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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 NINETEENTH SESSION**

**(Geneva, 2-6 July 2001)**

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## REPORT

### ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its nineteenth session from 2 to 6 July 2001 with Mr. S. Benassai (Italy) as Chairman and Mr. F. Wybenga (United States of America) as Vice-Chairman.
2. Experts from the following countries took part in the session: Argentina; Australia; Austria; Belgium; Brazil; Canada; China; Czech Republic; Finland; France; Germany; Iran (Republic Islamic of) Italy; Japan; Mexico; Netherlands; Norway; Poland; 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: Bahamas; Bulgaria; Portugal; Switzerland; Tunisia.
4. Representatives the United Nations Environment Programme (UNEP) and of the following specialized agencies were present: International Civil Aviation Organization (ICAO); International Labour Office (ILO); International Maritime Organization (IMO); World Health Organization (WHO); International Atomic Energy Agency (IAEA).
5. The following intergovernmental organizations were 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: Consumer Specialty Products Association (CSPA); International Air Transport Association (IATA); European Industrial Gases Association (EIGA); European Cylinder Makers Association (ECMA); Federation of European Aerosol Associations (FEA); International Federation of Freight Forwarders Associations (FIATA); Hazardous Materials Advisory Council (HMAC); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Plastics Packaging Manufacturers (ICCP); International Council of Chemical Associations (ICCA); International Organization for Standardization (ISO); European Secretariat of Manufacturers of Light Metal Packagings (SEFEL); International Union of Railways (UIC); International Road Transport Union (IRU); World Nuclear Transport Institute (WNTI).
7. The Director of the Transport Division of the Economic Commission for Europe, Mr. José Capel Ferrer, informed participants that the additional resources allocated to the Division in 2001 for activities relating to the reconfiguration of the Committee and the establishment of a new Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals had not permitted recruitment on a full-time basis to the P4 and GS posts which had been requested. As a result, although the resources allocated had enabled additional staff to be provided on a temporary basis, the Secretary of the Committee was obliged to take on personally in 2001 the duties of Secretary of the GHS Sub-Committee, resulting in some disruption and delay to normal work on the transport of dangerous goods.
8. Where the forecasts of the ECE budget for the 2002-2003 biennium were concerned, he said that provision had been made only for the P4 post and for 2002 only. The resources required for activities relating to the reconfiguration should therefore be reassessed by the Committee at the end of 2002, and the Secretary-General's report on the activities of the reconfigured Committee in 2001-2002 and its programme of work for 2003-2004, should, if appropriate, be submitted to the Council in 2003, subject to the adoption of budgetary provisions, possibly with immediate consequences in 2003 if it was necessary to await a decision from the Council and then from the General Assembly in this regard.

9. He said that the Transport Division would spare no effort to remedy the situation within the limits of the resources available, but he invited government delegations to reflect on the issue with the representatives of their permanent missions. He also invited the representatives of non-governmental organizations to reflect on possibilities of providing the secretariat with extra-budgetary support.

10. The Sub-Committee noted that it had three new members whose candidatures had been approved by the Economic and Social Council: Austria, Finland and the Islamic Republic of Iran.

11. The observer from Switzerland invited delegations spending the weekend in Geneva in order to attend the first session of the GHS Sub-Committee scheduled from 9 to 11 July to take part in an excursion to Epesses (INF.8).

#### **ADOPTION OF THE AGENDA**

Documents: ST/SG/AC.10/C.3/37 and Add.1

12. The Sub-Committee adopted the provisional agenda prepared by the secretariat, once it had been amended to include late submissions (see informal documents INF.1 and INF.2).

13. Document ST/SG/AC.10/C.3/2000/30 (CGA) was withdrawn from the agenda.

#### **ADDITIONAL PROVISIONS FOR THE TRANSPORT OF GASES**

14. The Working Group on the Transport of Gases (Working Group on Pressure Receptacle and Multiple Element Gas Containers) which had been scheduled to be convened in parallel was cancelled due to the lack of a sufficient number of proposals prepared in time.

<u>Documents:</u>	ST/SG/AC.10/27, paras. 13-21 and annex 1	Report of the Committee on its twenty-first session
	ST/SG/AC.10/C.3/34, paras. 13-17 and annex 1	Report of the Sub-Committee on its seventeenth session
	ST/SG/AC.10/C.3/34/Add.1	
	ST/SG/AC.10/C.3/36, paras. 10-17 and annex 1	Report of the Sub-Committee on its eighteenth session
	ST/SG/AC.10/2000/22 (EIGA)	
	ST/SG/AC.10/C.3/2001/31 (United States of America)	

15. The Sub-Committee agreed that the Working Group on the transport of gases should be convened at the next session to consider, on the basis of the reports of the Sub-Committee and the document submitted by EIGA, the questions raised in the annex to document ST/SG/AC.10/C.3/2001/31 and questions pending which had not been resolved during the previous biennium.

