

## COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the  
Transport of Dangerous Goods

Thirtieth session  
Geneva, 4-12 (a.m.) December 2006  
Item 2(a) (i) of the provisional agenda

### PROPOSALS OF AMENDMENTS TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Comments on UN/SCETDG/30/INF.22, ICPP

Transmitted by the expert from Canada

#### Introduction

1. The expert from Canada has read UN/SCETDG/30/INF.22 from ICPP with interest.
2. The expert from Canada recalls that the discussion this biennium on the testing regime for IBCs was provoked by papers from various delegations during this biennium and during previous biennia indicating problems in transport with IBCs, in particular those that were apparently not sturdy enough to withstand the rigours of transport, described by industry as 'lightweight' or 'single trip' (see ST/SG/AC.10/C.3/54, Report of the 27th session of the UNSCETDG).
3. The vibration test adopted by the Sub-Committee at its July session is a "benchmark" type of test intended to eliminate IBCs of inferior robustness. The test is not designed to simulate conditions of transport. Nevertheless, because it is a test to determine robustness, it should discriminate between IBCs that are of such a robust design that they can be expected to perform adequately under real conditions of transport and IBCs of a design that is not adequately robust.
4. The vibration test qualifies a design type if one new prototype IBC passes the test of one hour duration. Production IBCs of that design can then be mass produced based on that single successful test and they can be used to transport dangerous goods for an unlimited number of trips until the next periodic test which would be two and one half years.
5. If the vibration test is to have value, the test itself and the pass criteria have to be conservative enough to qualify only those designs that are of adequate robustness taking into account the lack of requirement to modify designs of IBCs that fail the test, the variability of the manufacturing process and the wear and tear that an IBC will be subjected to between inspections.
6. It is to be expected, then, that we would not wish to consider a vibration test result to be acceptable if the tested sample shows evidence of leaks or rupture of the inner receptacle. It should be just as unacceptable to consider an IBC to have passed the vibration test when structural failures such as buckles, broken welds, failed fastenings (e.g., pulled out screws) are observable.
7. The pass criteria in the current text of the vibration test does not clearly provide for structural components. Under the current criteria, an IBC would pass the vibration test even if the structural components, e.g., the cage, the attachments, the welds etc., are cracked, broken, disengaging etc. Consequently, the expert from Canada does not agree that the current pass criteria is adequate nor

does the expert from Canada believe that allowing an IBC to pass any test with structural damage that can be observed is a benefit to safety.

8. The proposal in ST/SG/AC.10/C.3/2006/78 is not an extreme technical criterion and certainly does not require the extreme testing that ICPP is suggesting in Item 6 of INF. 22. Why, for example, would the structure of the IBC be submitted to an x-ray or dye penetrant test when such tests are not required in the first place? The expert from Canada does not consider such suggestions particularly persuasive or realistic.
9. The expert from Canada agrees with ICPP that the pass criteria must be clear and not open to interpretation. In an effort to avoid interpretations, the expert from Canada offers for the Sub-Committee's consideration the following revision to the proposal in ST/SG/AC.10/C.3/2006/78:

6.5.6.13.4.1 No leakage or rupture shall be observed. **In addition, no breakage or failure of structural components, such as buckling, broken welds, failed fastenings, shall be observed.**

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