



危险物品专家组 (DGP)

第二十七次会议

2019年9月16日至20日，蒙特利尔

议程项目 3: 管理航空载运锂电池带来的安全风险

3.1: 审议如何将国际汽车工程师协会 (SAE) G27 委员会正在制定的锂电池包装标准 (AS6413) 纳入国际民航组织的规定 (参考: 工作卡 DGP.003.02)

根据外部标准试验的包装件上的标记以标明内容并提供可追踪性

(由秘书提交)

摘要

本工作文件就可采纳何种可能的方法对根据外部标准试验的包装件作标记，以标明包装中允许的锂电池的类型和数量提出了一些讨论。

危险物品专家组的行动: 请危险物品专家组讨论可能的方法，以确定应该在符合外部标准要求的包装件中采用何种标记，为运营人提供可追溯性和足够的信息以进行验收检查。

1. INTRODUCTION

1.1 The SAE International G-27 Lithium Battery Packaging Performance Committee that was tasked with the development of a packaging performance standard for lithium batteries has been working since 2016 on the development of the standard. This standard is designed to test a package containing lithium cells or batteries to verify that the packaging / cell or battery combination, including any features in the package, will contain an event should a cell fail and go into thermal runaway.

1.2 Once the standard to test packages containing lithium cells or batteries being developed by the G-27 Committee is complete, it will need to be reviewed by ICAO to determine if it is acceptable. If accepted, there will be a need for the DGP to develop requirements to bring reference and controls for packages tested to the standard into the Technical Instructions.

1.3 The purpose of this working paper is to commence the discussion on just how packagings that meet the standard, should it be accepted, can be identified when offered for transport and what potentially should be added to the Technical Instructions to achieve this.

1.4 Identification of “approved” packagings is critical for the purposes of acceptance by the operators. Like UN specification packagings, there is an expectation that operators will verify as part of the acceptance check that the packaging meets the standard and that the contents of the package are consistent with the actual tests performed. Many operators have already commented that unless they can verify that the package and packaging conform, they will not consider carrying packages of lithium batteries on passenger aircraft, assuming that the adoption of the standard results in the removal of the prohibition on the carriage of UN 3090 and UN 3480 as cargo on passenger aircraft.

1.5 It is believed that there must be a very clear set of marks on packagings that meet the standard so that there is a clear audit trail so that regulatory authorities can ensure that all applicable requirements have been met.

1.6 On the topic of regulatory authorities, the International Air Transport Association (IATA) believes the performance of the standard should be in accordance with procedures established by member States. The assignment of marks to identify the packagings, including the name of the manufacturer and a unique code or other identification of the packaging should provide an audit trail to just what configuration, quantity, type of lithium cells or batteries were tested in the identified packaging. The code of the State approving the marks should form part of any marks applied on approved packagings.

2. ACTION BY THE DGP

2.1 The DGP is invited to consider draft text for a possible new Chapter 9 to Part 6 as shown in the appendix to this working paper. This text is offered for discussion purposes, recognizing that the work of the G-27 Committee is ongoing, and the AS 6413 standard has not been completed.

2.2 Additionally, other panel members may have alternative proposals on methods to identify packagings that meet the standard that are considered as better options.

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附录

对《技术细则》第6部分的拟议修订

第6部分

包装术语、标记、要求和试验

第9章

锂电池芯和电池的包装

(仅UN 编号 3090 和 3480)

9.1 概述

本章的要求适用于拟装运锂电池芯和电池(仅UN 编号3090 and 3480)的包装。

9.2 包装要求

9.2.1 本节中对包装的要求系针对已通过国际汽车工程师协会航空标准AS 4613相关试验的包装。

9.2.2 如果包装旨在用于符合包装说明965和/或968第IA节规定的锂电池芯和/或电池，则包装也必须符合第1章、第3章和第4章的规定。

9.2.3 包装的制造商和随后的经销商必须向包装的用户提供有关装配应遵循的程序、包装件中的电池芯和/或电池的构型以及确保提交用于运输的包装件符合经试验的设计所需的任何其他组成部分的信息。

9.3 标记

注 1.— 标记表明带有这些标记的包装符合成功试验的设计类型，并且符合本章的规定，这些规定涉及包装的制造，而不是包装的使用。

注 2.— 标记并不总是提供试验级别等方面的完整细节，这方面可能需要进一步考虑进去，例如，通过参照经成功试验的包装的试验证书、试验报告或注册。

9.3.1 拟根据这些包装说明使用的每个包装必须带有的耐用、清楚易读的标记，其位置和相对于包装的大小应易于可见。对于总质量超过 30 千克的包装，标记或其副本必须出现在包装的顶部或一个侧面。字母、数字和符号必须至少 12 毫米高，但 30 千克或以下的包装，高度必须至少为 6 毫米，以及 5 千克或以下的包装必须为适当的尺寸。

9.3.2 符合本节和AS 6413 要求的包装必须标有：

a) AS 6413;

此符号不得用于除证明包装符合 SAE AS 6413 相关要求外的任何其他目的;

b) 该代码表示在包装件试验中使用的锂电池芯和/或电池的类型, 即“LI”代表锂离子”和/或“LM”代表锂金属;

c) 其包装件设计类型已经试验的锂电池芯或电池的最大净重(千克);

d) 进行包装件试验的年份的最后两位数字;

e) 授权分配该标记的国家, 由国际交通机动车识别标志表示; 和

f) 根据相应的国家主管部门规定指定的唯一标识符, 用于表明进行 AS 6413 试验的实体的名称以及试验的锂电池芯和/或电池的类型和构型。

9.3.3 标记必须按 9.3.2 中各分段的顺序组成; 这些分段中要求的每个标记必须明确分开, 例如通过斜线或空格, 以便容易识别。有关示例, 请参见 9.3.4。由相应的国家主管部门授权的任何其他标记必须仍能使 9.3.1 中要求的标记得以正确识别。

9.3.4 标记示例:

AS6413/LILM/7.5/20/AUS/FALCON-1234 如9.3.2 a)、b)、c)、d)、e)和f)所述

9.4 包装的试验要求

9.4.1 试验的开展和频率

每个包装的设计类型必须根据依相应的国家主管部门制定的程序提供的 AS 6413 的适用要求进行试验。