Informal documents: INF.13 and Add.1-3 (ISO)  
INF.39 (ISO)

16. The Sub-Committee took note of the information supplied by the representative of ISO, particularly with reference to the programmes of work of the technical committees TC 58 (Gas receptacles), TC 197 (Hydrogen technologies) and TC 220 (Cryogenic receptacles). The work plans of the various ISO committees could be consulted on the Web site <http://isotc.iso.ch/livelink/livelink/>.

### **Labelling in accordance with ISO standard 7225:1994**

Document: ST/SG/AC.10/C.3/2001/1 (Austria)

Informal document: INF.24 (EIGA)

17. The Sub-Committee adopted amendments to 5.2.2.1.6 and 5.2.2.2.1.2 on the basis of the proposal by Austria and the comments by EIGA with some changes (see annex 1).

18. The Sub-Committee also noted that standard ISO 7225:1994 no longer reflected the labelling provisions of the Model Regulations and it would not be possible to continue referring to it unless it was amended accordingly.

### **Proper shipping name for butadiene and hydrocarbon mixtures**

Document: ST/SG/AC.10/C.3/2001/32 (United States of America)

19. The proposal to amend the proper shipping name of UN No. 1010 was adopted (see annex 1).

### **Description of item UN No. 2857**

Informal document: INF.6 (United States of America)

20. The proposal to amend the description was adopted with drafting changes (see annex 1).

### **TANKS**

#### **Calculation of the outflow capacity of pressure-relief devices**

Document: ST/SG/AC.10/C.3/2001/3 (Spain)

Informal document: INF.40 (Spain)

21. The expert from Spain was invited to submit a new proposal bearing in mind the comments made by various delegations.

#### **Real outflow capacity of combined safety valves/bursting discs**

Document: ST/SG/AC.10/C.3/2001/4

22. After a discussion on the proposal for an addition to 6.7.2.12.2 in order to take account of the reduction in through diameter when the bursting disc was not completely fragmented, the expert from Spain withdrew his proposal and said that he would submit a new proposal for the next session.

#### **Inspection of approved portable tanks more than 30 years old**

Document: ST/SG/AC.10/C.3/2001/5 (Spain)

23. Several experts considered, like the expert from Spain, that it would be advisable to make provision for safety conditions for portable tanks which had been approved more than 30 years previously. Some experts considered, however, that measures of this nature should be included in the modal regulations and that it was not appropriate to introduce them into the Model Regulations because the provisions of Chapter 6.7 were new and only concerned new portable tanks which did not yet exist on the market.

24. The proposal by Spain was put to the vote, but was not adopted.

### **Tank minimum capacity threshold**

Document: ST/SG/AC.10/C.3/2001/18 (United Kingdom)

Informal document: INF.22 (EIGA)

25. The Sub-Committee agreed that provision should be made for the possibility of transport in tanks of less than 450 litres, for example, for liquids of packing group I which were not authorized for carriage in IBCs and for which the maximum quantity per packaging was 250 litres.

26. Some delegations considered that the details of the proposal should be refined so as to include the requirement of a number of performance tests, as for packagings, and the consideration of the question of labelling or placarding, etc.

27. At the request of the expert from the United Kingdom, the proposal, as amended by EIGA, was put to the vote and adopted (see annex 1).

### **Portable tank instruction T99**

Document: ST/SG/AC.10/C.3/2001/19 (United Kingdom)

28. Opinions were divided on this proposal. Some experts considered that there was no reason to authorize tanks which were completely different from those for which the Model Regulations provided, others that the substances to which provision T99 would apply should be listed, and others still that it would be more appropriate to apply the rational approach of assigning tank codes to substances to fill present gaps in this regard.

29. The experts from Belgium and France requested that a separate vote should be taken on the various parts of the proposal. Since the votes showed that there was no support for the actual principle of the proposal, the expert from the United Kingdom withdrew it.

### **Miscellaneous proposals**

Document: ST/SG/AC.10/C.3/2001/30 (United States of America)

Informal documents: INF.32 (United States of America)  
INF.23 (EIGA)

30. Several of the proposals contained in document ST/SG/AC.10/C.3/2001/30 were adopted, in some instances with a number of amendments (see annex 1).

31. For the proposals concerning special instructions TP10 and TP23, the expert from the United States said that he would submit a new document at the next session, taking the various comments into account.

32. With reference to the proposal concerning the interpretation of “quick-closing” in 6.7.3.5.4, it was specified that the term came from a UIC standard and should be taken to mean an extremely rapid closure of around one-tenth of a second, or at most between one and two seconds.

33. Several delegations considered that the proposal contained in document INF.32 had been submitted too late and did not contain sufficient justification, particularly with regard to its application to certain classes of goods.

34. The expert from the United States of America said that he would submit a new proposal at the next session.

## **TRANSPORT OF SOLID SUBSTANCES IN BULK IN CONTAINERS**

Documents: ST/SG/AC.10/C.3/2001/20 (United Kingdom and Germany)

Informal documents: INF.25 (United Kingdom)  
INF.33 (United States of America)

35. The Sub-Committee confirmed that the document prepared jointly by the United Kingdom and Germany furnished a good basis for preparing proposals on the multimodal carriage of dangerous goods in bulk in containers.

