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**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

**REPORT OF THE SUB-COMMITTEE OF EXPERTS  
ON ITS TWENTY-SEVENTH SESSION**

(Geneva, 4-8 July 2005)

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## REPORT

### ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its twenty-seventh session from 4 to 8 July 2005 with Mr. S. Benassai (Italy) as Chairman and Ms. Linda Hume-Sastre (Canada) as Vice-Chairman.
2. Experts from the following countries took part in the session: Argentina; Australia; Austria; Belgium; Brazil; Canada; China; France; Germany; Italy; Japan; Netherlands; Norway; Poland; Portugal; Russian Federation; South Africa; Spain; Sweden; United Kingdom; United States of America.
3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries took part: Bulgaria; Fiji, Kenya; Romania; Switzerland.
4. The representatives of the following specialized agencies were present: International Civil Aviation Organization (ICAO); International Maritime Organization (IMO); International Atomic Energy Agency (IAEA).
5. The following intergovernmental organizations were also represented: European Commission (EC); Intergovernmental Organization for International Carriage by Rail (OTIF).
6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: European Aerosol Association (FEA); European Association of Automotive Suppliers (CLEPA); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Liquefied Petroleum Gas Association (AEGPL); European Portable Battery Association (EPBA); European Secretariat of Manufacturers of Light Metal Packagings (SEFEL); Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); International Air Transport Association (IATA); International Association of the Soap, Detergent and Maintenance Products Industry (AISE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Council of Chemical Associations (ICCA); International Dangerous Goods and Containers Association (IDGCA); International Electrotechnical Commission (IEC); International Express Carriers Conference (IECC); International Confederation of Plastics Packaging Manufacturers (ICPP); International Federation of Freight Forwarders Association (FIATA); International Organization for Standardization (ISO); International Vessel Operators Hazardous Materials Association (VOHMA); Portable Rechargeable Battery Association (PRBA); World Nuclear Transport Institute (WNTI); International Union of Railways (UIC).

### ADOPTION OF THE AGENDA

Documents: ST/SG/AC.10/C.3/53 (Provisional agenda)  
ST/SG/AC.10/C.3/53/Add.1 (List of documents)

Informal documents: INF.1 and INF.2 (List of documents)  
INF.3 (Provisional timetable)

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to include late submissions of informal documents (INF.1 to INF.41), with some changes, including the withdrawal of document ST/SG/AC.10/C.3/2005/7.

## **EXPLOSIVES, SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES**

### **Test series 8**

8. The Sub-Committee entrusted consideration of the documents concerning item 3 (a) to the Working Group on Explosives which met from 4 to 5 July 2005 under the chairmanship of Mr. A. Johansen (Norway) (see paras. 17-19).

### **Miscellaneous proposals**

#### ***Aluminium witness screens used in Series 6 (c) testing***

Document: ST/SG/AC.10/C.3/2005/5 (Australia)

Informal document: INF.31 (Netherlands)

9. The Sub-Committee entrusted consideration of the proposal by Australia and the comments by the Netherlands to the Working Group on Explosives.

#### ***Additional test for determining 1.4 S classification***

Document: ST/SG/AC.10/C.3/2005/22 (Canada)

Informal document: INF.20 (United States of America)

10. Some delegations made it clear that they found existing tests and criteria appropriate for the classification of the majority of 1.4 S articles and substances for carriage, but that there were some concerns regarding the classification of items that may be classified under divisions 1.1, 1.2 or 1.4, such as shaped charges, detonators, etc. Some delegations recalled that, in the context of the mandate entrusted to it by the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee), the Sub-Committee should also take account of the storage and use of the products in the application of tests and criteria for classification.

11. Since the majority of the delegations were of the opinion that a technical discussion was required, the Sub-Committee decided to entrust consideration of the proposal by Canada to the Working Group on Explosives.

#### ***Texts of paragraphs 10.4.3.3 and 16.3.1***

Document: ST/SG/AC.10/C.3/2005/24 (Norway)

12. The proposal by Norway to bring the text of paragraph 10.4.3.3 of the Manual of Tests and Criteria into line with that of paragraph 16.3.1 was unanimously adopted.

#### ***Nitroguanidine, wetted (UN No. 1336)***

Document: ST/SG/AC.10/C.3/2005/10 (ICCA)

Informal document: INF.15 (ICCA)

13. Several delegations opposed the principle of using flexible IBCs for the carriage of desensitized explosives and, therefore, did not wish to adopt the ICCA proposal for the carriage of nitroguanidine.

14. There was no support for the proposal and the representative of ICCA withdrew it.

### **Criteria of the Globally Harmonized System of Classification and Labelling of Chemicals concerning explosives**

Informal document: INF.12 (Germany)

15. The Sub-Committee took note of the fact that the expert from Germany would submit this informal document to the GHS Sub-Committee.

