International Civil Aviation Organization

WORKING PAPER

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English and Chinese only

DANGEROUS GOODS PANEL (DGP)

TWENTY-SIXTH MEETING

Montréal, 16 to 27 October 2017

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 2019-2020 Edition

1.2 M DROP TEST FOR LITHIUM BATTERY PACKAGES

(Presented by J. Jin[1])

REVISED

SUMMARY

This working paper proposes amendments to Section II of Packing Instructions 966 (lithium ion batteries packed with equipment) and 969 (lithum metal batteries packed equipment) to clarify that a retail package may be the object subject to the 1.2 m drop test requirement.

Action by the DGP: The DGP is invited to consider amending Section II of Packging Instructions 966 and 969 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Section II of Packing Instructions 966 and 969 states that "Each package of cells or batteries, or the completed package, must be capable of withstanding a 1.2 m drop test in any orientation without …."

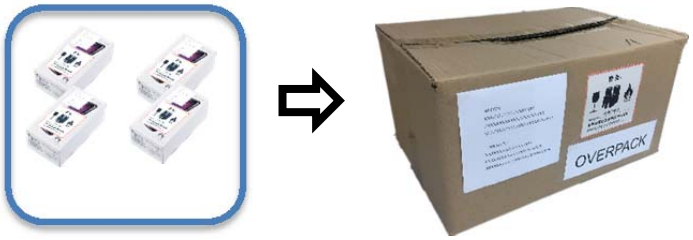
1.2 The following two packages have the same content, packaging material and have been packed using the same packaging methods. The only difference is that Example A is a retail package while Example B is a package with marks and labels applied.

[1] The Chinese version of this paper was provided by China.

Example A Inner packaging (retail package) containing equipment and lithium batteries	**Example B. Package (a retail package with marks and labels) containing equipment and lithium batteries**
	

1.2.1 **Scenario 1.** If four of the boxes shown in Example A are put into an outer packaging, the requirements of Packing Instruction 966, Section II would apply and the package would be subject to the 1.2 m drop test requirement.

1.2.2 **Scenario 2.** If four boxes shown in Example B are put into an OVERPACK, then each package, actually the retail package, would have been subject to the 1.2 m drop test.



1.2.3 If boxes in **Scenario 1** and **Scenario 2** have the same content, packaging material and packing method except for the mark and label, the safety performance for the two is exactly the same.

1.2.4 In Scenario 1, if each retail package is capable of withstanding a 1.2 m drop test, the package would not need to be subject to the drop test again.

2. ACTION BY THE DGP

2.1 The DGP is invited to clarify that the 1.2 m drop test for lithium batteries packed with equipment could be applied to the retail packaging, each package or the completed package by amending Section II to Packing Instructions 966 and 969 Section II as shown in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENT TO PART 3 OF THE TECHNICAL INSTRUCTIONS

Part 4

PACKING INSTRUCTIONS

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Chapter 11

CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

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11.1 PACKING INSTRUCTIONS

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Packing Instruction 966

Passenger and cargo aircraft for UN 3481 (packed with equipment) only

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II.2 **Additional requirements**

. . .

— Each retail package, or package of cells or batteries, or the completed package, must be capable of withstanding a 1.2 m drop test in any orientation without:
  — damage to cells or batteries contained therein;
  — shifting of the contents so as to allow battery to battery (or cell to cell) contact;
  — release of contents.

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. . .

Packing Instruction 969

Passenger and cargo aircraft for UN 3091 (packed with equipment) only

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II.2 **Additional requirements**

. . .

— Each retail package, or package of cells or batteries, or the completed package, must be capable of withstanding a 1.2 m drop test in any orientation without:
  — damage to cells or batteries contained therein;
  — shifting of the contents so as to allow battery to battery (or cell to cell) contact;
  — release of contents.

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