



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-THIRD MEETING

Montréal, 11 to 21 October 2011

Agenda Item 5: Resolution, where possible, of the non-recurrent work items identified by the Air Navigation Commission or the panel:

5.1: Review of provisions for the transport of lithium batteries

SPARE LITHIUM-ION BATTERIES FOR BATTERY-POWERED WHEELCHAIRS

(Presented by K. Koume)

SUMMARY

This paper proposes that spare lithium ion batteries for wheelchair is permitted for carriage by passengers.

Action by the DGP: The DGP is invited to add paragraph in Part8; 1.1.2 g) as presented in the appendix to this working paper.

1. INTRODUCTION

1.1 Provisions for the carriage of lithium battery-powered mobility aids were discussed at the Twenty-Second Meeting of the Dangerous Goods Panel (DGP/22, 5 to 16 October 2009) (DGP/22-WP/100, paragraph 5.4.1 refers), but those provisions did not include spare batteries due to the lithium ion battery capacity, which was considered to exceed 160 Wh.

1.2 Recently, smaller lithium ion batteries which have watt hour rating not more than 160 Wh were developed for the use of wheelchairs. Passengers with demands wishing to carry wheelchairs with spare batteries are increasing. It is therefore necessary to consider permitting spare lithium ion batteries for wheelchairs in a passenger baggage, taking into account the human rights of mobility restricted persons.

1.3 Part 8;1.1.2 of the Technical Instructions permits the carriage of the following devices or equipment containing lithium batteries:

- a) battery-powered wheel chairs or other similar mobility aids;

- b) portable medical electronic devices (AED, Nebulizer, CPAP etc);
- c) portable electronic devices (watches, calculating machines, cameras, cellular phones, laptop computers, camcorders, etc); and
- d) security-type equipment such as attaché cases, cash boxes, cash bags, etc.

1.4 The Technical Instructions also permit passengers to carry a spare lithium metal or lithium ion battery for portable medical electronic devices and lithium or lithium ion cell batteries for portable electronic devices provided that the capacity of the battery does not exceed 160 Wh and that no more than two batteries are carried per person and the batteries are individually protected.

1.5 If the capacity of the spare battery for a wheelchairs does not exceed 160 Wh and is well protected, the carriage of such a spare battery should be allowed. It is therefore proposed to add a provision for spare lithium-ion batteries to Part8;1.1.2 g) of the Technical Instructions.

APPENDIX

PROPOSED AMENDMENTS TO THE TECHNICAL INSTRUCTIONS

Part 8

PROVISIONS CONCERNING
PASSENGERS AND CREW

...

Chapter 1

PROVISIONS FOR DANGEROUS GOODS
CARRIED BY PASSENGERS OR CREW

Parts of this Chapter are affected by State Variations CH 1, US 15; see Table A-1

1.1 DANGEROUS GOODS CARRIED BY PASSENGERS OR CREW

...

1.1.2 Notwithstanding any additional restrictions which may be implemented by States in the interests of aviation security, except for the incident reporting provisions of 7;4.4 or 7;4.5, as applicable, the provisions of these Instructions do not apply to the following when carried by passengers or crew members or in baggage that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage) or in excess baggage carried as cargo as permitted by 1;1.1.4.1 g):

...

- g) with the approval of the operator(s), lithium-ion battery-powered wheelchairs or other similar mobility aids for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg), subject to the following conditions:
- 1) the batteries must be of a type which meets the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, section 38.3;
 - 2) battery terminals must be protected from short circuits (e.g. by being enclosed within a battery container) and securely attached to the mobility aid;
 - 3) the operator(s) must ensure that such mobility aids are carried in a manner so as to prevent unintentional activation and that they are protected from being damaged by the movement of baggage, mail, stores or other cargo; and
 - 4) the pilot-in-command must be informed of the location of the mobility aid.

It is recommended that passengers make advance arrangements with each operator.

5) no more than two spare batteries per person may be carried in carry-on baggage only. Spare batteries must not exceed a watt-hour rating of 160 Wh, and must be individually protected so as to prevent short circuits.

軽量電動車いす

IR-Li



AISINの車いす用電動パワーユニットPU20を装着した軽量電動車いすです。優れた機動性と安心のセーフティ機能の数々であなたの行動力と可能性が広がります。



- 軽量約23.8kg (バッテリー重量2kg含)
- Li-ion (リチウム-イオン) バッテリー搭載
- 1充電 15km走行
- 稼動時の静粛性 (PU10比 10dbダウン)
- スムースな操作感



IR-Li

車体価格 450,000円
非課税

項目	仕様内容	
品名	IR-Li	
駆動方式	後輪直接駆動	
寸法 (全長×全幅×全高)	106×64×88cm (前座高44×後座高42cm)	
重量	約23.8kg (バッテリー重量2kg含)	
操舵方式	ジョイスティック操舵	
駆動車輪径	22インチ	
制御方式	マイクロコンピューター制御	
モーター	30分定格出力24V 90W×2	
手動/電動切り替え	手元切替え式 (左右連動)	
走行速度	前進 ~最高6km/hまで可変 ※1 後進 ~最高3km/hまで可変	
実用登坂角度	6°	
バッテリー (1個あたり)	Li-ion 25.9V×6Ah	
充電器	電源	AC100V 50/60Hz
	充電方式	完全自動充電方式
	充電時間	最長5.5時間
電動走行距離	15km (6.0km/hタイプ) 1充電 ※2	
キャスター	6°クッションキャスター	
フレーム	アルミ	

※1 4.5km/h仕様もあります。 ※2 JIS T9203による計測。
● IR-LiにつきましてはIRを基本フレームとしておりますが、その他仕様変更につきましては別途ご相談ください。

世界初!
Li-ionバッテリー搭載!



- 1充電15km走行可
- 左右クラッチ連動

税込価格
Li-ionバッテリー **68,250円**
(本体価格 65,000円)

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