### ***Amendments to the Manual of Tests and Criteria, classification of fireworks***

Informal documents: INF.4 (Germany)  
INF.19 (Denmark)

16. The Sub-Committee decided to entrust consideration of these informal documents to the Working Group on Explosives.

### **Report of the Working Group on Explosives**

Informal document: INF.39

17. The Sub-Committee noted that the Working Group could not reach consensus on the issues concerning the tests 8 (d). The other issues were discussed in depth and new proposals will be submitted to the July 2006 session during which a final working group session would be convened to resolve any outstanding issue.

18. The Sub-Committee adopted modifications to Figure 10.4 of the Manual of Tests and Criteria as proposed by the Working Group (see annex 1). This decision should be brought to the attention of the GHS Sub-Committee.

19. The experts from Spain and Sweden requested that document ST/SG/AC.10/C.3/2005/11 and informal document INF.7 remain on the agenda for the July 2006 session.

### **PACKAGINGS (INCLUDING IBCs AND LARGE PACKAGINGS)**

#### **Packaging performance**

#### ***Drop test and righting test for IBCs***

Document: ST/SG/AC.10/C.3/2005/8 (Argentina)

20. Several experts entered reservations regarding the second proposal to modify the testing provisions for the flexible IBC righting test. The expert from Argentina withdrew this proposal.

21. With regard to the first proposal, several experts shared the opinion of the expert from Argentina that the absence of discharge after the drop test did not enable it to be determined whether the IBC could still be handled safely after being dropped.

22. The new criterion for acceptance proposed, however, seemed too vague and was open to a variety of interpretations. The expert from Argentina was, therefore, invited to submit a new proposal.

23. The expert from France said that he would also like to prepare a document on the subject.

### **Revision of Chapter 6.3**

Document: ST/SG/AC.10/C.3/2005/15 (United Kingdom)

Informal document: INF.22 (United States of America)

24. The proposal to revise Chapter 6.3 gave rise to various comments. The expert from the United Kingdom would submit a new proposal which would take these comments into account along with those that could be sent to him in writing.

### **Miscellaneous proposals**

#### ***Waterproof packagings***

Document: ST/SG/AC.10/C.3/2004/76 (China)

Informal document: INF.16 (Australia)

25. Some experts regretted that they did not have more information about the origin of the explosion involving flexible IBCs containing dichloroisocyanuric acid salts (UN No. 2465). The contact of this substance of Division 5.1 with water did not normally tend to cause an explosion.

26. Other experts considered, however, that it would be useful to define the term “water resistant” with greater precision, since a water resistant bag did not necessarily prevent moisture from getting in.

27. Other experts considered that it would be more appropriate to settle the matter globally by ensuring that non-waterproof packagings could not be used for substances likely to react dangerously with water.

28. The experts from China and Australia were invited to submit a new proposal.

#### ***UV resistance of plastics used in IBCs***

Document: ST/SG/AC.10/C.3/2005/2 (Australia)

Informal documents: INF.13 (Canada)  
INF.25 (ICPP)

29. Some experts considered that the existing provisions, according to which plastics IBCs could only be used for five years and their condition checked before each new use, made it possible to ensure their safety. Others, on the contrary, considered that it was not currently possible to verify their resistance to ageing and to ultraviolet radiation.

30. The experts from Australia and Canada were invited to prepare a new proposal.

***Strength of “single trip” or “lightweight” composite intermediate bulk containers (IBCs)***

Document: ST/SG/AC.10/C.3/2005/4 (Australia)

Informal documents: INF.14 (Canada)  
INF.26 (ICCP)  
INF.9 (Austria)  
INF.41 (Canada)

31. The Sub-Committee noted the information provided by the expert from Australia that the current trend was to manufacture increasing numbers of “lightweight” composite IBCs which met the level of performance currently required but in which the structural framework had limited resistance to deformation resulting from handling impacts or stacking. Some were even commercialized as “single trip” IBCs although the current requirements permitted five years of use.

32. Some experts also raised issues associated with the testing and marking of IBCs. Incident data was presented by one expert suggesting there were potential issues requiring examination.

33. The majority of experts acknowledged that there was sufficient concern to warrant examination and the Sub-Committee accepted the proposal by Canada to organize an informal working group which would identify and address issues associated with the carriage of IBCs. The Sub-Committee adopted the terms of reference of this group, which will be convened in Paris from 10-13 October 2005, on the basis of informal document INF.41 (see annex 2).

***Draft ISO standard 16103 (Transport packages for dangerous goods – Recycled plastics materials)***

Informal document: INF.33 (ISO)

34. The Sub-Committee regretted that the draft standard had been brought to its attention at such a late stage. It agreed to put it on the agenda for the next session so that comments could be passed on to the ISO secretariat.

