

DANGEROUS GOODS PANEL

Dubai, 31 March to 4 April 2003

Agenda Item 2 Development of recommendations for amendments to the Technical : Instructions for incorporation in the 2005/2006 edition

INTERPRETATION AND USE OF PART 4; 1.1.6

(Presented by G. A. Leach)

1. BACKGROUND

Part 4; 1.1.6 of the Technical Instructions states:

"Packagings for which retention of liquid is a basic function must be capable of withstanding without leakage an internal pressure test which produces a pressure differential of not less than 95 kPa (not less than 75 kPa for liquids in packing group III of Class 3 or Division 6.1)...."

This text has recently been queried, for the following reasons:

- a) Modern pressurised aircraft are pressurised to the equivalent of 8,000 feet, which is approximately 75 kPa (i.e. a pressure drop of 25 kPa from ground level atmospheric); non-pressurised aircraft are normally restricted to fly at a height of 10,000 feet (approximately 70 kPa (i.e. a pressure drop of 30 kPa from ground level atmospheric) although this can be exceeded if the flight crew are using oxygen. The pressure differentials specified in 4;1.1.6 of 75 and 95 kPa equate to altitudes of 34,000 feet and approximately 70,000 feet respectively.

Note 4 in the Introduction to Part 4 states "extreme conditions may result in a pressure change of 68 kPa"(which equates to an altitude of 29,000 feet). If testing is required then on the basis of 1.1.6 the test is nearly 4 times the standard/usual/expected pressure differential and at nearly 50% more than the pressure change encountered in extreme conditions.

This requirement would seem to indicate that such a package is capable of passing a test far in excess of extreme conditions and the Working Group is asked to consider whether this

was the intent of this text; it is suggested any such test should reflect normal conditions of transport.

- b) The text states that the packaging "must be capable of" etc, meaning that testing sometimes has to be undertaken. However, there is no advice in the Technical Instructions to indicate:
 - i) how many samples should be used;
 - ii) what type of test should/can be used e.g. vacuum, hydraulic or air pressure;
 - iii) how long should the container be pressurised for.

It is suggested the Technical Instructions should contain more specific information on this testing.

No proposals are made in this paper, but the views of the Working Group are sought with an intention to propose changes, if necessary, at the Panel meeting.

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