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#### COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the Transport of Dangerous Goods

#### REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS FOURTEENTH SESSION

(Geneva, 8-18 December 1997)

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#### REPORT

#### ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its fourteenth session from 8 to 18 December 1997, with Mr. S. Benassai (Italy) as Chairman and Mr. F. Wybenga (United States of America) as Vice-Chairman.

2. This session of the Sub-Committee was attended by the following countries: Australia, Belgium, Brazil, Canada, China, France, Germany, India, Italy, Japan, Mexico, Morocco, Netherlands, Norway, Poland, Russian Federation, South Africa, Spain, Sweden, United Kingdom, United States of America.

3. Observers from the following countries were also present under rule 72 of the rules of procedure of the Economic and Social Council: Austria, Bulgaria, Czech Republic, Democratic Republic of Congo, Finland, New Zealand, Nigeria, Portugal, Switzerland.

4. Representatives of the following specialized agencies were also present: International Labour Organization (ILO); International Maritime Organization (IMO) and International Atomic Energy Agency (IAEA).

5. The following intergovernmental organizations were also represented: European Commission (EC); Central Office for International Carriage by Rail (OCTI), Organization for Economic Co-operation and Development (OECD); Committee of the Organization for Co-operation between Railways (OSZhD), Preparatory Commission for the Organization for the Prohibition of Chemical Weapons (OPCW).

6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: International Association of the Soap, Detergent and Maintenance Products Industry (AISE), European Chemical Industry Council (CEFIC); European Committee of Paint, Printing Ink Artists Colours Manufacturer's Associations (CEPE); European Industrial Gas Association (EIGA); Federation of European Aerosol Associations (FEA); Hazardous Materials Advisory Council (HMAC); International Air Transport Association (IATA); International Council of Intermediate Bulk Container Association (ICIBCA), International Confederation of Plastics Packaging Manufacturers (ICPP); International Organization for Standardization (ISO); International Road Transport Union (IRU).

#### **OPENING OF THE SESSION**

7. Mr. J. Capel Ferrer, Director of the Transport Division of the Economic Commission for Europe welcomed the participants.

8. He reported on the conclusions of the Regional Conference on Transport and the Environment organized by ECE in Vienna from 12 to 14 November 1997. The Conference had adopted a Declaration and a joint Programme of Action which provided, <u>inter alia</u>, for the promotion of the safety of the transport of dangerous goods. In the Declaration, the Governments

of the member States of ECE committed themselves in particular to taking due account of the United Nations Recommendations on the Transport of Dangerous Goods.

9. He also informed the Sub-Committee that it had not yet been possible, in the course of the official administrative procedures for recruitment at P2 level, to select an appropriate candidate for the P2 post in the Dangerous Goods Unit of the Transport Division which would be vacant as from 1 January 1998.

10. Lastly, he recalled that proposals had been made within the Coordinating Group for the harmonization of chemical classification systems for the follow-up and updating of the harmonized system under the auspices of the Economic and Social Council, possibly by the Committee of Experts on the Transport of Dangerous Goods whose mandate and name might come under review as a result. He invited the experts of the Sub-Committee to assess carefully the possible consequences of this reorganization on their work.

# **Distribution of documentation**

11. The experts from Australia, Belgium, Canada, Germany, Italy, South Africa, the United Kingdom and the United States had reported that the official documents for the session had reached them extremely late; some had received no documents at all.

12. The Sub-Committee as a whole deplored a situation which had prevented delegations from making proper preparation for the session and the secretariat was requested to ask the Conference Services Division to ensure that documents submitted within the statutory deadlines, i.e. 10 weeks prior to the session, were also distributed in accordance with the rules, at least 6 weeks prior to the session.

13. Several delegations said that they had only been able to prepare for the session because the Transport Division had made the documents available on Internet  $\underline{*}/$ ; they asked the secretariat to continue to supply this service and, if possible, to improve it using processing language accessible to as many countries as possible.

14. Other delegations reminded the meeting, however, that they did not yet have access to Internet and that for them it was essential that the official documents should be transmitted within the deadlines. The expert from France said that, much though his country favoured the distribution of the documents in several languages, he preferred to receive them in English by the deadline, rather than receive documents in French late or even not at all.

15. The Sub-Committee as a whole therefore considered that the documents should be distributed by the Conference Services Division as soon as they were available in the original language. The Sub-Committee was informed that a member of the Conference Services Division was scheduled to address the session and give explanations.

<sup>\*/</sup> http://www.unece.org/trans/danger/danger.htm

16. The experts from the United States of America and Canada emphasized the usefulness of having documents on the Internet with respect to obtaining comments on the proposals from industry and other interested parties.

# **ADOPTION OF THE AGENDA**

17. The Sub-Committee adopted the provisional agenda prepared by the secretariat (ST/SG/AC.10/C.3/27 and Add.1) after amending it to include late submissions (informal documents INF.1 and INF.2).

18. The expert from Japan asked that his document ST/SG/AC.10/C.3/1997/53 should only be discussed at the fifteenth session, as corrected by informal document INF.5 (to be issued as ST/SG/AC.10/C.3/1997/53/Corr.1).

# DRAFT AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

#### Tanks (Part 3, Chapters 4.2 and 6.6)

Coding of tanks

<u>Documents</u>: ST/SG/AC.10/C.3/1997/7 (EPTA/TCA) ST/SG/AC.10/C.3/1997/10 (Germany) ST/SG/AC.10/C.3/1997/60 (Germany)

19. The proposals by Germany were intended to establish a system of additional marking for tanks to supplement the T codes system. These markings should be for the benefit of users and control authorities.

20. It was pointed out that a similar proposal by Germany had been submitted to the RID/ADR Joint Meeting and had in principle been adopted, but that the system in question had concerned specific RID/ADR tanks and not the portable tanks which would be built in accordance with the Model Regulations for multimodal transport.

21. In view of the lack of significant support for his proposal, the expert from Germany withdrew it.

Document: ST/SG/AC.10/C.3/1997/88 and -/Add.1 (United States of America)

22. The proposal to revise the coding system in implementation of the rationalized approach (see ST/SG/AC.10/C.3/26/Add.1) was adopted in principle. The proposed revision of the assignment of these T codes to the different substances as a result was entrusted to a drafting group and, on the basis of the report of that drafting group (INF.31), the Sub-Committee adopted the amendments reproduced in annex 1.

23. Document ST/SG/AC.10/C.3/1997/88/Add.1, as amended, was to remain on the agenda for the fifteenth session.

Report of the IMO Working Group on Portable Tanks

Document: ST/SG/AC.10/C.3/1997/92 (IMO)

24. The proposals contained in paragraphs 5.1, 5.2, 5.5, 5.6, 5.9, 5.10 and 5.11 of the report were adopted (see annex 2). The secretariat was requested to consider paragraphs 5.4 and 5.12 and to amend the present texts if deemed necessary. Paragraphs 5.8 and 5.7 were entrusted to a drafting group.