35. The representative of ISO said that if the standard was not acceptable, it could be revised rapidly. He was informed that if ISO wished a reference to be made to the standard, it should spell out the desired amendment to the text of the Model Regulations.

**LIMITED QUANTITIES**

Document: ST/SG/AC.10/C.3/2005/17 (United Kingdom)

Informal document: INF.27 (ICCA)

36. The proposal by the United Kingdom to introduce new provisions for excepted quantities was the subject of numerous comments.

37. Some experts and representatives of industry were emphatic that the provisions of ICAO in that regard were indispensable in certain cases, for example, for the carriage of laboratory samples. In their opinion, it was not realistic to believe that the provisions of the Model Regulations could be applied in those special cases and, as a result, dangerous goods were currently carried in practice in very small quantities in breach of the majority of regulations applicable to carriage by sea and land. It was essential, therefore, to address this issue in the Model Regulations in a simplified form.

38. Some experts were in favour of introducing the provisions of the Technical Instructions of ICAO for excepted quantities, as they stand, into the Model Regulations in order to resolve current problems of multimodal transport. They pointed out, however, that the United Kingdom's proposal was not in line with those provisions and that, if they were not accepted by ICAO the proposal would do nothing to resolve the problem of harmonization. They pointed out that quantity limits should correspond to those of ICAO, that substances of packing group I should not be permitted and that a reference should be provided in the transport document. Some experts would also like some form of hazard communication to be provided for cargo transport units. The representative of ICAO pointed out that the ICAO Dangerous Goods Panel would be willing to review the current ICAO provisions in the light of debate in the UN Sub-Committee.

39. Several experts found unacceptable the proposal by ICCA to almost double the quantity limit per inner packaging.

40. Some experts considered that the concept of carriage in excepted quantities should only apply to special cases where it was difficult to apply the regulations. The proposal by the United Kingdom would be tantamount to authorizing the transport of large quantities of dangerous goods packed in small quantities in full loads in vehicles or containers with no information being provided as to the dangerous nature of the load. In their opinion, that was not acceptable in that exceptions existed for limited quantities and already gave rise to problems on that account.

41. It was also pointed out that an exception for toxic substances of packing group I would lead to a security problem since very small quantities of some of those substances could be used for terrorist purposes.

42. The representative of IMO said that his organization considered that all dangerous goods represented a potential hazard and that it was not in favour of multiplying exemptions for safety reasons. He believed that, at this stage, the question was specific to a given transport mode and should not, therefore, be addressed in the Model Regulations.

43. Several experts regretted that the proposal by the United Kingdom had not been backed by detailed justifications. However, the expert from the United Kingdom pointed out that this had been subject to intensive discussion over the previous biennium. There had been twenty years of experience in air transport with no reported incident. On the other hand, experience with the air mode was not necessarily relevant for other modes, and the expert from France recalled the study he had presented about the risks related to the carriage of dangerous goods in limited quantities which showed that the risks presented by full loads of dangerous goods packed in small quantities was far from negligible. One expert suggested that the question of excepted quantities should be discussed in an informal working group.

44. The expert from the United Kingdom said that he would submit a new proposal at the next session.

## **LISTING, CLASSIFICATION AND PACKING**

### **Confetti sprays**

Document: ST/SG/AC.10/C.3/2004/74 (China)

45. Several experts considered that the confetti sprays described in the document were more similar to articles of Class 2, UN No. 2037, rather than to articles of Class 9 although they are fitted with a release device. Articles classified under UN No. 2037 benefit from the exception of special provision 191



when they contained less than 50 ml of gas. If the expert from China wished to classify them in Class 9, he would also have to make provision for appropriate conditions of carriage.

46. The expert from China said that he would study the comments made and, if necessary, submit a new proposal.

#### **Packing instruction for UN No. 2465, dichloroisocyanuric acid salts**

Document: ST/SG/AC.10/C.3/2004/75 (China)

47. Following discussion of this document, the expert from China said that his proposal was related to document ST/SG/AC.10/C.3/2004/76. In view of the discussion on the latter document (see paragraph 25), he would consider the problem of waterproof packagings in greater detail in cooperation with the expert from Australia.

#### **Classification testing for Class 8 materials**

Document: ST/SG/AC.10/C.3/2005/1 (Australia)

48. The proposed amendment to paragraph 2.8.2.5 (c) (ii) concerning corrosiveness in metals was adopted (see annex 3).

49. The proposal should, however, be transmitted to the GHS Sub-Committee, which should be invited to support the amendment since it also concerned Chapter 2.16 of the GHS.

