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

منظمة الطيران المدني الدولي

ورقة عمل

فريق خبراء البضائع الخطرة

الاجتماع السابع والعشرون

مونتريال، من ١٦ إلى ٢٠١٩/٩/٢٠

البند رقم ٢ : إدارة المخاطر المتعلقة بالسلامة الجوية وتحديد أوجه التعارض
٢–٢: إعداد ما يلزم من اقتراحات لتعديل وثيقة "التعليمات الفنية للنقل الآمن للبضائع الخطرة بطريق الجو " (Doc 9284) لإدخالها في طبعة ٢٠٢١–٢٠٢٢ من الوثيقة النظر في كيف يُمكن للقاعدة

نقل بطاريات الليثيوم على متن طائرات الركاب

(مقدمة من ت. مولر)

الموجز

تقترح ورقة العمل هذه السماح بنقل على طائرة للركاب شحنة واحدة تتضمن حزمتين، كحد أقصى، من بطاريات الليثيوم المستخدمة في الأجهزة الطبية، في حال لم تتوافر رحلة على متن طائرات الشحن الخالص، وذلك بموافقة المشغل الجوي.

الإجراء المعروض على فريق خبراء البضائع الخطرة: يُدعى فريق خبراء البضائع الخطرة إلى مناقشة واعتماد المقترح بإعداد حكم خاص جديد على أساس رقمي الأمم المتّحدة للتعليمات القاضية بحظر نقل بطاريات معدن الليثيوم (UN 3090) وحظر نقل بطاريات أيونات الليثيوم (UN 3480)، وذلك على النحو الوارد في المرفق (أ).

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,

*تُرجم ملخص ورقة العمل فقط.

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 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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APPENDIX A

PROPOSED AMENDMENT TO PART 3 OF THE TECHNICAL INSTRUCTIONS

Part 3

DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND LIMITED AND EXCEPTED QUANTITIES

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Chapter 3

SPECIAL PROVISIONS

. . .

Table 3-2. Special provisions

TIs	*UN*	
AXXX		In instances where no cargo aircraft is available, one consignment containing a maximum of one [two] package[s] of lithium batteries for medical devices may be carried on a passenger aircraft with the prior approval of the operator under the following conditions: a) the shipper must provide the operator with a copy of the test summary report as specified in Part 2;9.3 g); b) the package[s] must not contain more than four batteries; c) for lithium ion batteries: — the Watt-hour rating of each battery must not exceed 160 Wh; and — the batteries must be packed in accordance with Section IA of Packing Instruction 965; d) for lithium metal batteries: — the lithium content of each battery may not exceed 8 g; and — the batteries must be packed in accordance with Section IA of Packing Instruction 968; . e) reference to Special Provision xx must be: i) included on the dangerous goods transport document; and ii) marked adjacent to the proper shipping name on the package; and [f) A copy of the operator approval must accompany the shipment.]

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APPENDIX B

HEARTMATE LEFT VENTRICULAR ASSIST DEVICE (LVAD)

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