25. The Sub-Committee adopted the conclusions of the drafting group with reference to sections 5, 7 and 12 of the IMO document (see annex 2).

Provisions for gases with critical temperatures below 65° C

Document: ST/SG/AC.10/C.3/1997/50 (EIGA)

26. Consideration of this question was entrusted to a working group which met from 8 to 11 December 1997.

27. The representative of EIGA introduced the report of the Working Group on tanks for non-refrigerated gases with a critical temperature below  $65^{\circ}$  C, to which was annexed the first draft of Chapter 6.7 on requirements for the design and construction of multiple-element gas containers and the inspections and tests which they should undergo, and a draft Chapter 4.3 (renumbered section 4.2.4) concerning the use of such containers. This report and its annexes are reproduced as addendum 2 to this report.

28. The Sub-Committee agreed that the Working Group should meet again during the fifteenth session to consider these texts at a second reading and settle the questions pending.

# Use of packagings and IBCs (Parts 1, 3 and Chapter 4.1)

<u>Document</u>: ST/SG/AC.10/C.3/1997/52 (United States of America and United Kingdom) <u>Informal documents</u>: INF.10 (Netherlands) INF.14 (Germany)

29. The Sub-Committee welcomed the considerable work done by the experts from the United States and the United Kingdom. Their joint document contained a proposal for presenting packing instructions and substantive proposals concerning the use of certain packagings.

30. It was pointed out that the basic purpose of this work was to provide packing instructions which would be acceptable for transport by land and sea.

31. The Sub-Committee considered that it would first of all be advisable to resolve the substantive questions contained in document ST/SG/AC.10/C.3/1997/52. Questions of form (presentation of packing instructions and relation to the list of dangerous goods in Chapter 3.2) would be settled subsequently.

32. The experts from the United Kingdom and the United States of America said that their document was a first draft for consideration and discussion and that they would undertake to prepare a new version for the fifteenth session in the light of the discussion at the present session.

Use of removable head drums for liquids of packing group I (para. 7)

33. Some delegations pointed out that these drums were not currently authorized by the IMDG Code, RID and ADR for liquids of packing group I and that it was difficult in any case to manufacture drums which met the test requirements for those liquids. It was also stressed that the tests did not necessarily take account of all conditions of carriage and that it might be necessary to make provision for a vibration test. The observer from Switzerland also considered that these drums presented risks during the handling and use of the products because of their larger evaporation surface.

34. Other delegations pointed out that the industry manufactured removable head drums which met the test requirements for liquids of packing group I. These drums were also subjected to an internal hydraulic pressure test of 250 kPa which was considered to be very stringent and guaranteed the quality of the closures. The term "removable head" meant an opening of a diameter of more than 7 cm and not necessarily a completely removable head. These drums also accumulated fewer residues, particularly in the case of viscous substances, than non-removable head drums and therefore had advantages in terms of environmental protection.

35. The Sub-Committee finally accepted the principle of the use of removable head drums for liquids of packing group I provided that conditions for so doing were introduced (accurate description of the type of movable head permissible, dimension of the drums and openings, limitations on the types of substances which could be carried in these drums, for example, taking viscosity into account). The experts from the United Kingdom and the United States of America were asked to submit a proposal along those lines.

#### Hermetically sealed, sift-proof and water-resistant packagings (paras. 8 and 9)

36. The Sub-Committee agreed that the Model Regulations should mention cases in which a substance should be packed in a hermetically sealed packaging, and that the term "hermetically sealed" should be defined. Similarly, cases in which sift-proof or water-resistant packagings should be used would also be mentioned.

#### Use of 5M1, 5H1 and 5L1 bags (para. 10)

37. The Sub-Committee agreed that 5M1, 5H1 and 5L1 bags could only be used in special cases and should therefore not be part of the general packing instructions.

#### Pressure limitations for IBCs (paras. 11 to 13)

38. The Sub-Committee noted that the restriction of the use of plastics IBCs to liquids with a maximum vapour pressure of 110 kPa at 50 °C not only existed in the IMDG Code but also in RID and ADR.

39. Some delegations considered that these restrictions should not be arbitrarily fixed and that the hydraulic test pressure at which the IBC was tested should determine which substances could be carried in terms of their vapour pressure.

40. The experts were invited to consider the question for the next session.

# Packing group designations for articles (para. 14)

41. The Sub-Committee decided that there was no need to designate the packing group for articles in the list of dangerous goods since the packing group represented a group of substances corresponding to certain classification criteria which were not applicable to articles. This decision involved drafting changes, for example, in paragraph 2.0.1.3 and in Note 1 to Chapter 4.1. However, the packing instructions should indicate, if necessary, the test level required for packagings for articles.

# Use of wooden barrels (para. 16)

42. The Sub-Committee agreed that wooden barrels need only be provided for alcoholic beverages and ethyl alcohol.

# N type packagings (para. 17)

43. The experts from the United States of America would submit a proposal concerning the use of packagings made of metals other than steel or aluminium for the next session.

# Compressed gas cylinders (para. 18)

44. The Sub-Committee noted that gas cylinders were designated as packagings for certain substances other than gases in various regulations, since they provided adequate safety guarantees on account of their resistance to internal pressure.

45. It was pointed out that it was not only gas cylinders with a maximum capacity of 150 litres that were concerned but also pressure receptacles with a capacity greater than 150 litres.

46. Some delegations considered that references to these pressure receptacles should not be included in so far as no provision existed in the Model Regulations concerning their construction. As a compromise, they could accept gas cylinders with a maximum capacity of 150 litres, but they were opposed to an extension to all types of pressure receptacles with a greater capacity.

47. The Sub-Committee decided to ask the experts from the United Kingdom and the United States of America to prepare a proposal providing for the possibility of using pressure receptacles with a maximum capacity of 450 litres and general provisions concerning the design and construction of these receptacles to be included in Chapter 6.2.

#### Large packagings (para. 19)

48. The Sub-Committee considered that the wording of the provisions concerning large packagings in this document should be revised. The experts from Germany and the Netherlands pointed out that restrictions on the type of substances to be transported in large packagings should be considered. No decision was taken by the Sub-Committee in this respect.

# Packing instructions (Annex 1)

49. The Sub-Committee discussed at length the question of which packing instructions should be used for substances considered to be solids according to the definition in Chapter 1.2 but which might become liquid at temperatures of carriage greater than 20 °C.

50. It was pointed out that paragraph 4.1.1.13 of the Model Regulations, and the corresponding provisions of the IMDG Code, RID and ADR provided that the packagings used for these substances should also be capable of containing the substance in the liquid state. In this regard the IMDG Code referred, for substances considered to be solids (with a melting point greater than  $20^{\circ}$  C), to tables which specified that certain packagings (e.g. fibre drums, paper bags) could not be used for substances liable to become liquid during carriage. RID and ADR specified that certain packagings could only be used for substances with a melting-point greater than 45 °C.

