



**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Memphis, 30 April to 4 May 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

2.3: Part 3 — Dangerous Goods List and Limited Quantities Exceptions

UN NO. 3479:

FUEL CELL CARTRIDGES CONTAINING HYDROGEN IN METAL HYDRIDE
FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT CONTAINING HYDROGEN IN
METAL HYDRIDE
FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT
CONTAINING HYDROGEN IN METAL HYDRIDE

(Presented by International Organization for Standardization (ISO))

REPORT ON ISO/TS 16111:2006 *TRANSPORTABLE GAS STORAGE DEVICES — HYDROGEN ABSORBED IN REVERSIBLE METAL HYDRIDES*

In preparation for this meeting, where the above topic will be discussed, we are pleased to provide you with an update of the ISO/TC 197 activities regarding transportable gas storage devices — hydrogen absorbed in reversible metal hydrides.

As part of this update, we are pleased to announce the publication of **ISO/TS 16111:2006**. For your information, ISO/TS 16111 is a normative reference in IEC/PAS 62282-6-1 *Fuel cell technologies - Part 6-1: Micro fuel cell power systems – Safety*. Indeed, Annex B of IEC/PAS 62282-6-1 requires that fuel cell cartridges that store hydrogen in hydrogen absorbing metal alloy meet the requirements of ISO/TS 16111.

For your information, the TS covers the design requirements of transportable hydrogen gas storage canisters including all necessary shut-off valve, pressure-relief devices (PRD), and appurtenances, intended for use with reversible metal hydride, hydrogen storage systems. It also includes special provisions for small canisters with an internal volume of less than 0,12 litres.

Please note that the requirements of the TS are aligned with the requirements of the special provision of UN entry 3479.

We are also pleased to suggest maximum net quantity per package for passenger aircraft and cargo aircrafts. This topic was discussed at the last ISO/TC 197 WG 10 meeting on 10-12 April 2007 in Vancouver. The working group was supportive of the values proposed by the US Fuel Cell Council (WP22), which proposes that these cartridges, subject to the provisions proposed in WP04, be permitted to be transported on both cargo and passenger aircraft as cargo, with maximum net quantities of 15 kg and 1 kg, respectively.

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