#### **New entry for lithium ion rechargeable batteries**

Document: ST/SG/AC.10/C.3/2005/12 (PRBA)

Informal documents: INF.5 (PRBA)  
INF.29 (EPBA)

50. Some experts were in favour of studying the possibility of classifying rechargeable batteries in terms of their capacity in watt hours, which could be easily calculated, rather than in terms of their equivalent lithium content, although it was not always possible to identify the charge status.

51. Other experts noted that experiments were being carried out in the United States to further assess the hazards associated with the transport of lithium ion rechargeable batteries on aircraft. The expert from the United States of America indicated that a number of incidents have occurred in both consumer and transport sectors including one involving a recent fire aboard a cargo aircraft. A number of experts indicated that they would like further safety and technical justification, such as a risk analysis from PRBA, and would prefer to await the results of the experiments before taking a decision.

52. Several experts were not in favour of the principle of exempting batteries twice as powerful as those currently exempted.

53. The representative of PRBA said that he would submit a new proposal at the next session.

**Fuel cell system containing flammable gas**

Document: ST/SG/AC.10/C.3/2005/16 (Japan)

54. The expert from Japan requested that examination of this document should be postponed until the next session.

**Carriage of medicines (UN Nos. 1851, 3248 and 3249)**

Document: ST/SG/AC.10/C.3/2005/18 (United Kingdom)

55. The representative of the United Kingdom considered that the per package quantity restrictions for which special packing provision PP6, provided were not logical given the quantities permitted for carriage in limited quantities; he therefore proposed that provision PP6 should be amended.

56. The expert from the United States of America considered that this quantity restriction was unnecessary and that medicines could be treated like other substances. He proposed that PP6 should be deleted. The experts from Canada and South Africa supported the proposal.

57. A member of the secretariat recalled that such medicines did not receive the same treatment as other substances since special provision 274 was not applicable and there was no requirement, for reasons of commercial confidentiality invoked by the industry, to indicate the name of the toxic active principle in the transport document. This exception had been accepted by the Sub-Committee as a compromise, namely, restrictions on the content of packages, since the Sub-Committee considered it necessary that the name of the toxic product should be available to the emergency services in the event of the carriage of large quantities. The Sub-Committee also wished to prevent these UN numbers from being used for the carriage of toxic products used in the manufacture of medicines, or that could be used as medicines, or products sold in a pharmacy but not actually intended for medical or pharmaceutical use.

58. The proposal to delete provision PP6 was put to the vote and adopted.

**Tank instruction for water-reactive liquids (n.o.s.) (UN Nos. 3129, 3148, 3131, 2813)**

Document: ST/SG/AC.10/C.3/2005/21 (United States of America)

Informal document: INF.35 (United States of America)

59. The expert from the United States of America will submit a new proposal for the next session since the proposal is also related to the guiding principles for assigning tank instructions (see also para. 84)

**New entry for flammable liquid, water soluble, N.O.S.**

Informal document: INF.6 (DGAC)

60. Several experts considered that such a new entry would imply the reclassification of many products presently carried under UN No. 1993, and that it would be necessary to define more precisely "polar or water soluble mixtures or solutions". In addition, the introduction of such a concept would concern also many other N.O.S. entries and imply many new entries. Furthermore, this would require reclassification on the basis of an emergency response criterion.

61. The Sub-Committee did not agree to take a decision on the basis of an informal document, and the representative of DGAC said that he would consider submitting a new proposal.

## **Revised rationalized approach for solid substances in bulk containers**

Informal document: INF.24 (ICCA)

62. It was noted that the proposal by ICCA would increase significantly the number of substances authorized for carriage in bulk containers and some experts said that, if this were the intention, it would also be necessary to add more stringent requirements for transport in bulk containers.

63. Other experts noted that many additional substances were already authorized for bulk container transport in other modal provisions and that the proposal would remove some packing group II and Division 6.2 substances currently authorized in the Model Regulations.

64. Some experts felt that the fact that a substance is allowed in flexible IBCs is not a suitable criterion for allowing them in bulk containers which do not offer the same degree of protection, e.g. for division 4.3 substances, powdery toxic substances or substances such as asbestos.

65. The representative of ICCA will submit a revised proposal to the next session.

## **MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS**

### **Definition of transport unit and closed transport units**

Document: ST/SG/AC.10/C.3/2005/3 (Australia)

66. Although several experts suggested the inclusion of definitions for transport units in section 1.2.1, some experts did not support the proposal as drafted. Some experts felt that the term “cargo transport unit” used in the IMDG Code would be more appropriate to avoid confusion with the term “Transport unit” used in ADR with a different meaning. Others expressed concern at the second sentence “Transport units with fabric sides or tops are not closed transport units”, since in ADR and RID other options are mentioned (“open”, “closed”, “sheeted”).