51. Several delegations were not in favour of a 45 °C limit as it would be too restrictive in cold countries and possibly too generous in warm ones. Other delegations felt that it was necessary to set a precise limit to ensure compliance by consignors with the requirements and harmonized interpretation, particularly for international transport.

52. The expert of the United Kingdom proposed inserting a <u>note</u> at the top of table P002 (solids) stipulating that table P001 (liquids) applied to solids that are likely to become liquid under transport conditions.

53. The representative of HMAC said that the proposal would amount to prescribing for solids, packagings tested for liquids, which would be excessively restrictive in the light of paragraph 4.1.1.13. For example, a packaging for a solid belonging to class 6.1, packing group I, would have to undergo an internal pressure test of 250 kPa, a level of performance which the vapour pressure of the liquefied solid would not justify.

54. The expert from Germany considered that for European land transport (ADR, RID) the present regulations require that packagings intended for solids with a melting point below 45 °C had to be tested for the transport of liquids.

55. That interpretation was not shared by all delegations, and the proposal by the United Kingdom, after being put to a vote, was not adopted.

56. The Sub-Committee asked the experts of the United States of America and the United Kingdom to follow the model of the IMDG Code, i.e. to make provision for a table for substances which conformed to the definition of solids specifying that certain packagings must not be used for substances which may become liquid during transport.

#### Limits on quantities per packaging

57. The Sub-Committee noted that RID, ADR and the IMDG Code make provision for more restrictive limits on quantities per inner packaging and package than those of Chapter 6.1 of the Model Regulations, and that they were not harmonized among themselves. Those additional restrictions were not provided for in all the national regulations.

58. The representative of OCTI said that the additional restrictions were attributable to a concern with risk management during transport. The test specifications for packagings reflect a concern for safety under normal transport conditions. For some modal regulations it was deemed necessary to add an additional safety factor to take into account the risk of an accident. Some other experts expressed the view that risk management involved balancing safety costs and benefits and the costs of packaging limits exceeded the minor safety benefits.

59. Views on the issue were divided. Some experts felt that accident reports in their countries made it possible to conclude that the current limits set by the Model Regulations were adequate. Others thought that those set by the modal regulations should not be changed for fear of altering current safety levels, or that they should be aligned on the stricter ones.

60. Several experts thought that whatever solution was adopted, it would be desirable to ensure harmonization of the different modal regulations. Other experts felt that deviations should be admitted.

61. The Sub-Committee agreed to examine limits on a case-by-case basis.

#### Combination packagings

62. No majority emerged as to whether or not provision should be made for quantity limits for the inner packagings of combination packagings. This question should be reconsidered at the fifteenth session at which the modal organizations concerned could submit their viewpoints.

63. It was suggested that the issue of quantity limitations in P001 and P002 should be considered by an informal working group comprising experts from modal organizations. The expert from Australia said that he regretted that the Sub-Committee was increasingly making use of informal working groups to settle certain problems, since not all delegations had the opportunity to participate in the work of these informal inter-sessional groups. If this suggestion were to be followed up, he proposed that the working group should meet in Australia.

64. As many experts felt that it would be difficult for them to attend a working group session in Australia, the expert form Canada proposed to host the working group on packing instructions in Ottawa from 2 to 4 March 1998 with a possibility for video conference for delegations who could not travel to Canada. The expert from Australia said that in that case he could withdraw his initial proposal and the invitation of the expert from Canada was accepted. The mandate of the informal working group will be to look at P001, P002 and depending on the time available, also to other matters related to the development of packing instructions

65. Several delegations considered that the decision concerning a limit lower than that of Chapter 6.1 for the outer packagings of combination packagings would depend on the decision on inner packagings. The question should therefore be reconsidered at the fifteenth session.

#### Single packagings

66. The Sub-Committee indicated in an orientation vote that there was no need to make provision for quantity limits other than those of Chapter 6.1 for single packagings for substances of packing groups II and III. The question would have to be reconsidered separately for substances of packing group I.

67. The expert from Germany suggested that no decision should be made without principle support from IMO. The expert from the United States of America and the United Kingdom indicated that experts should represent all modes of the transport.

#### Fibre drums (1G) for liquids

68. It was pointed out that the use of these 1G drums was not permitted for liquids according to the IMDG Code, RID and ADR. They were, however, permitted and used in some countries if they passed the tests for packagings for liquids.

69. The Sub-Committee asked the experts from the United States of America and the United Kingdom not to include these 1G drums in their proposal for packing instruction P001 concerning packagings for liquids.

70. Some experts said that they were prepared to study the possibility of including fibre drums for liquids if specific proposals containing detailed information on the drums were submitted.

#### Composite packagings

71. This question should be reconsidered at the fifteenth session.

#### Use of boxes for solids

72. The question of quantity limits for boxes should be reconsidered at the fifteenth session (see also INF.10 and INF.14).

#### IBCs and packing instructions other than P001 and P002

73. The experts from the United Kingdom and the United States of America invited all delegations to submit their comments in writing by 6 March 1998 with regard to packing instructions and IBCs other than P001 and P002 and with regard to annexes 2, 3, 4 and 5 of the document so that they could prepare a revised document by 17 April 1998, which was the deadline for the submission of documents for the fifteenth session.

Use of "X"-coded packagings for explosives, self-reactive substances and organic peroxides

Document: ST/SG/AC.10/C.3/1997/56 (Germany)

74. The expert from Germany considered that the degree of confinement was not necessarily linked to the performance test standard and that there were not necessarily grounds for prohibiting "X"-coded packages for explosives, self-reactive substances and organic peroxides since, with the exception of metal packagings, these packagings did not necessarily involve an unacceptable degree of confinement.

75. Some delegations supported the proposal by Germany subject to a revision of the wording and the consideration of substantive amendments in all the chapters concerned. At the request of the Sub-Committee, the expert from Germany revised the proposed amendments; his proposal, as revised, was adopted (see annex 2).

Editorial revision of Chapter 4.1

Document: ST/SG/AC.10/C.3/1997/62 (United Kingdom)

76. In view of the number of oral comments made, the expert from the United Kingdom withdrew his proposal. The experts of the Sub-Committee were invited to submit their comments in writing to the expert from the United Kingdom so that he could submit a new proposal.

#### Other packaging and IBC matters

Inclusion of test temperature in the packaging designation code

Document: ST/SG/AC.10/C.3/1997/78 (New Zealand)

77. The observer from New Zealand proposed that the test temperature criteria for the drop test should be amended since the temperature of -18 °C did not seem to him appropriate for countries with hot climates or countries with very cold climates. The observer from Finland shared this point of view.

78. It was recalled that this temperature of -18 °C for the drop test was the result of a compromise linked not only to temperatures which might be encountered during carriage, but to the fact that certain plastics substances were liable to modifications of important physical properties at this temperature.

79. The observer from New Zealand withdrew his proposal and would possibly submit a new proposal after consultation with the experts of the Sub-Committee.

