

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

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EXPLOSIVES AND RELATED MATTERS

Comments on the IME Paper ST/SG/AC.10/C.3/2008/10

Transmitted by the expert from Canada

Introduction

At the twenty-ninth session of the Sub-Committee, the expert from Canada made a proposal for an additional test for determining 1.4S classification (ST/SG/AC.10/C.3/2006/62). The Working Group on Explosives reviewed and supported the proposal. It was requested that the expert from Canada prepare a new proposal, including additional text to be inserted in the Manual of Tests and Criteria (UN/SCETDG/29/INF.65). At the thirty-first session of the Sub Committee, the expert from Canada submitted (a) an information paper containing a detailed example of the application of the proposed test to perforating charges (UN/SCETDG/31/INF.43) and (b) a working paper containing new text for Section 16 (ST/SG/AC.10/C.3/2007/29). The working paper stated that, if the new test were accepted, there would need to be modifications made to Section 10 of the Manual of Tests and Criteria "Introduction to Part I". The majority of the Working Group was in favour of provisional acceptance of the proposal from Canada, while waiting for further results or proposals from other countries. If no new results or proposals are submitted, the square brackets around the Canadian text are to be removed (UN/SCETDG/31/INF.45). The document ST/SG/AC.10/C.3/2008/11 represents the new proposal for the additional text in Section 10, as well as slight modifications to Section 16 to address some of the comments received from the members of the working group. In addition, more examples of test results are provided.

The IME document ST/SG/AC.10/C.3/2008/10 opposes introduction of this test for a number of reasons. We wish to comment on their reasoning. The IME text is reproduced in italics in the following section, with our comments following.

Comments

(a) *The need for a new test has not been adequately demonstrated and the ramifications of the new test have not been fully studied:*

(i) *Canada has provided no data that proper and complete application of the current classification system and tests for explosives has led to incorrect or inappropriate classifications. If proper and complete application of the system is resulting in correct classifications, then why is a new test needed?*

Response: A previous paper (ST/SG/AC.10/C.3/2006/62) demonstrated clearly that initiation of a 19g perforating charge resulted in substantial effects outside the package, sufficient to exclude the article from the 1.4S category. However, application of the current Series 6 tests would have led to a 1.4S classification.

(ii) *Canada has reported test results for shaped charges. However, they have not discussed why the application of the proposed test to shaped charges is needed. IME is unaware of any transportation or workplace incident involving packaged 1.4S shaped charges that would indicate the need for a new test;*

Response: The issue is that the current test series cannot distinguish between articles that meet the 1.4S criteria and those that do not. Whether or not an accident has occurred is not relevant to this.

(iii) *There is no data provided in the proposal on how 1.4S articles other than shaped charges might perform in the test. The IME is concerned that acceptance of this test could lead to reclassification of approved articles from Compatibility Group S to some other compatibility group; even though there is no evidence that such reclassification is needed or desirable.*

Response: Ample examples are provided in ST/SG/AC.10/C.3/2008/11.

(b) *The proposal is incomplete.*

(i) *The proposal contains no indication as to how the proposed test will fit in the flow chart (Figure 10.3 of the Manual of Tests and Criteria);*

Response: This is addressed in ST/SG/AC.10/C.3/2008/11

(ii) *The proposal provides incomplete guidance regarding test failures. Paragraph 16.7.1.4 of the proposal states that failures should be excluded from Compatibility Group S, but provides no indication as to what compatibility group those failing devices should be assigned.*

Response: This is addressed in ST/SG/AC.10/C.3/2008/11

(c) *The acceptance criteria of paragraph 16.7.1.4 of the proposal are subjective and vague, are open to varying interpretations, and are inconsistent with the conditions under which performance of the test is proposed:*

(i) *Criterion “a” mentions “Damage to the witness plate”. IME questions what kind of damage? Does this mean any damage? Is discoloration of the witness plate the kind of damage that would result in exclusion from Compatibility Group S? Would a scratch on the witness plate be sufficient to exclude from Compatibility Group S, and if so, on what basis? If not a scratch, what about a dent? Would any dent result in a failure or only dents of certain sizes (and what would those sizes be)? Is a hole evidence of a failure and if so, what size hole? Would a hole the diameter of a straight pin be a failure, and if so, on what basis? IME acknowledges that this discussion could be perceived as facetious, but it serves to demonstrate how the vagueness of the criterion “damage to the witness plate” is open to varying interpretations, many of which are inappropriate when considering assignment to Compatibility Group S.*

Response: “Damage to the witness plate” is a criterion which has been used routinely in other UN tests. We are unaware of any difficulty in applying this criterion in the past.

The criterion “damage to the witness plate” is also inconsistent with the conditions provided in paragraph 16.2.2 of the proposed method that states that the test is performed on Compatibility Group S candidates if it is expected that functioning of an article would produce effects more severe than in the 6(c) test. There is no witness plate in the 6(c) test. IME questions how examining a witness plate can be used as a measure of severity greater than Test 6(c)?

As the proposed 6(d) test is derived from the 6(a) test where a witness plate is present, use of a plate seems entirely appropriate.

(ii) *Criterion “c” of the proposed test method mentions “Disruption and scattering of the package and its contents”. IME questions what is meant by the phrase “disruption and scattering”? How much disruption and scattering is considered enough to exclude a device from Compatibility Group S? As we noted above, we point out that “disruption and scattering” are also not Test 6(c) criteria and question how this coincides with the conditions of proposed section 16.2.2 in evaluating effects worse than can be expected from Test 6(c)?*

Response: There will be an element of subjectivity in judging “disruption and scattering”, as discussed in the Working Group. It should be noted that the current criterion for 1.4S classification is “no effects outside the package”, which was felt to be too restrictive. The proposed criterion allows the Competent Authority to exercise judgment, which the UN scheme encourages them to do.

Conclusion

The arguments put forward by the IME do not raise any valid objections to the adoption of this proposed test. The majority of the Working Group has agreed that the status quo is unsatisfactory, and after several discussions and modifications to the proposal, the expanded test series should now represent an adequate means to properly classify articles meeting the 1.4S criteria.
