AERONAVES DE PASAJEROS

(Nota presentada por T. Muller)

RESUMEN

En esta nota se propone que, si no hay vuelos de aeronaves exclusivamente de carga, se permita transportar en aeronaves de pasajeros una expedición que contenga como máximo dos bultos de baterías de litio para aparatos médicos, con aprobación del explotador.

Medidas recomendadas al DGP: Se invita al DGP a considerar y adoptar la propuesta para introducir una nueva disposición especial para ONU 3090 y ONU 3480, según figura en el Apéndice A de esta nota de estudio.

1. INTRODUCTION

1.1 Since the introduction of the embargo on lithium batteries on passenger aircraft we have several times been approached by medical companies or intervention teams such as Médecins Sans Frontières (Doctors without Borders), seeking advice on how to transport spare lithium batteries, urgently needed, to destinations where cargo aircraft are unavailable. To overcome the restrictions, occasionally staff members travelled with the spare batteries in hand luggage to the final destination or the spare batteries were sent together with the piece of equipment, although the equipment was not needed, to make transport as cargo possible on board a passenger aircraft. Although this may have solved some problems, in most of the cases this is a very impractical and unaffordable solution to ensure required health care for a patient. This is explained in the following example:

> Recently a big medical company needed to urgently ship four spare lithium ion batteries used to power the HeartMate Left Ventricular Assist Device (LVAD). The device is intended for certain advanced heart failure patients and will improve long-term survival, functional

* Sólo se han traducido el resumen y el apéndice.

status and quality of life. In Appendix B you will find some pictures of the device. The device is powered by four lithium-ion batteries which are worn by the patient externally on their back. In case of failure of one of the batteries, they need urgently to be replaced. Shipping the whole device again is impossible as the device costs several thousands of Euros. These batteries are fully tested not only in accordance with the UN *Manual of Tests and Criteria*, Part III, subsection 38.3 but also in accordance with all medical standards, and the lithium ion batteries will be shipped at 30% SOC in a package that is fully certified in accordance with transport and medical regulations and standards. Therefore, it is very hard to explain to a patient that the batteries cannot be delivered on time because they are not allowed to be transported on a passenger aircraft without going through the time-consuming procedures of obtaining approvals or exemptions.

1.2 We strongly believe that this is an undesirable situation. Therefore, we would like to invite the panel to discuss the possibility of allowing on a passenger flight, under well-established conditions and in case of medical urgency, a maximum of one shipment containing one (or two) package(s) lithium batteries **with the prior approval of the operator**. Currently, under the passenger provisions, the operator is already allowed to approve the carriage of lithium ion batteries up to 160 Wh and for lithium batteries for medical devices up to 8 g lithium. Some may argue that these batteries are transported in cabin which is true but, on the other hand, besides the fact that the batteries must be protected to prevent short circuits, no other mitigating measures are required. Moreover, an operator must also approve the transport of battery-powered mobility aids which can be transported in the hold with the battery installed, in which case no watt hour limitation applies.

1.3 Recognizing that the goal of the Technical Instructions is to provide adequate instructions for the safe transport of dangerous goods but also to facilitate the transport of dangerous in instances of urgency provided an overall level of safety can be achieved, this working paper proposes a new special provision to allow a well-defined number of packages and batteries on a passenger flight with the prior approval of the operator under the following well-established conditions:

a) maximum of one [two] packages per flight containing maximum four Lithium batteries;

b) for Lithium ion batteries, the watt hour rating may not exceed 160 Wh;

c) for Lithium metal batteries the lithium content may not exceed 8 g;

d) lithium ion batteries must be at maximum 30 % state of charge;

e) compliance with the UN *Manual of Tests and Criteria*, Part III, subsection 38.3 must be proven by means of the lithium battery summary test report;

f) lithium ion batteries must be packed in accordance with Section IA of Packing Instruction 965 and lithium metal batteries must be packed in accordance with Section IA of Packing Instruction 968.

1.4 In addition, Part 7;1.7 requires the operator to conduct a safety risk assessment which should include appropriate additional information (e.g. origin of the shipment, reliability of the company, additional safety considerations during loading etc.) to ensure the safe transport of lithium batteries as cargo.

1.5 Before submitting this proposal to the panel, we have taken the opportunity during the last Dangerous Goods European Liaison Group in June, a forum where European CAA’s and operators

have the possibility to discuss topics of common interest, to discuss the feasibility of the submission of an official working group concerning this topic to the panel and to seek the advice from the participants. The positive outcome from regulators as well as from operators has contributed to this working paper.

2. ACTION BY THE DGP

2.1 The DGP is invited to discuss and adopt the proposal for a new special provision against UN 3090 and UN 3480 as shown in Appendix A to this working paper.

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APÉNDICE A

PROPUESTA DE ENMIENDA A LA PARTE 3 DE LAS INSTRUCCIONES TÉCNICAS

Parte 3

LISTA DE MERCANCÍAS PELIGROSAS, DISPOSICIONES ESPECIALES Y CANTIDADES LIMITADAS Y EXCEPTUADAS

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Capítulo 3

DISPOSICIONES ESPECIALES

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Tabla 3-2. Disposiciones especiales

IT	*ONU*	
AXXX		Si no hay aeronaves de carga disponibles, puede transportarse en aeronaves de pasajeros un envío que contenga como máximo un bulto [dos bultos] de baterías de litio para aparatos médicos, con aprobación previa del explotador, ajustándose a las condiciones siguientes: a) el expedidor debe proporcionar al explotador una copia del informe resumido de los ensayos, según se especifica en la Parte 2;9.3 g); b) el bulto [bultos] no debe contener más de cuatro baterías c) para las baterías de ion litio: — la capacidad nominal no debe ser superior a 160 Wh; y — las baterías deben estar embaladas conforme a la Sección IA de la Instrucción de embalaje 965; d) para las baterías de metal litio: — el contenido de litio de cada batería no debe ser superior a 8 g; y — las baterías deben estar embaladas conforme a la Sección IA de la Instrucción de embalaje 968; . e) una referencia a la Disposición especial xx debe: i) incluirse en el documento de transporte de mercancías peligrosas; y ii) marcarse al lado de la denominación del artículo expedido en el bulto; y [f) a la expedición debe adjuntarse una copia de la aprobación del explotador.]

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APÉNDICE B

DISPOSITIVO DE ASISTENCIA VENTRICULAR IZQUIERDA HEARTMATE (LVAD)

— FIN —