Modification of the dimensions of a packaging compared with the tested package design

Document: ST/SG/AC.10/C.3/1997/82 (Canada)

80. The expert from Canada withdrew his document.

Testing requirements for infectious substances packaging

Document: ST/SG/AC.10/C.3/1997/84 (United States of America)

81. The proposed amendment to paragraph 6.3.2.6 (b) of the Model Regulations was adopted (see annex 2).

Large packagings (liners for large fibreboard and wooden packagings)

Document: ST/SG/AC.10/C.3/1997/85 (France)

82. The Sub-Committee considered that there was no need to include requirements for liners for large packagings in flexible materials, fibreboard or wood, since the imposition of liner use requirements (which were not mandatory but were an additional safety factor) would have an adverse effect on the use of liners. As a result, paragraph 6.6.4.2.8 adopted at the previous session (see ST/SG/AC.10/C.3/26/Add.2) was deleted.

Packagings for substances which are toxic on inhalation

Informal document: INF.18 (United States of America)

83. The expert from the United States of America reported to the Sub-Committee on ongoing work in his country concerning the use of packagings for substances which are toxic on inhalation. Other experts asked to see the test data produced in due course.

Transport of IBCs after the expiry of the deadline for the validity of inspection

Informal document: INF.22 (India)

84. The expert on India was invited to revise his proposal on the basis of the text of paragraph 4.1.2.10 of the Model Regulations.

Draft CEN and ISO standards concerning tests for packagings intended for the carriage of dangerous goods

Informal document: INF.24 (United Kingdom) INF.32 (Secretariat)

85. The Sub-Committee took note of the work of the European Committee for Standardization in this regard. The Committee also noted that it had been proposed that ISO should prepare standards concerning the testing of packagings and that ISO would in this case establish a category A link with the Committee. A list of draft standards, transmitted by the secretariat of Technical Committee ISO/TC.122 (SC.3), was distributed (INF.32).

Leakproofness test for aerosols

Document: ST/SG/AC.10/C.3/1997/79 (Germany)

86. There was some support for developing a new test as an alternative to the leakproofness test of section 6.2.2.1, in order to take account of the modern industrial production technology. However, several experts were not convinced that a method based on a statistical quality assurance programme would provide a suitable alternative. The representative of FEA said that for ensuring proper consumer safety, it was necessary to test each aerosol can for leakproofness.

87. It was generally felt that a new leakproofness testing method should be at least as effective as the existing one and should, in addition, be drafted precisely enough so as to be used universally as a standard which does not require the approval or the interpretation of the competent authority.

88. The expert from Germany invited the experts of the Sub-Committee to send him written comments and asked for his proposal to remain on the agenda on the next session. He would prepare a revised proposal when deemed appropriate.

#### Other draft amendments

Reclassification of morpholine (UN 2054)

Document: ST/SG/AC.10/C.3/1997/23 and Corr.1 (United States of America)

89. The proposal to reclassify the substance in Class 8, packing group I, subsidiary risk 3, was adopted (see annex 2).

Printing ink-related material

Document: ST/SG/AC.10/C.3/1997/48 (CEPE)

90. The proposal to revise entry UN 1210 to include printing ink-related material was adopted (see annex 2).

Amendments to Chapter 3.4

Document: ST/SG/AC.10/C.3/1997/57 (CEPE)

91. CEPE proposed to extend the exemptions authorized in Chapter 3.4 to dangerous goods packed in single packagings meeting the test criteria of Chapter 6.1 in quantities established in column 7 of the table in Chapter 3.2.

92. After a discussion on the question, the representative of CEPE withdrew his proposal and said that he would submit a new proposal at a forthcoming session.

Documentation and electronic data interchange (EDI)

Document: ST/SG/AC.10/C.3/1997/58 (CEPE) Informal document: INF.25 (Sweden)

93. The aim of the CEPE document was to resolve problems which were currently due to the differences between the requirements of the various modal regulations in multimodal transport and to make the use of EDI official.

94. Several delegations considered that the time had indeed come to reconsider documentation requirements. It was suggested, however, that the question of EDI should be studied separately in the future.

95. It was pointed out that problems in multimodal transport were not only linked to the differences in the information required by the various regulations (which could be settled if the regulations in question were brought into line with the Model Regulations) but also to the fact that the various private-law conventions governing relations between consignors, carriers and consignees contained different transport document requirements depending on the modes and that these documents were used to transmit the information on dangerous goods.

96. It was also pointed out that the information prescribed in the regulations for the transport of dangerous goods and contained in the transport documents was not intended to govern private-law relations between consignors, carriers, intermediaries and consignees, nor only to inform carriers of the dangerous nature of a load, but also to permit checks during carriage and emergency action in the event of an accident. Several experts considered it indispensable that this information should be physically present on board the means of transport.

97. With regard to the form for dangerous goods, the representative of IATA said that his organization used a form based on Recommendation No. 11 of the ECE Working Party on Facilitation of International Trade Procedures which was also to be found in the United Nations Recommendations; this form did not give rise to any problems.

98. The CEPE document and document INF.25 were entrusted to a working group for preliminary consideration so as to enable CEPE to prepare a further proposal for the next session.

99. As a result of the discussion within the working group, CEPE are initially to commence work to establish separately for each mode of transport:

(a) Who makes use of a dangerous goods transport document during a transport operation;

- (b) For what purpose do they use it;
- (c) What information do they actually need for that purpose.

CEPE will use that information for determining the information content of a multimodal dangerous goods form, and from which a proposal for the text of Chapter 5.4 will be derived. Interested parties were invited to submit information to CEPE. CEPE will report on progress to the Sub-Committee at future sessions.

Damaged packagings

Document: ST/SG/AC.10/C.3/1997/61 (United Kingdom) Informal document: INF.8 (IATA)

100. These documents had been prepared as a result of leakage problems observed in certain packagings meeting the test criteria of Chapter 6.1, particularly on board narrow-bodied aircraft where the lower-deck holds were restricted in height and packagings had therefore to be dragged over the floor for loading and stowage.

101. The representative of IATA considered that this type of handling during loading was part of normal conditions of carriage and proposed that a working group should be convened to consider whether the present conditions for the testing of packagings were representative of the constraints to which the packagings were subjected under normal conditions of carriage and whether it would be necessary to make provision for additional tests to take account of constraints which might not have been envisaged previously.

102. Several delegations considered that it would be timely to review the test conditions if it proved that packagings certified on the basis of those tests were not resistant to normal conditions of carriage.

103. Several delegations said that investigations were in progress to determine whether the handling in question could be considered to come under normal conditions of carriage and studies had been initiated to ascertain what was to be understood by that expression.

104. The expert from Belgium said that the proposal by the United Kingdom was tantamount to transferring to the consignor responsibility for operations which he was not in a position to control, and that a consignor who used a "UN" certified packaging had the right to expect that it was suited to the conditions of carriage. He felt that the consignor should not be held responsible for the mishandling of the packages.

105. The majority considered, however, that pending the results of the ongoing investigations and studies, the proposal by the United Kingdom offered the best possible solution in requiring consignors, when selecting the appropriate packagings, to take account of the conditions which might be encountered during carriage, and in requiring special precautions to be taken in stowage and handling. The Sub-Committee adopted this proposal.