67. The expert from Australia will submit a revised proposal to the next session.

### **Security: High Consequence Dangerous Goods List**

Document: ST/SG/AC.10/C.3/2005/9 (United Kingdom)

68. The proposal to add UN No. 3375, ammonium nitrate emulsion, or suspension, or gel to the list of high consequence dangerous goods in Chapter 1.4 was adopted (see annex 3).

### **Orientation arrows on Class 7 goods**

Document: ST/SG/AC.10/C.3/2005/12 (DGAC)

69. The Sub-Committee noted that IAEA considered that the package orientation arrows should not be required for radioactive material packages of types IP-2, IP-3, A and was still discussing the issue for fissile approved packages on the grounds that the packagings are required to be able to withstand a drop test without leakage (a drop test for type A packages).

70. A member of the secretariat asked what the justification for IP-2 and IP-3 packages was, since UN packagings meeting the packing group I and II performance tests could be used as IP-2 and IP-3

packagings. Combination packagings or vented packagings of these types would be required to bear the orientation marks when containing other dangerous goods.

71. The Sub-Committee agreed to except types IP-2, IP-3 and A packages from the requirement (see annex 3), but felt that this issue should be further considered by IAEA.

72. The representative of ICAO suggested that the Sub-Committee should recommend to modal bodies not to include these marking requirements for types A, IP-2 and IP-3 packages in their 2007 regulations, but no consensus could be found on this issue.

#### **Maximum degree of filling for filling by mass; chemical names**

Informal documents: INF.8 and INF.10 (Austria)

73. The Sub-Committee considered that the issues raised in these two documents by the expert of Austria should be discussed on the basis of official proposals.

#### **Viscosity and flash point in accordance with the table in 32.3.1.7**

Informal document: INF.11 (Austria)

74. The Sub-Committee agreed that the table in 32.3.1.7 could be clarified as proposed since there is flash point limit for a flow-time above 100 s (see annex 1).

### **HARMONIZATION WITH THE IAEA REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL**

#### **Review of the inclusion of the IAEA provisions in the Model Regulations**

Document: ST/SG/AC.10/C.3/2005/19 (United Kingdom)

75. The expert from the United Kingdom explained that some of the IAEA provisions could be better integrated in the Model Regulations in accordance with the logic of the Model Regulations format, e.g. by using packing instructions, transferring some provisions in specific chapters, eliminating duplications, etc.

76. Several experts felt that this work should be carried out in close cooperation with IAEA experts, and the representative of IAEA said that IAEA would organize a consultant meeting to consider these proposals in October 2005.

77. The Sub-Committee noted that a revised proposal will be submitted by the expert from the United Kingdom at the December session.

#### **Request for clarification in respect of the IAEA Regulations**

Informal document: INF.17 (Australia)

78. The representative of IAEA provided explanations on several issues raised in INF.17, but said that some of them had not been raised in his organization.

79. The Sub-Committee considered that these requests for clarification should be addressed directly to IAEA by the Government of Australia, if still necessary.

## **Measures to strengthen international cooperation in nuclear, radiation and transport safety and waste management**

Informal document: INF.32 (IAEA)

80. The Sub-Committee took note of the policy for reviewing and revising the IAEA's Regulations for the Safe Transport of Radioactive Material, as submitted by the IAEA Director General and approved by the Board of Governors in June 2005. According to this policy, the IAEA Regulations will continue to be reviewed every two years but the decision for revision and publication will be made on the basis of the assessment by the Transport Safety Standards Committee (TRANSSC) and the Commission on Safety Standards (CSS).

### **GUIDING PRINCIPLES FOR THE MODEL REGULATIONS**

Document: ST/SG/AC.10/C.3/2005/23 (United Kingdom)

Informal documents: INF.23 (United States of America)  
INF.34 (United States of America)

81. The Sub-Committee noted that some guiding principles as agreed in principle at the last December session were not completely up to date and would have to be revised. The expert from the United Kingdom would prepare a revised document for the December 2005 session.

82. It was suggested that the guiding principles should address also bulk containers and high consequence dangerous goods.

83. The Sub-Committee noted that the experts from the United Kingdom and the United States of America would cooperate for submitting guiding principles concerning packagings and IBCs.

84. For the guiding principles for tanks (INF.23, INF.34), the Sub-Committee noted that they would have to be updated but some proposals such as deletion of TP9 were of a substantial nature and would have to be addressed as such.

### **OTHER BUSINESS**

#### **Cooperation with the GHS Sub-Committee**

Informal document: INF.12 (secretariat)

85. The Sub-Committee noted that the expert from Germany had submitted an informal proposal to the GHS Sub-Committee (INF.6) for additional work on certain hazardous properties (physical hazards, ammonium nitrate; substances having explosive properties although not classified as explosives; explosives which are not packed for transport; desensitized explosives; determination of initial boiling point and flash point; chemically unstable gases).

