



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTIETH MEETING

Montréal, 24 October to 4 November 2005

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 2007-2008 Edition

**DEVELOPMENT OF RECOMMENDATIONS FOR AMENDMENTS TO
THE TECHNICAL INSTRUCTIONS FOR INCORPORATION IN THE
2007/2008 EDITION**

(Presented by U.A. Mikhin)

1. BACKGROUND

1.1 In the Technical Instructions, conditions are set for transport. One of the conditions concerns pressure variations: Part 4, Note 3. From practice we have learned that this note sets a value that is not good enough. When an aircraft with a non-pressurized cargo hold climbs up to 10,000 meters, which is not an abnormal height, the pressure in the hold goes down more than four times the normal atmospheric pressure of 100 kPa. Receptacles and packagings tested to withstand a pressure reduction to 68 kPa, prescribed in Note 3, are not strong enough to withstand 24k Pa of 10,000 m. Dangerous goods are then leaving their containment and start to endanger the integrity of the aircraft and the persons on board. To prevent this experienced danger the following proposal for improvement of the test value is necessary. Moreover it has to be made clear to shippers and airlines the difference between pressurized transport and non-pressurized transport. Meaning that dangerous goods packagings that are not tested as prescribed in Note 3 of Part 4 have to be transported in pressurized holds.

2. PROPOSAL

2.1 Amend Note 3 in the Introductory Notes of Part 4 as follows:

Note 3.— Pressure ~~variations~~

Dangerous goods have to be transported in pressurized cargo holds. Due to altitude, pressure reductions will be encountered under flight conditions which may in extreme

conditions be of the order of 68 kPa. Since receptacles or packagings will generally be filled at normal atmospheric pressure of approximately 100 kPa, these pressure reductions will tend to cause discharge of liquid contents or bursting of the receptacles or packagings during flight, unless each receptacle or packaging and its closures meet the packaging test requirements. If dangerous goods are to be transported in non-pressurized cargo holds when the packagings are to in order up to 24 kPa pressure reduction.

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