106. The majority of the Sub-Committee considered that for the time being there were not sufficient data or statistics on accidents or incidents to call in question present test requirements. It would therefore be advisable to await the results of the ongoing investigations and studies before deciding to establish a working group. All delegations were invited to supply information on accident statistics if appropriate.

107. It was also recalled that the tests contained in the United Nations Recommendations had been deliberately planned so that they could be carried out as simply and at as little cost as possible in any country in the world.

Nitrocellulose membrane filters (UN 3270)

Document: ST/SG/AC.10/C.3/1997/51 (United States of America)

108. The Sub-Committee adopted in principle the proposal to amend entry UN 3270. The reference to series 1, type a tests, in special provision 237 was, however, placed in square brackets along with the new special provision 28X, for confirmation at the fifteenth session (see annex 2).

Additional screening procedures

Document: ST/SG/AC.10/C.3/1997/63 (CEFIC)

109. The proposal by CEFIC was adopted with some amendments (see annex 2).

Desensitized explosives

Document: ST/SG/AC.10/C.3/1997/72 (New Zealand)

110. Several experts supported the proposal by the observer from New Zealand to create a new Division 4.4 for desensitized explosives, since their present classification in Class 3 or in Division 4.1 and the relevant label did not correctly reflect the potential danger of explosion, particularly in the event of leakage in which the contents of a packaging were liable to become concentrated and subsequently explosive.

111. Other experts drew attention to the fact that this question had been under discussion for many years. They considered that these desensitized substances were indeed a special case but that they did not present any danger of explosion. They were also of the opinion that the multiplication of divisions and labels for special cases should be avoided, and that in this specific case the creation of a new division would not contribute anything from the point of view of safety.

112. The proposal to create a Division 4.4 was rejected.

Document: ST/SG/AC.10/C.3/1997/47 (Belgium)

113. In this document the expert from Belgium proposed consequential amendments necessary to take account of the introduction of desensitized explosives in Class 3 in the tenth revised edition of the Recommendations. The Sub-Committee did not agree to amend the title of Class 3, but most of the other proposed amendments were adopted, sometimes with modifications (see annex 2).

Substances toxic on inhalation

Documents: ST/SG/AC.10/C.3/1997/81 (United States of America) Informal document: INF.6 (CEFIC) INF.16 (EIGA)

114. Although the Sub-Committee overall had recognized the need to provide for special requirements for the packing and carriage in tanks of certain substances which were toxic on

inhalation belonging to packing group I, opinions were divided on the issue of special provisions with regard to hazard communication.

115. Some delegations opposed the idea of n.o.s. entries for these substances or a special reference in the transport document and a specific label, which, as proposed would not differ essentially from the present label for Division 6.1 from the point of view of the symbol, could possibly be confused with the label for Division 6.2 and seemed to them to indicate a risk that was less acute than that of Division 6.1. They also feared that the creation of this special group of substances would mean that the hazards inherent in substances of packing groups II and III that were toxic on inhalation would be ignored.

116. Other experts, however, supported the idea of the expert from the United States of America that the extreme danger to the population of such substances justified special measures.

117. Some experts were of the opinion that it was premature to make provision for these substances at a time when work on the overall harmonization of the classification and labelling systems for chemicals was still in progress, particularly with regard to toxicity.

118. At the request of the expert from the United States of America, the Chairman asked the Sub-Committee to take a decision on the principle of each of the aspects contained in the proposal.

# Principle of hazard communication

119. The Sub-Committee adopted the principle that additional provisions on hazard communication should be adopted for substances which were highly toxic on inhalation. However, the Sub-Committee was unable to agree on the definition of this group of substances and the criteria for their classification. In particular, the Sub-Committee did not agree that this group included all substances of Division 2.3 and those meeting the criteria of packing group I concerning toxicity on inhalation. A motion to reopen the discussion of the issue following the vote was rejected.

#### Principle of introducing n.o.s. entries for substances that were toxic on inhalation

120. This principle was adopted. For the entries proposed by the expert from the United States of America, a differentiation between organic and inorganic substances did not seem to be necessary, but provision should be made for an additional entry for substances which were toxic, flammable and corrosive.

#### Principle of particulars in the transport document

121. The principle of identifying in the transport document that such substances were toxic on inhalation was adopted.

#### Principle of specific labelling

122. The principle of providing for a label other than the current label for division 6.1 was not adopted.

Lithium batteries

Document: ST/SG/AC.10/C.3/1997/83 (United States of America) Informal document: INF.15 (Germany)

123. Consideration of these documents was deferred to the next session.

#### Segregation of dangerous goods

Document: ST/SG/AC.10/C.3/1997/89 (United States of America) Informal document: INF.3 (Australia)

124. Certain experts considered that this proposal to introduce provisions concerning dangerous goods segregation was a good initiative. However, it was underlined that segregation provisions depended on the mode of transport and it was not necessarily justified to try to harmonize these provisions between the modes. This might be of interest for a given mode of transport or for segregation inside transport units such as containers during multimodal transport, but in that latter case, consideration of the most stringent provisions of the IMDG Code as applied on a substance by substance basis might be a difficult exercise.

125. The expert of the United States of America indicated that, since the UN Recommendations had been transformed into Model Regulations, it was important for the Regulations to provide guidance on segregation so that such segregation provisions could be used by developing countries for their own regulations.

Copper sulphate and copper sulphate solution

Documents: ST/SG/AC.10/C.3/1997/90 (Germany)

126. As this document had been circulated too late by the secretariat, its consideration was deferred to the next session.

#### Limited quantities

Document: ST/SG/AC.10/C.3/1997/93 (FEA/CEPE)

127. FEA requested that consideration of this document should be deferred to the next session.

# INCORPORATION OF PROVISIONS CONCERNING RADIOACTIVE MATERIAL IN THE MODEL REGULATIONS

Documents: ST/SG/AC.10/C.3/1997/33 (IAEA) ST/SG/AC.10/C.3/1997/66 (United States of America) ST/SG/AC.10/C.3/1997/94 (IMO) Informal documents: INF.7 (IMO) INF.30 (Italy)

128. In addition to the above documents, the expert from Germany and the representative of IAEA submitted written comments on document ST/SG/AC.10/C.3/1997/66.

129. The Sub-Committee welcomed the considerable work done by the expert from the United States of America in adapting the provisions contained in IAEA's Regulations for the Safe Transport of Radioactive Material (1996 edition, ST.1) to the format of the Model Regulations annexed to the United Nations Recommendations on the Transport of Dangerous Goods.

130. The representative of IAEA said that three objectives should be pursued in this work:

(a) Admission that the scope of the IAEA Regulations was broader than the present scope of the United Nations Recommendations but that the IAEA Regulations should be fully reflected in the Model Regulations;

(b) Identification of the best location for the IAEA requirements in the Model Regulations;

(c) Justification of any proposal to delete or amend texts taken from the IAEA Regulations.