86. The GHS Sub-Committee should be informed that the Sub-Committee would agree to address the questions raised but that it would be highly desirable that experts in storage and supply of dangerous goods be associated to the work.

## **Harmonization of RID/ADR/ADN with the fourteenth revised edition of the UN Recommendations**

Informal document: INF.8 (Secretariat)

87. The Sub-Committee took note of the questions raised by the Ad Hoc Working Group on the harmonization of RID/ADR/ADN with the UN Model Regulations and provided the following explanations:

- (a) Exemption of gases in 2.2.2.3: the 280 kPa pressure referred to is an absolute pressure. This is indeed in contradiction with 1.2.2.5, therefore the word “absolute” should be inserted before “pressure” in 2.2.2.3;
- (b) The provisions for transport of infectious substances in the Model Regulations are unclear indeed and should be corrected as necessary in future. The intents of the provisions are:
  - (i) Only animal carcasses may be carried in bulk under UN 2900;
  - (ii) Codes BK1 and BK2 should have been assigned to UN 2814, but only for animal carcasses;
  - (iii) Animal carcasses infected with category B pathogens should normally be classified under UN No 3373, but the transport conditions should be decided by the competent authority in accordance with 2.6.3.6.2;
- (c) The question of inconsistencies for the assignment of TP provisions for carriage of corrosive substances is due to the IMO decision to apply stringent requirements to specific particularly highly corrosive substances, which could not be systematically assigned to all corrosive substances carried under N.O.S. entries. This question will be addressed also at the next session of the Sub-Committee when the revised document on the rationalized approach for assignment of tank provisions will be discussed.
- (d) The Sub-Committee agreed that 6.5.6.9.2 (c) should be corrected (see annex 4).

88. The expert from the United States of America expressed concern at the fact that the Government of Germany intended to submit proposals on infectious substances to the RID/ADR/ADN Joint Meeting which could result in conflicting requirements.

89. The expert from Germany explained that the proposals concerned the introduction of less stringent requirements for transport of clinical wastes, the question of “otherwise healthy humans or animals”, and the list of Category A substances. These proposals would not necessarily result in conflicting requirements and should be addressed urgently for inland transport in Europe.

## **Report of the ICAO Dangerous Goods Panel (18-22 April 2005)**

Informal document: INF.37 (ICAO)

90. The Sub-Committee took note of the report of the ICAO Dangerous Goods Panel on its session held from 18 to 22 April 2005.

91. Referring to paragraphs 8.12.1 and 8.12.2 of the report, the Sub-Committee confirmed that the expression “for testing” in special provision 310 of the UN Model Regulations was intended to cover not only design qualification testing but also product development testing.

### **Report of the IMO Editorial and Technical (E and T) group**

Informal document: INF.38 (IMO)

92. The Sub-Committee took note of the report of the IMO E and T Group on its session held from 25 to 29 April 2005.

93. The Sub-Committee noted that the change of the upper flash point limit for flammable liquids from 61 °C to 60 °C might imply an amendment to the SOLAS Convention, but did not agree to recommend postponing the entry into force of this change as requested by the representative of IMO since this clause is necessary for the implementation of the GHS.

### **Packing requirements for UN 1402 (Calcium Carbide)**

Informal document: INF.40 (China)

94. The expert from China suggested amendments to sections 4.2.5.3 and 4.1.4.2 of the Model Regulations intended to require a control of the acetylene contents in IBCs and tanks carrying calcium carbide, which should be less than 1%. Several comments were made e.g. that the acetylene contents could increase during transport if the substance were exposed to wet atmospheres. The expert from China said that he would submit a proposal for the next session.

### **Application for consultative status of the European Portable Battery Association (EPBA)**

Informal document: INF.28 (EPBA)

95. The Sub-Committee granted EPBA consultative status but stressed that all non-governmental organizations (in particular, EPBA, EBRA, PRBA, IEC) concerned with the carriage of batteries should coordinate their positions, for example, by setting up a coordination committee.

### **OPTIONS TO FACILITATE GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS**

Document: ST/SG/AC.10/C.3/2005/20 (Canada and United Kingdom)

96. The experts from the United Kingdom and Canada underlined that the annex to their document had been prepared in order to stimulate the discussion on the various options to facilitate global harmonization, but that it did not represent their own views or those of their respective Governments.

