



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-FIRST MEETING

Montréal, 5 to 16 November 2007

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2009-2010 Edition

AMENDMENT TO PART 8 IN ORDER TO PERMIT PASSENGERS AND CREW TO CARRY CONSUMER ELECTRONIC DEVICES POWERED BY FUEL CELL SYSTEMS CONTAINING HYDROGEN IN METAL HYDRIDES AND SPARE FUEL CELL CARTRIDGES

(Presented by G. Branscombe)

SUMMARY

This working paper proposes an amendment to Part 8;1.1.2 r) to permit passengers and crew to carry consumer electronic devices powered by fuel cell systems containing hydrogen in metal hydrides and spare fuel cell cartridges.

Action by the DGP is in paragraph 2.

1. INTRODUCTION

1.1 At DGP/20, provision was made to permit passengers and crew to carry onboard an aircraft as carry-on baggage portable electronic devices powered by fuel cell systems and spare fuel cell cartridges under a new subparagraph r) in Part 8;1.1.2. Only fuel cell cartridges containing flammable liquids, formic acid and butane were permitted under the new provisions. It was generally agreed that other fuels should only be considered for inclusion after the matter was addressed by the UN Sub-Committee of Experts on the Transport of Dangerous Goods (UNSCETDG) and new proper shipping names and UN numbers were assigned.

1.2 In response to the panel's recommendation, the Canadian expert to the UNSCETDG submitted a comprehensive proposal on fuel cells containing hydrogen in metal hydride. The paper from the expert from Canada was adopted by the UNSCETDG with some minor modifications at the UNSCETDG's thirtieth session and provisions for fuel cells cartridges containing hydrogen in metal hydride were adopted for inclusion into the 15th revised edition of the UN Model Regulations. The capacity of these fuel cell cartridges was restricted to 120 ml.

1.3 Further to the Canadian Expert to the UNSCETDG's action, Canada has issued a permit to allow fuel cell cartridges containing hydrogen in metal hydride with an internal volume not exceeding 100 ml, to be transported as carry-on aboard passenger aircraft within Canada.

2. ACTION BY THE DGP

2.1 The DGP is invited to:

a) *amend* 8;1.1.2 r) 1) to read as follows:

r) portable electronic devices (for example cameras, cellular phones, laptop computers and camcorders) powered by fuel cell systems, and spare fuel cartridges, under the following conditions:

1) fuel cell cartridges may only contain flammable liquids (including methanol), formic acid, ~~and~~ butane and hydrogen in metal hydride;

b) *amend* 8;1.1.2 r) 2) to read as follows:

2) fuel cell cartridges must comply with International Electrotechnical Commission (IEC) PAS 62282-6-1 Ed. 1 and fuel cell cartridges containing hydrogen in metal hydride must additionally comply with the requirements in Special Provision A162;

c) *amend* 8;1.1.2 r) 4) to read as follows:

4) the maximum quantity of fuel in any fuel cell cartridge must not exceed:

a) for liquids 200 mL;

b) for liquefied gases, 120 mL for non-metallic fuel cell cartridges or 200 ml for metal fuel cell cartridges;

c) for hydrogen in metal hydride, 120 ml.