131. The Sub-Committee adopted the principle of the rearrangement of the provisions contained in paragraph 3 (a) of the proposal by the United States of America (ST/SG/AC.10/C.3/1997/66). It also considered that it was not necessary to include the IAEA schedules in the Model Regulations since they were informative and duplicated provisions appearing elsewhere.

132. The Sub-Committee considered that relevant parts of paragraphs 101, 103, 104, 105 and 106 of the IAEA Regulations should be included in Part 1 and these paragraphs should be edited for application, where appropriate, to the carriage of all dangerous goods.

133. Similarly, some other provisions of the IAEA Regulations which did not currently appear in the Model Regulations could be made applicable to other dangerous goods; that should, however, be checked on a case-by-case basis.

134. The Sub-Committee accepted the principle that all definitions should be concentrated in Part 1 (1.2.1). Initially, however, priority would be given to defining terms which might have a different meaning in the carriage of radioactive material from their meaning in the carriage of other dangerous goods.

135. The expert from China considered that it was not necessary to define the terms "consignor" and "carrier". If the Sub-Committee decided to add some definitions for these general transport terms, it should strictly follow the definitions in the international private law conventions (e.g. the Hamburg Rules) which were applicable in international transport. He said that the definition of the term "vessel" did not correspond to that of other conventions.

136. Several delegations expressed the wish that the English term "consignor" should be used (as in the IAEA Regulations) rather than the term "shipper" which currently appeared in the United Nations Regulations.

137. The Sub-Committee decided not to exclude carriage by post from the scope of the Model Regulations. It was recalled that the Universal Postal Union Convention excluded all dangerous goods from carriage by post with the exception of substances of Division 6.2 and some radioactive substances, and that the Model Regulations should therefore be respected when such substances were carried by post. A general provision concerning postal carriage should be included in Part 1.

#### Transitional measures

138. The Sub-Committee considered that the transitional measures concerning packagings should appear in Chapter 6.4 and not in Part 1.

#### General provisions

139. The expert from Belgium proposed that the general provisions concerning Class 7 should be transferred to Part 7. This proposal was not accepted since these provisions concerned the complete transport chain and should appear in Part 1 rather than in a part which basically concerned the carrier.

#### Requirements concerning shipping, authorization of consignments and notifications

140. The expert from Belgium considered that these provisions should not appear in Part 5 because this part only concerned marking, labelling and documentation. It was pointed out that Part 5 was entitled "consignment procedures" and was therefore suitable for provisions which basically concerned the consignor. Paragraph 5.1.1.1 should be revised to take account of these new provisions.

#### Administrative procedures for approval (etc.)

141. The Sub-Committee agreed that the provisions contained in paragraphs 21 to 36 should be included in the Model Regulations.

#### Continuation of the work

142. IAEA would convene a group of experts to prepare a new proposal for the fifteenth session on the basis of the conclusions of the present session.

# GLOBAL HARMONIZATION OF SYSTEMS OF CLASSIFICATION AND LABELLING OF CHEMICALS

#### (a) General

<u>11th Consultation of the IOMC Coordinating Group for the Harmonization of Chemical</u> <u>Classification Systems (Ottawa, 24-26 November 1997)</u>

Informal documents:INF.37 (ILO), INF.9 (Draft summary of decisions and conclusions)INF.26 (United Kingdom) (Implementation mechanism)INF.28 (Secretariat) (Implementation of the status and mandate of the<br/>Committee of Experts on the Transport of Dangerous Goods and on the<br/>Implementation of its Recommendations)INF.29 (Secretariat) (Comments on the proposals for the implementation<br/>mechanism)

143. The representative of ILO reported on the outcome of the 11th Consultation of the IOMC Coordinating Group. He explained that proposals had been made by the United States of America and the United Kingdom for various options for developing a mechanism for the future implementation and up-dating of the Globally Harmonized System (GHS) (see INF.26). Amongst the options presented, the group had favoured two options (6(d) and 6 (e) in INF.26) which would both imply the development of a mechanism under the auspices of the United Nations Economic and Social Council. A working group would be hosted and chaired by the United Kingdom to develop practical terms of reference for these options, whilst keeping in mind other UN fora options.

144. The first ECOSOC option consisted in reconfiguring the existing Committee of Experts on the Transport of Dangerous Goods into a new Committee dealing with GHS and transport policy issues with two sub-committees; i.e. a sub-committee on harmonized classification and labelling (dealing with non-transport issues) and a sub-committee on the transport of dangerous goods (with the existing Sub-Committee's mandate except where there may be a need to avoid duplications of work).

145. The second ECOSOC option consisted in establishing a working group parallel to the Committee of Experts on the Transport of Dangerous Goods, to develop recommendations and maintain the GHS, reporting to ECOSOC and possibly hosted by the existing Committee.

146. The proposals by the United Kingdom and the United States of America contained detailed explanations on the advantages and disadvantages of each option, and it was assumed that, for both options, the total meeting time allocated would be that presently allocated to the Committee of Experts and the Sub-Committee.

147. The Sub-Committee noted that, after consultation of the Chairman and Vice-Chairman of the Committee on the options proposed, the secretariat had provided participants at the 11th Consultation with information on the activities of the Committee (INF.28) and comments on the ECOSOC options proposed (INF.29). The secretariat suggested that before choosing the best

option, it would be necessary to define precisely the terms of reference for this new body, and that it might be premature to propose to reconfigure the Committee of Experts. A solution could be to follow the example of the Group of Experts on Explosives when it was created in 1959 (ECOSOC Resolution 724 (XXVIII)). That group was, until 1970, independent from the Committee of Experts but was convened during sessions of the Committee so that its experts could also serve on the Committee of Experts as experts or advisers. Similarly, a group of experts on the harmonization of systems of classification and labelling of chemicals, independent from the Committee of Experts, but meeting during sessions or back to back sessions of the Committee/Sub-Committee so as to ensure strong links between the two bodies, could be established. That group could be required to ensure cooperation with the Committee but it could report directly to the Council.

148. The expert from Germany said that his Government preferred the option of a reconfigured Committee because of the political importance which was given to the harmonization of systems of classification and labelling of chemicals. The creation of a group of experts would not respond to the political demand in that field. He said that the new sub-committee should maintain the GHS, consider its implementation through the various systems and monitor this implementation. The new committee would deal with strategic and administrative matters, such as definition of programmes of work and allocation of meeting time to both sub-committees balancing their respective needs. He felt that the workload of the Committee of Experts on the Transport of Dangerous Goods would decrease in future and it would be possible to allocate more time to harmonization issues. He asked the secretariat to explain why the option of a parallel working group seemed preferable at this stage.

149. The expert of the United Kingdom said that the option of a reconfigured Committee of Experts on the Transport of Dangerous Goods was preferred by his Government for the reasons explained by the expert from Germany. He recalled that a working group would discuss again these options in the context of developing suitable terms of reference and the secretariat would be invited to participate in order to explain the potential implications of the various suggestions or options.