97. The Sub-Committee agreed that the questions raised in this document should be discussed informally.

98. Experts felt that it was necessary first to determine the problems to be solved. Fifty years of cooperation between the Sub-Committee, IMO, ICAO, UNECE and IAEA had resulted in a very good level of harmonization of the various international legal instruments regulating the international transport of dangerous goods but there are still problems in international transport. These are due to the fact that there are still some differences between the international modal legal instruments, although it was recognized that a number of these differences are often justified and legitimate. One problem seemed to be the lack of harmonization between national inland transport regulations which impede international transport when there is no international legal instrument superseding national regulations, such as ADR and RID. National regulations, even when based on the Model Regulations, are not always fully in line with the Model Regulations, or are not updated and brought in line simultaneously worldwide.

As a result, consignors and transport operators must check on a case-by-case basis the regulations applicable in each country concerned by the transport operation, and this entails problems of compliance.

99. Other problems mentioned were the difficulty in many countries to update national regulations every two years, the fact that new UN provisions have to be translated in all national languages, the poor capacity for implementation and enforcement in many countries, insufficient training, capacity-building and technical cooperation activities at international level despite the active involvement of organizations such as IMO, ICAO and IATA for maritime and air transport and technical support provided by certain countries on a bilateral basis.

100. It was mentioned that developing a widely supported world convention on the international transport of dangerous goods, although difficult, might solve these problems in the long term, but it would have to take account of the existing international legal instruments in force. Such a convention could exclude from its scope maritime and air transport which are already covered by the IMDG Code and ICAO Technical instructions. Alternatively, it could include common provisions for all modes of transport which, however, would not prevent the modal organizations from addressing, in addition, the purely mode-related and operational provisions in separate instruments.

101. For questions relating to the mandate of the Sub-Committee, a member of the secretariat said that the rules of procedure applicable to the Sub-Committee are specified in the Rules of Procedures of the Economic and Social Council, and that they cannot be changed as long as the Sub-Committee is a subsidiary body of the Council. Its terms of reference are decided, and updated every two years, by the Council itself. He felt that, in the event of a convention, its terms of reference would not be likely to change, at least immediately. It could continue to function as presently, i.e. making recommendations on the transport of dangerous goods, which would still be addressed to Governments for their national provisions and international organizations for international or regional modal legal instruments, but also to the Contracting Parties of this world convention or its administrative body.

102. Experts of the Sub-Committee and international organizations were invited to discuss all these issues formally or informally at national level or within their constituencies so as to further explore the possibilities of improving global harmonization for international transport of dangerous goods. Document ST/SG/AC.10/C.3/2005/20 was carried forward to the next session for possible further consideration.

#### **ADOPTION OF THE REPORT**

103. The Sub-Committee adopted the report on its twenty-seventh session and the annexes thereto on the basis of a draft prepared by the secretariat.

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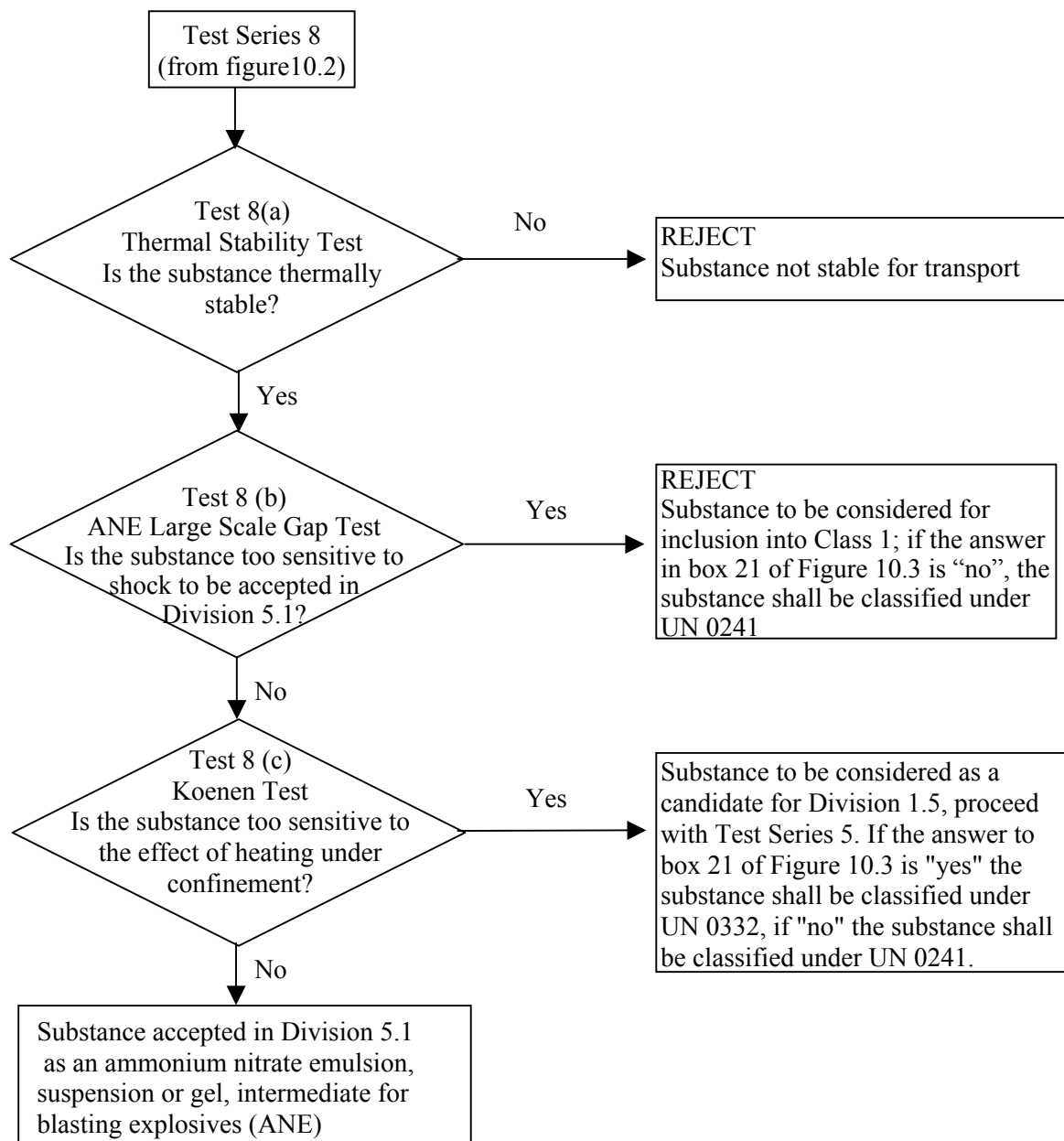
Annex 1

