

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

10 June 2014

Forty-fifth session

Geneva, 23 June – 2 July 2014

Item 5 (e) of the provisional agenda

Electric storage systems: miscellaneous

Comments on ST/SG/AC.10/C.3/2014/12 and ST/SG/AC.10/C.3/2014/47 – Special Provision 310, Prototype and Low Production Lithium Batteries Contained in Equipment

**Transmitted by PRBA – The Rechargeable Battery Association and
RECHARGE, the European Association for Advanced Rechargeable
Batteries**

Background

1. ST/SG/AC.10/C.3/2014/12 from Germany correctly states that Special Provision 310 of the UN Model Regulations authorizes the transport of low production and pre-production lithium ion and lithium metal cells and batteries but does not authorize the transport of these cells and batteries when contained in equipment. PRBA and RECHARGE fully-support Germany's proposal to amend Special Provision 310 to authorize low production and pre-production lithium ion and lithium metal cells and contained in equipment. We also have included in this Informal Paper several proposed changes and comments for the Sub-Committee's consideration.
2. In addition, ST/SG/AC.10/C.3/2014/47 from France identifies a number of issues regarding shipments of prototype lithium batteries that should be addressed by the Sub-Committee. PRBA and RECHARGE recommend that Special Provision 310 be more closely aligned with Special Provision A88 of the ICAO Technical Instructions, which has been updated several times by the Dangerous Goods Panel to account for larger prototype lithium batteries transported by air. PRBA and RECHARGE support France's suggestion that the working group on the UN testing of lithium batteries meeting in Washington, DC in September 2014 include this issue on their agenda.
3. When Special Provision 310 was first adopted in the 1990s, most lithium cells and batteries were designed to be easily-removable from the equipment they were intended to power. As lithium cell and battery technologies and form factors have evolved, it has become more common to manufacture equipment with lithium cells and batteries that are permanently installed. That is, the cells and batteries are not easily removable and can only be replaced by professional technicians.
4. When a prototype or low production lithium cell or battery is installed in equipment and shipped for testing or for use in the field, the shipment requires a competent authority approval because the current regulations do not authorize such shipments. PRBA and RECHARGE believe prototype and low production lithium cells and batteries contained in equipment can be safely transported without an approval when packaged in accordance

with Special Provision 310. In fact, when cells and batteries are contained in equipment, the equipment provides an additional level of protection during transport. We also believe that large equipment having a strong impact resistant casing can be safely transported in strong outer packaging rather than Packing Group I packaging provided it is constructed of suitable materials of adequate strength and design in relation to the packaging capacity and its intended use.

5. Germany's proposal to include a reference in Special Provision 310 to shipping damaged or defective should be removed. We believe this will create unnecessary confusion for companies packaging low production and prototype lithium batteries.

Proposal

6. PRBA and RECHARGE support SG/AC.10/C.3/2014/12 from Germany and propose the following changes for the Sub-Committee's consideration:

6.1 Add a requirement to proposed paragraph (a) to protect cells and batteries from short circuit. Add a requirement to proposed paragraph (b) that equipment be protected to prevent accidental operation during transport, which is consistent with the requirements in Special Provision 188 and Packing Instruction P903. In addition, minor edits are offered to paragraph (b)(i);

6.2 Include a provision that authorizes the transport of large equipment having a strong impact resistant casing in strong outer packaging; and

6.3 The reference to transporting damaged or defective batteries in accordance with Special Provision 376 and Packing Instruction P908 should be removed.

7. PRBA's and RECHARGE's proposed changes to SG/AC.10/C.3/2014/12 are provided below.

(a) Cells and batteries:

(i) The cells and batteries are transported in an outer packaging that is a metal, plastics or plywood drum or a metal, plastics or wooden box and that meets the criteria for packing group I packagings; ~~and~~

(ii) Each cell and battery is individually packed in an inner packaging inside an outer packaging and is surrounded by cushioning material that is non-combustible, and non-conductive; and

(iii) Cells and batteries are protected against short circuit.

(b) Cells and batteries contained in equipment:

(i) ~~The cells and batteries contained in~~ equipment are is transported in an outer packaging that is a metal, plastics or plywood drum or a metal, plastics or wooden box and that meets the criteria for packing group I packagings; ~~and~~

(ii) The cells and batteries are protected against short circuit; and

(iii) The equipment is constructed or packaged in such a manner as to prevent accidental operation during transport.

Large equipment employing a strong, impact resistant outer casing may be packed in strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use. Packagings need not meet the requirement of 4.1.1.3. The equipment shall be constructed or

packaged in such a manner as to prevent accidental operation during transport. Cells and batteries shall be protected against short circuit.

Large equipment may be transported unpackaged under conditions specified by the competent authority.

~~(e) — Identified damaged or defective cells and batteries shall be transported in accordance with special provision 376 and packaged in accordance with P908 of 4.1.4.1 or LP904 of 4.1.4.3, as applicable.~~