150. A member of the secretariat said that the secretariat had no preference for any option, but that the financial implications had to be borne in mind. The authors of the proposals had explained clearly that future work in that respect would have to be done within existing resources and that they wished to restrict the financial implications to a minimum. He said that the secretariat resources needed did not depend only on the number of meeting days; for the same number of meeting days, the resources needed are likely to increase significantly if the number of sessions increase, if the subjects addressed vary significantly, and if the number of experts involved increases globally. He said that he understood that the two options favoured for the time being were probably the most cost-effective, but he feared that the options could not be implemented with the resources presently allocated to the service of the Committee.

151. He recalled that the contribution of the Committee to the harmonization work in the area of physical hazards had resulted in additional workload for the secretariat, and that until now this workload had been shared by the ILO secretariat. According to the proposals, this effort would have to be pursued in the area of physical hazards without the help of the ILO secretariat, extended

to health hazards and hazard to the environment presently under the responsibility of OECD, and to hazard communication presently under the responsibility of ILO. The updating work would of course be less demanding than the development work, but the overall coordination responsibility would be transferred from ILO to the UN secretariat. Therefore, whatever option is retained, it should be borne in mind that it would result in additional workload for the secretariat. This was recognized in the proposal from the United Kingdom and the United States of America, but this additional workload would have to be assessed, for the short term and the long term, on the basis of precise terms of reference and proposed work programmes.

152. On the basis of the proposals as drafted, the secretariat felt that the option of a reconfigured committee, as presented, with three clear different entities with different mandates and representatives, could lead to a multiplication of meetings (for a same overall meeting time during a biennium) and additional costs compared with the option of an independent working group that would meet as the UN/ILO working group did during Sub-Committee sessions where it might be easier for Governments to provide voluntary contributions as proposed. This view would of course have to be reassessed when the terms of references and organizational aspects are better defined.

153. The expert from the United States of America said that he fully shared the views of the secretariat. He considered that GHS issues and transport of dangerous goods issues were different and they concerned experts from different sectors, and he wondered whether a reconfigured committee, composed of experts from so many sectors, would be the appropriate body to endorse the work of the Sub-Committee of Experts on the Transport of Dangerous Goods.

154. The expert from Italy considered that the option proposed by the secretariat ensured the autonomy of the existing Committee of Experts on the Transport of Dangerous Goods and guaranteed a close cooperation between the GHS group and the Sub-Committee.

155. The representative of OECD said that his organization would recommend to its Member States to support the ECOSOC options, but that his organization would be frustrated if it did not keep certain responsibilities in the area of health hazards and hazards to the environment.

156. The Chairman underlined that these new developments were likely to modify the existing role, functions and working methods of the Committee of Experts on the Transport of Dangerous Goods and its Sub-Committee, and he wondered whether the Sub-Committee should express a position on these issues at this stage.

157. Several experts mentioned that they had just been made aware of these developments through informal documents and they wished to discuss these matters internally at national level. It was therefore decided not to seek any position from the Sub-Committee at this time.

158. The Sub-Committee noted that ILO will establish a working group on the harmonization of labelling and hazard communication systems.

#### (b) Physical hazards

159. This sub-item was discussed at working group level by the Joint UN/ILO Working Group on harmonized classification systems (see annex 4, reproduced as addendum 3 to this report).

# (c) Health hazards and (d) Hazards to the environment

Informal documents: INF.48 (OECD), INF.9 (Netherlands), INF.35 (CEFIC)

160. The representative of OECD informed the Sub-Committee of the progress made by his organization in the area of classification criteria related to health hazards and hazards to the environment, and of the work plan of the programme related to these criteria.

161. The Sub-Committee noted in particular that OECD had considered, for toxicity criteria, proposals to introduce a new concept of proportionality based on the idea that the internal concentration/dose leading to a systematic effect is related to the external concentration/dose applied by a certain route of exposure. This solution differed fundamentally from the consensus reached until now.

162. The representative of CEFIC considered that this new concept, leading to a correlation between the cut-off limits for the three modes of exposure would contribute to a more scientifically based scheme.

163. The expert from the United Kingdom acknowledged that this new concept might be scientifically sound, but he recalled that harmonization had to be based on existing systems and underlined that this new concept would have important downstream consequences on existing regulations.

164. The expert from the United States of America did not feel that the proportionality concept was ideal because existing criteria took risk (exposure routes) into account and therefore the values for each route should not be necessarily proportional.

165. The Sub-Committee in general shared the view that OECD should not introduce new concepts, especially when they would imply important changes to existing regulatory systems, and that it should adhere to the consensus previously reached and try to solve the four pending issues.

166. The representative of OECD said that several OECD delegations were not in favour of the proportionality concept and that concept would probably have to be readdressed. The next discussion on this subject would take place in Paris (6th session of the OECD Advisory Group on Harmonization of Classification and Labelling Systems, Paris, 2-6 February 1998), and he wished that the Sub-Committee would be represented by several experts.

167. For hazards to the environment, several experts regretted that OECD had revised its first approach (which took reasonable account of the needs of transport regulations), to take account of chronic toxicity for defining the high hazard levels. It was felt that chronic toxicity could be an appropriate criterion in the case of carriage in bulk or of release of large amounts of products, but

that it was not appropriate for transport in smaller amounts up to and including the size of tankcontainers. The system of classification would differ significantly from existing ones and would become much more complicated and difficult to apply through transport regulations where selfclassification has to remain possible for reasons of practicality.

Classification criteria for mixtures

Informal document: INF.47 (OECD)

168. The representative of OECD informed the Sub-Committee of the plans of his organization for the harmonization of classification criteria for mixtures, in particular that the OECD had noted that the ILO/UN Working Group had dealt with physical hazard of mixtures and that OECD would not duplicate work and would refer back to the focal point if additional work was deemed necessary.

169. On a question by the representative of OECD, the Sub-Committee confirmed that the classification criteria developed for physical hazards concerned not only liquids, solids, mixtures and solutions but also hazardous wastes.

170. The Sub-Committee also recalled that the transport regulations contain specific provisions for the classification of mixtures, solutions and hazardous wastes for all kinds of hazards, and that these provisions should be taken into account by OECD as part of existing international systems. It was also recalled that in the case of wastes, Annex III of the Basel Convention refers specifically to the hazard classification system of the United Nations Recommendations on the Transport of Dangerous Goods.

#### **RELATIONS WITH OTHER ORGANIZATIONS**

#### **Relations with ISO**

Informal document: INF.12 (ISO)

171. The Sub-Committee was informed of the progress made on the work carried out by the Technical Committee ISO/TC 58 Gas cylinders.

#### **OTHER BUSINESS**

Informal document: INF.45 (Japan)

172. The expert from Japan informed the Sub-Committee that the Japanese Ministry of Transport started issuing classification certificates for explosives to be carried by sea as from September 1997. The certificate is issued to manufacturers or consignors on the basis of applications supported by a test report issued by the authorized association (Nippon Kaiji Kentei Kyokai).