**Draft amendments to the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria (Fourth revised edition, as amended)**

Sub-section 10.4

10.4.3.3 (a) Replace "a qualified explosives expert" with "the competent authority".

Figure 10.4: Amend to read as follows:



Sub-section 32.3: 32.3.1.7 (c) In the table, replace "-5 and below" with "no limit".

\* \* \*

**Annex 2**

**Terms of reference of the informal working group on IBC performance tests  
(Paris, 10-13 October 2005)**

**Scope:** UN IBC test protocols using the official and informal documents discussed at the twenty-seventh session of the Sub-Committee, and verbal comments, as a starting point for discussion.

**Objectives:**

1. Review the test protocols and test acceptance criteria in the current UN Recommendations to ensure that IBCs that meet the stated minimum requirements are strong enough to survive real transport and handling conditions;
2. Consider recent reported performance experience of “lightweight” IBCs and whether specific marking and test protocols should be developed and prescribed in the Model Regulations;
3. Consider clarifying requirements in light of current compliance/interpretation testing practices (e.g., leakproofness test);
4. Propose appropriate changes to the test protocols and IBCs’ markings that are deemed necessary as a result of this review;
5. Changes to tests, acceptance criteria or new tests may be considered as appropriate.

**Time line:** Prepare an interim progress report as an informal document for presentation at the Sub-Committee’s twenty-eighth session (December 2005).  
If appropriate, prepare a formal proposal to the Sub-Committee for consideration not later than its twenty-ninth session (July 2006).

\* \* \*

**Annex 3**

**Draft amendments to the UN Recommendations on the Transport of Dangerous Goods, Model Regulations (Fourteenth revised edition)**

PART 1

***Chapter 1.4***

Table 1.4.1 Division 5.1: Amend the second entry to read as follows:

"Division 5.1 perchlorates, ammonium nitrate, ammonium nitrate fertilisers and ammonium nitrate emulsions or suspensions or gels, in bulk".

PART 2

***Chapter 2.8***

2.8.2.5 c) ii) In the first sentence, replace "corrosion rate on steel" with "corrosion rate on either steel" and insert "when tested on both materials" at the end.

Add a new note at the end to read as follows:

*“NOTE: Where an initial test on either steel or aluminium indicates the substance being tested is corrosive the follow up test on the other metal is not required.”*

PART 3

***Chapter 3.2*** UN Nos. 1851, 3248 and 3249: Delete “PP6” in column (9).

PART 4

***Chapter 4.1***

4.1.4.1 In P001 and P002, delete PP6.

PART 5

***Chapter 5.2***

5.2.1.7.2 (d) Insert "A, IP-2, IP-3," before "B(U)".

\* \* \*

**Annex 4**

**Corrections to the fourteenth revised edition of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations**

PART 3        In the Dangerous Goods List, for UN No 3254, insert “TP2” and delete “TP33” in column (11).

PART 6

6.5.6.9.2 (c)    At the beginning, insert "and composite" after "Rigid plastics".

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