International Civil Aviation Organization

DGP-WG/20-WP/11
25/9/20

WORKING PAPER

DANGEROUS GOODS PANEL (DGP) WORKING GROUP MEETING (DGP-WG/20)

Montréal, 19 to 23 October 2020

Agenda Item 2: Managing air-specific safety risks and identifying anomalies
2.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2023-2024 Edition

LOADING OF DANGEROUS GOODS ON AIRCRAFT

(Presented by the Secretary)

SUMMARY

This working paper invites the working group to discuss ways of achieving a more performance-based approach to determining where dangerous goods should be loaded on aircraft. A proposed amendment may be developed for the DGP 2021 Working Group meeting based on feedback provided.

Action by the DGP-WG: The DGP is invited to review the provisions for stowing and loading dangerous goods and provide feedback on if and how a more performance-based approach can be achieved.

1. INTRODUCTION

1.1 The practice of repurposing underutilized passenger aircraft during the COVID-19 pandemic in order to increase their cargo capacity by loading cargo in the passenger cabin has highlighted potential inconsistencies with the loading and stowage provisions in Part 7;2 of the Technical Instructions. These were discussed at a DGP virtual meeting in May 2020, a summary of which is provided in paragraph 2.. This working paper invites DGP-WG/20 to discuss ways of achieving a more performance-based approach to determining where dangerous goods should be loaded.

2. BACKGROUND

2.1 At the beginning of the COVID-19 pandemic, some operators believed they could simply load cargo in the passenger cabins. However, passenger cabins are not certified as cargo holds and are not designed to handle a larger fire that may involve dangerous goods. Operational and airworthiness

requirements need to be taken into account. States and industry providing feedback to ICAO indicated that they were prohibiting dangerous goods from being loaded in the passenger cabin and requiring that they be loaded in the hold. However, dangerous goods could be permitted if the Technical Instructions were strictly applied because the provisions in Part 7;2 prohibit dangerous goods in a cabin *occupied by passengers*. This provision was likely added with the assumption that there would always be passengers in a passenger cabin, and the current needs were probably never anticipated. The need to reconsider assumptions that were made when drafting the loading requirements in the Technical Instructions had been raised in the past, particularly with respect to accessibility requirements. The provisions were prescriptive, and benefits in considering a more performance-based approach that would take various cargo compartments, aircraft types, and operational conditions into account had been raised. The argument for doing this had been strengthened with the new cargo compartment safety Standards and Recommended Practices (SARPs) that the Council adopted for incorporation as a new Chapter 15 in Annex 6 — *Operation of Aircraft*, Part I — *International Commercial Air Transport — Aeroplanes*.

3. PROPOSAL

3.1 There is no amendment proposed at this time. This working paper is simply seeking feedback from the working group on the subject, taking the following into account:

a) storage and loading provisions in Part 7;2 of the Technical Instructions;

b) storage and loading provisions in Part S-7;2 of the Supplement to the Technical Instructions; and

c) cargo compartment safety SARPs in Chapter 15 of Annex 6 (reproduced in the appendix to this working paper).

3.2 A proposed amendment may be developed for the DGP 2021 Working Group meeting based on feedback provided.

4. ACTION BY THE DGP-WG

4.1 The DGP is invited to review the provisions for stowing and loading dangerous goods and provide feedback on if and how a more performance-based approach can be achieved.

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APPENDIX

CARGO COMPARTMENT SAFETY SARPS EXTRACTED FROM ANNEX 6, PART I, CHAPTER 15 (APPLICABLE NOVEMBER 2020)

CHAPTER 15. CARGO COMPARTMENT SAFETY

Note.— Guidance on the hazards associated with the transport of items in the cargo compartment, the conduct of a specific safety risk assessment in accordance with the Safety Management Manual (SMM) *(Doc 9859), and the responsibilities for the transport of dangerous goods, is contained in the* Guidance for Safe Operations Involving Cargo Compartments *(Doc10102).*

15.1 TRANSPORT OF ITEMS IN THE CARGO COMPARTMENT

15.1. The State of the Operator shall ensure that the operator establishes policies and procedures for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment. The risk assessment shall include at least the:

a) hazards associated with the properties of the items to be transported;

b) capabilities of the operator;

c) operational considerations (e.g. area of operations, diversion time);

d) capabilities of the aeroplane and its systems (e.g. cargo compartment fire suppression capabilities);

e) containment characteristics of unit load devices;

f) packing and packaging;

g) safety of the supply chain for items to be transported; and

h) quantity and distribution of dangerous goods items to be transported.

Note.— Additional operational requirements for the transport of dangerous goods are contained in Chapter 14.

15.2 FIRE PROTECTION

15.2.1 The elements of the cargo compartment(s) fire protection system, as approved by the State of Design or State of Registry, and a summary of the demonstrated cargo compartment fire protection certification standards, shall be provided in the aeroplane flight manual or other documentation supporting the operation of the aeroplane.

Note.— Guidance on the elements of cargo compartment fire protection and associated demonstrated standards are provided in the Guidance for Safe Operations Involving Cargo Compartments *(Doc 10102).*

15.2.2 The Operator shall establish policies and procedures that address the items to be transported in the cargo compartment. These shall ensure, to a reasonable certainty, that in the event of a fire involving those items, it can be detected and sufficiently suppressed or contained by the elements of the aeroplane design associated with cargo compartment fire protection, until the aeroplane makes a safe landing.

Note.— Guidance on policies and procedures that address the items to be transported in the cargo compartment are provided in the Guidance for Safe Operations Involving Cargo Compartments *(Doc 10102).*

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