Thirteen International Symposium on the Transport of Dangerous Goods by Sea and Inland Waterways (ISTDG 13)

Document : ST/SG/AC.10/C.3/1997/46 (Secretariat)

173. The Sub-Committee was informed that ISTDG 13 should be held in Seoul, Republic of Korea, in the autumn of 1998.

174. The Sub-Committee took note of information papers 4 (Division 6.2 - Diagnostic specimens, blood products and chemical, bio-medical and regulated medical waste) (HMAC), 27 (Joint OECD/PIARC ERS 2 project on transport of dangerous goods in road tunnels - grouping of dangerous goods loadings to be used in harmonized tunnel regulations) (United Kingdom) and 40 (Tests 1(b), 2(b), E.1- calibration of the heating rate) (CEFIC); the experts were invited to provide their comments to the authors.

#### Distribution of documents

175. Referring to paragraph 15 of this report, the expert from the United Kingdom asked, at the end of the session, whether a member of the Conference Services Division would address the session with respect to the late receipt of documents. A member of the secretariat said that he had been informed that the problem did not concern only this Sub-Committee, that the matter was still under investigation and that the Conference Services Division preferred to wait for a global analysis of the problem before providing explanations.

176. The Sub-Committee regretted that situation and requested the secretariat to convey its concerns to the Conference Services Division.

#### Arrangements for the next session

177. The Sub-Committee agreed that the work programme for the next session would be as follows:

First week (29 June-4 July 1998):	Tanks (with working group) Draft amendment to the Model Regulations Class 7 provision Packing instructions
Second week (6-10 July 1998):	Class 1 issues Global harmonization issues

The length of the session during the second week will be determined by the secretariat depending on the proposals received.

178. The following documents were carried forward to the next session:

ST/SG/AC.10/C.3/1997/27, -/C.3/1997/37, -/C.3/1997/43, -/C.3/1997/53 and -/Corr.1; -/C.3/1997/80, -/C.3/1997/83, -/C.3/1997/89, -/C.3/1997/90, -/C.3/1997/91, -/C.3/1997/93; ST/SG/AC.10/C.3/R.635, -/C.3/R.661, -/C.3/R.664, -/C.3/R.707, -/C.3/R.708, -/C.3/R.764 ST/SG/AC.10/R.473, -/R.509 INF.15, INF.19, INF.20, INF.21, INF.33

# **ADOPTION OF THE REPORT**

179. The Sub-Committee adopted the report on its fourteenth session and the annexes thereto.

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ST/SG/AC.10/C.3/28 page 29 Annex 1

#### Annex 1

#### Draft amendments to portable tank provisions on the basis of the rationalized approach (Refer to paragraphs 22 and 23 of this report)

#### 1. Draft amendments to Chapter 4.2

#### Chapter 4.2

# Paragraph

- 4.2.1.1 Replace "(T1-T34)" with "(T1-T20)" in the fifth line.
- 4.2.1.13.15 Replace "T34" with "T20".
- 4.2.4.2.2 Replace "(T1-T34)" with "(T1-T20)" in the first line and "T34" with "T20" in the third line.
- 4.2.4.2.5 Replace the existing table with the following:

Portable tank instruction specified	Portable tank instructions also permitted
T1	T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T15, T16
T2	T4, T5, T6, T7, T8, T9, T10, T11, T15, T16
Т3	T4, T5, T6, T7, T8, T9, T10, T11, T15, T16
T4	T5, T6, T7, T8, T9, T10, T11, T15, T16
T5	T8, T11, T16
Т6	T7, T8, T9, T10, T11, T15, T16
Τ7	T8, T11, T15, T16
Т8	T11, T15, T16
Т9	T10, T11, T15, T16
T10	T11, T16
T11	T16
T15	T16
T16	None
T20	None

# 4.2.4.2.6 Replace the table for T1-T33 with the following:

T1 - T16	PO	ORTABLE TANK INST	RUCTIONS	T1 -T16		
These portable tank instructions apply to liquid and solid substances of Classes 3 to 9. The general provisions of section 4.2.1 and the requirements of section 6.6.2 shall be met.						
Portable tank instructio n	Minimum test pressure (bar)	Minimum shell thickness (in mm- reference steel) (see 6.2.4)	Bottom opening requirements (see 6.6.2.6)	Pressure-relief requirements (see 6.6.2.8)		
T1	1.5	See 6.6.2.4.2	See 6.6.2.6.2	Normal		
T2	1.5	See 6.6.2.4.2	See 6.6.2.6.3	Normal		
T3	2.65	See 6.6.2.4.2	See 6.6.2.6.2	Normal		
T4	2.65	See 6.6.2.4.2	See 6.6.2.6.3	Normal		
T5	2.65	See 6.6.2.4.2	Not Allowed	See 6.6.2.8.3		
T6	4	See 6.6.2.4.2	See 6.6.2.6.3	Normal		
T7	4	6mm	Not allowed	Normal		
Т8	4	6mm	Not allowed	See 6.6.2.8.3		
Т9	6	See 6.6.2.4.2	See 6.6.2.6.3	Normal		
T10	6	See 6.6.2.4.2	See 6.6.2.6.3	See 6.6.2.8.3		
T11	6	6mm	Not allowed	See 6.6.2.8.3		
T15	10	10mm	Not allowed	Normal		
T16	10	10mm	Not allowed	See 6.6.2.8.3		

In the table for T34, replace "T34" with "T20".

4.2.4.3 Delete the following portable tank special provisions: TP 11, TP14 and TP15.

ST/SG/AC.10/C.3/28 page 31 Annex 1

2. Draft amendments to Chapter 3.2

Document ST/SG/AC.10/C.3/1997/88/Add.1 should be considered at the fifteenth session of the Sub-Committee, subject to the following modifications:

- (a) Replace "T9" by "T11" in column "RAT.APP.CODE" for the entries UN 2749, UN 1093, UN 1921, UN 1991, UN 1992, UN 2733, UN 2924, UN 2983, UN 3273 and UN 3286 (packing group I only).
- (b) Replace "T2 [T1?]" by "T1" in column "RAT.APP.CODE" for the entry UN 1325 (twice).
- (c) Replace "T4 [T3?]" by "T3" in column "RAT.APP.CODE" for the entries UN 2304, UN 2448, UN 3176.
- (d) Replace "[T15?]" by "T15" in column "RAT.APP.CODE" for the entry UN 3207 (twice).

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ST/SG/AC.10/C.3/28 page 32 Annexes 2/3/4

#### Annex 2

Draft amendments to the Model Regulations annexed to the Recommendations on the Transport of Dangerous Goods and to the Manual of Tests and Criteria (see ST/SG/AC.10/C.3/28/Add.1)

#### Annex 3

Report of the Working Group on tanks for non-refrigerated gases with a critical temperature below 65 °C (see ST/SG/AC.10/C.3/28/Add.2)

#### Annex 4

Report of the UN/ILO Working Group on the harmonization of classification criteria for physical hazards (see ST/SG/AC.10/C.3/28/Add.3)