DANGEROUS GOODS PANEL (DGP)
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Agenda Item 4: Managing safety risks posed by the carriage of energy storage devices by air (Ref: Job Card DGP.006)

PRACTICES OF CHINA'S CIVIL AVIATION IN THE SAFETY MANAGEMENT OF POWER BANK AIR TRANSPORT

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SUMMARY

This information paper introduces some practices adopted by China to enhance the safety of passengers carrying power banks on board.

1. INTRODUCTION

1.1 With the widespread use of portable electronic devices, power banks have become an essential carry-on item for many passengers when travelling. However, the flammable and explosive characteristics of the lithium batteries built into them pose a persistent safety hazard to the flight safety of civil aviation.

1.2 Compared with ground environments, the aircraft cabin is enclosed and confined and emergency resources are limited. Sudden failures such as a power bank catching fire or emitting smoke can easily trigger panic among passengers and are more difficult to handle, posing a potential threat to the flight safety of civil aviation and to the personal safety and property of passengers.

1.3 The International Civil Aviation Organization (ICAO) has long focused on the safety risks of power bank air transport, has continuously revised and refined the standardized provisions for the air transport of lithium batteries and power banks, and has established a globally applicable regulatory framework for the safe air transport of power banks, which has become the core basis for the regulatory work of civil aviation authorities of States.

1.4 Basing itself on the realities of transport operations and taking into account ICAO requirements, China's civil aviation has strictly aligned itself with international standards and implemented international control requirements. It has progressively optimized its regulatory policies,

improved its public communication system, strengthened emergency response and advanced coordinated governance, forming a safety management system for power bank air transport that fits domestic scenarios and fully implements international provisions, and effectively preventing and mitigating the safety risks of power bank transport.

2. DISCUSSION

2.1 Aligning with international standards and optimizing policies on the carriage of power banks by passengers

a) Under ICAO requirements, power banks with safety defects are prohibited from air transport. In actual transport operations, however, safety defects in power banks usually cannot be identified visually, and passengers generally lack the ability to assess product safety. Relying solely on passengers' own awareness of compliance makes it difficult to implement ICAO control requirements, which places enormous pressure on civil aviation regulators.

b) In response, China's civil aviation, strictly following the core provisions of ICAO and taking into account its national circumstances, has optimized in a targeted manner the policies controlling the carriage of power banks by passengers and has clarified the criteria and implementing rules for identifying non-compliant power banks. This has made it possible to prevent, to the greatest extent, power banks that do not meet the requirements of the Technical Instructions from being taken on board, and has achieved the alignment and implementation of domestic policies with ICAO standards and requirements.

2.2 Carrying out comprehensive passenger awareness and guidance efforts around international compliance requirements

a) China's civil aviation has invited experts in the field of civil aviation dangerous goods transport to give popular-science presentations explaining ICAO requirements for the transport of power banks, the safety risks of spontaneous ignition of lithium batteries, and the importance of standardized management of carriage by air to flight operations and passengers' lives and safety, thereby increasing the public's awareness of and support for the policies.

b) Drawing on mainstream social platforms, news media and other channels, it has produced special reports on the safety of carrying power banks that are in line with international safety control requirements, as well as short warning videos on typical power bank fire cases and non-compliant carriage, giving the public an intuitive understanding of the aviation safety hazards of non-compliant power banks.

c) Airports are encouraged to use airport announcements, dynamic display screens and other communication tools to intensively publicize, in travel scenarios such as check-in, security screening and waiting for boarding, ICAO's requirements for the carriage of power banks and the corresponding domestic management requirements. By deploying additional on-site service personnel, airports answer passengers' questions promptly and correct non-compliant carriage by passengers, promoting the implementation of ICAO compliance requirements in all respects.

2.3 **Strengthening the emergency response capabilities of crew members in accordance with international handling recommendations**

a) For emergencies such as lithium battery and power bank fires and smoke on board aircraft, ICAO has developed relevant emergency response guidance documents that provide clear guidance on the emergency response procedures for the flight crews of airlines in its Member States and constitute an internationally accepted reference for handling sudden in-flight fires.

b) China's civil aviation has studied and developed industry standards for cabin lithium battery emergency response protective equipment, and has allocated special funds to support all domestic airlines in equipping themselves with such dedicated protective equipment, providing adequate hardware support for crew members in carrying out emergency response.

c) In accordance with the content of the relevant ICAO emergency response guidance documents, China's civil aviation has formulated and issued the Guidelines for In-flight Emergency Response to Lithium Batteries, providing detailed guidance for domestic airlines in establishing crew emergency response procedures. At the same time, it has guided airlines in carrying out regular in-flight emergency response drills focusing on cabin fire handling, order maintenance and the use of lithium battery emergency response protective equipment, comprehensively enhancing crew members' professional capabilities for rapid response and scientifically sound risk avoidance, and ensuring that, in the event of an emergency, the harm caused by power bank incidents on board is reduced to the greatest extent possible.

2.4 **Coordinated governance with competent authorities for emergency management, industrial manufacturing and market regulation**

a) Following the concept of whole-chain governance of lithium batteries, China's civil aviation deeply participates in the drafting of standards by the industrial manufacturing authorities on the production and manufacture of power banks, and promotes the full alignment of domestic product production standards with international civil aviation transport safety requirements, thereby improving the intrinsic safety of power banks at the source of production and reducing the flow of products that do not meet international air transport requirements into the market.

b) At the same time, it collects and compiles product information on unsafe power bank events on board aircraft and feeds it back to the relevant departments, promoting the screening and clearing of products with safety defects and building a whole-chain, closed-loop safety governance system.

3. CONCLUSION

3.1 The safety of power bank air transport is a common safety challenge for the global civil aviation community, and strictly implementing ICAO provisions and standards is the core basis and fundamental principle for States in managing the aviation safety of power banks. China's civil aviation has always taken ICAO control requirements as its core and held firmly to the bottom line of aviation

safety. Through systematic measures - policy alignment and optimization, public compliance communication, upgrading of crew capabilities and cross-departmental source-based governance — it has implemented ICAO safety requirements in all respects and dimensions. In doing so, it has strictly fulfilled China's civil aviation responsibility for international aviation safety and has also provided China's practice as a reference for the safety governance of power banks in global civil aviation.

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