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Asia and Pacific Office

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Agenda Item 5: Presentations – State / Industry / ICAO

**TOWARDS A HARMONIZED APPROACH TO MITIGATING FIRE RISKS
ASSOCIATED WITH LITHIUM BATTERY POWER BANKS CARRIED BY
PASSENGERS IN AIRCRAFT: AN URGENT NEED FOR ACTIONS**

(Presented by Hong Kong, China)

SUMMARY

The recent aircraft fire incidents, suspected to be associated with lithium batteries power banks carried by passengers, have prompted some civil aviation authorities and airlines operators in the region to introduce new restrictions in addition to the current ICAO requirements. This paper shares the proactive actions taken by the Civil Aviation Department of Hong Kong, China on safety risks and mitigation measures implemented in order to further enhance aviation safety. As a more harmonised regulatory and safety management approach by civil aviation authorities and operators can facilitate safety promotion and passenger education and provide a safe and smooth flying experience for the travelling public, this paper proposes promulgation of this emerging safety issue, as well as development of clear and harmonized guidance by ICAO for concerted efforts by regulators and the aviation community to address these common risks.

1. INTRODUCTION

1.1 In the light of the occurrence of two recent reported aircraft fire incidents between late January and mid-March that were suspected to have been caused by lithium battery power banks (“power banks”), some civil aviation authorities and operators have responded by introducing additional restrictions on the carriage and usage of such items by passengers during flight. These restrictions are in addition to the current requirements stipulated in the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (“ICAO TIs”). This paper shares the experience from the Civil Aviation Department of Hong Kong, China (“HKCAD”) in addressing concerns about the emerging safety risks associated with power banks, in particular, the recent implementation of additional risk mitigation measures in Hong Kong, China.

1.2 On the other hand, it is noted that different measures imposed by civil aviation authorities and airlines operators on carriage and usage of power banks by passengers during flight may impose complexities in safety promotion campaigns for passengers. Taking into account the process and time needed by States to coordinate a review with relevant ICAO Expert Panels on their Standards and Recommended Practices, this paper aims to solicit the support from APRAST to seek the ICAO APAC Office’s assistance to highlight this safety issue to the ICAO Headquarters for consideration to take immediate action to enhance awareness, and to develop clear and harmonized guidance for regulators and industry to effectively address this issue, which should also facilitate safety promotion actions and educations conducive to providing a safe and smooth flying experience for passengers.

2. DISCUSSION

2.1 The ICAO TIs covers a list of dangerous goods that are prohibited to be carried by air passengers and crews, either as carry-on baggage, checked baggage or on person. It also provides a list of dangerous goods items that are permitted to be carried aboard an aircraft by passengers under certain conditions. Amongst others, there are provisions that allow passengers to carry spare lithium batteries on aircraft, subject to certain limits and requirements. For example, the lithium batteries must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3, and they must be carried as carry-on baggage and individually protected so as to prevent short circuits. Additional limits on the quantity allowed may also apply depending on the amount of lithium content in the case for lithium metal batteries, or the Watt-hour (“Wh”) rating in the case for the lithium ion batteries. These requirements detailed in the ICAO TIs are applicable in Hong Kong, China.

2.2 Spare lithium batteries can come in different forms, including power banks which are widely used by the public for charging portable electronic devices on the go. These power banks are typically lithium ion batteries encased in a portable device, and their Watt-hour ratings usually do not exceed 100 Wh. They are normally equipped with various Universal Serial Bus (“USB”) ports which serve as input and output interfaces for electrical power, enabling them to charge other portable electronic devices, or be recharged by other power sources.

2.3 As power banks are items commonly carried by travellers and their product quality may vary, the HKCAD has been mindful of potential risks while closely following and monitoring ICAO’s developments. In view of the recent cases including the fire incident in late January 2025 that was suspected to have been caused by power bank stowed in overhead compartment and resulted in a hull loss on ground, followed by another fire incident occurred in overhead bin which was extinguished inflight in mid-March 2025, both of which have further demonstrated the potential prevalence of power bank problems and possible severity, HKCAD considers that reinforcement of safety actions is warranted for this emerging safety issue.

2.4 Since the first reported case in this region, HKCAD has issued an advisory circular to remind operators and ground handling agents of the need for passengers to adhere to the requirements of ICAO TIs, in particular on the carriage of power banks. Following the results of our ongoing safety review and assessment, the HKCAD has further engaged with the local operators and taken proactive mitigation actions to enhance the cabin safety procedures for the carriage and use of spare lithium batteries and power banks. Amongst others, the HKCAD issued a Flight Operations Notice (“FON”) to impose additional considerations and requirements on the stowage of power banks in the overhead compartment and their usage during flight. These proactive measures aim to further reduce associated safety risks on the stowage and use of power banks during flight.

2.5 Although harmonisation of mitigation measures is an important consideration, aviation safety must always take precedence. Given that the risks associated with power banks are evident in the recent incidents, the HKCAD deemed it necessary to promptly impose additional restrictions besides those outlined in the ICAO TIs to further enhance aviation safety. That said, it is noted that there is a lack of harmonised approach in mitigating the power bank risks, with regard to different restrictions or recommendations imposed by civil aviation authorities and airlines operators for the stowage of power banks in overhead compartment, the usage of power banks during flight to charge other devices, the recharging of the power banks, etc. These inconsistencies could lead to confusion and inconvenience among the travelling public in particular when they travel via one or more stopovers, and potentially creating a secondary layer of hazard such as confrontation by unruly passengers during flight, further endangering the safety of aircraft.

2.6 In view of the above, Hong Kong, China considers that it is essential for the international aviation community to establish a clear and harmonized approach for the implementation of mitigation measures associated with fire risks arising from carriage and usage of power banks by passenger in aircraft. The ICAO's assistance is thus sought to promulgate information to enhance safety awareness, and to develop clear and harmonized guidance for regulators and the aviation community to effectively address the issue, thereby enabling a safe and smooth flying experience for all passengers.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) note the recent cases of fires onboard aircraft suspected to be caused by power banks carried by passengers on aircraft and potential consequences;
- b) invite States/Administrations to note HKCAD's safety management and oversight actions to address this emerging safety issue, and share their experiences and assessments on power bank risks; and
- c) seek the assistance of the ICAO APAC Office to highlight this emerging safety issue to the Headquarters for their consideration to take immediate actions, including promulgating information to enhance safety awareness, conducting a holistic risk assessment on carriage and usage of power banks during flight by passengers, and developing guidance materials to ensure a harmonized approach to mitigating the safety risks.

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