36. Since some experts had expressed reservations on certain aspects of this document, particularly the type of substances which could be authorized, certain conditions of carriage and the application of these provisions to carriage by sea, it was decided to entrust consideration of the documents to an ad hoc working group that would provide comments to the experts from the United Kingdom and from Germany so that they could prepare a revised proposal for the next session. Delegates were also requested to provide these written comments intersessionally.

## **PACKAGINGS (including IBCs and large packagings)**

### **Tests for packagings**

Document: ST/SG/AC.10/C.3/2001/24 (ISO)

Informal documents: INF.9 (Canada)  
INF.31 (United States of America)

37. The first proposal, concerning paragraph 6.1.5.2.1, was adopted with some amendments (see annex 1).

38. In the case of the second proposal, which was to impose a delay of 24 hours between filling and the drop test in order to take account of possible gasket relaxation, some experts considered that it would be advisable initially to submit technical data or accident statistics in order to justify a proposal which had considerable consequences for test costs.

39. The representative of ISO said that the experience of the test laboratories was that there was a real safety problem and that test practices should be harmonized to take account of the phenomenon of gasket relaxation.

40. The proposal was put to the vote and adopted.

41. The third proposal concerning 6.1.5.3.4 was adopted on the basis of the text proposed by the United States of America in document INF.31 (see annex 1).

42. The fourth proposal concerning the cooperation test (6.1.5.7) was adopted.

43. Although opinions were divided on the other points brought to the Sub-Committee's attention by ISO, the Sub-Committee took the following decisions:

- (a) Paragraph 6.1.5.1.9 should not be deleted;
- (b) The proposal to amend 6.1.5.3.4 was adopted (see annex 1);



(c) The question of tests for partially filled packagings could be opened for discussion, but at a more intensive level and based on specific proposals and fuller information on the use of such packagings.

44. The expert from the United States of America had expressed his concern about the work of CEN and ISO on the preparation of a standard EN/ISO 16 104 in informal document INF.31. He feared a duplication of the respective roles of ISO and the Sub-Committee, divergences between the standard and Chapter 6.1 and updating difficulties in the future. The expert from Canada expressed similar concerns in informal document INF.9.

45. Several delegations said that it would only be possible to use the standard if it met the requirements of the Model Regulations and if it evolved as the Regulations evolved.

### **Drop test**

Document: ST/SG/AC.10/C.3/2001/27 (United States of America)

46. The proposal to revise paragraph 6.1.5.2.5.2 was adopted after it had been amended (see annex 1).

### **Standards for steel drums**

Document: ST/SG/AC.10/C.3/2001/7 (ICDM/ICCR)

47. On considering the proposal by ICDM/ICCR, the Sub-Committee agreed to add a note to 6.1.4.1.1 specifying that carbon steels meeting ISO standards 3573:1999 and 3574:1999 were considered appropriate.

48. The Sub-Committee decided to come back to the proposal contained in INF.10 at the next session on the basis of a new document which SEFEL was invited to prepare.

### **Packing instruction P601**

Document: ST/SG/AC.10/C.3/2001/16

49. The Sub-Committee adopted the addition of a special provision specifying that glass inner packagings with a capacity of not more than 1.3 litres could be used in an outer packaging with a maximum gross mass of 25 kg for bromine (UN No. 1744).

50. An oral proposal by the expert from Germany, supported by the expert from Belgium, to increase the maximum capacity of the inner packaging to 2.5 litres was not adopted.

51. The proposal to assign packing instruction P602 (instead of P601) to UN No. 1605 (ethylene dibromide) was adopted.

### **Special packing provision for magnesium/iron/polyethylene powder (UN No. 2813, packing instruction P403)**

Document: ST/SG/AC.10/C.3/2001/17 (United Kingdom)

52. The proposal was adopted in principle, subject to revision of the text at the next session for more general application. The expert from the United Kingdom would prepare a new text.

### **Definition for combination packagings**

Document: ST/SG/AC.10/C.3/2001/26 (United States of America)

53. The proposal was withdrawn by the expert from the United States of America.

### **Packing instructions for IBCs**

Document: ST/SG/AC.10/C.3/2001/28 (United States of America)

54. The proposal to authorize fibreboard IBCs for solid substances under instruction IBC 07 (Division 4.3; Division 6.1, packing group I; Class 8, packing group I) was not adopted.

### **Maximum capacity and net mass for packagings**

Document: ST/SG/AC.10/C.3/2001/29 (United States of America)

55. Opinions were divided on the need to amend 6.1.1.1 in order to clarify the limits of maximum capacity and net mass as from which the provisions of Chapter 6.1 would no longer apply.

56. Some experts pointed out that merely to establish a capacity limit of 450 litres for single packagings for liquids would make it possible to use packagings with a net mass of well over 400 kg depending on the density of the liquid. On the other hand, it was noted that a 400 kg mass limit might preclude the use of standard 220 litres drums for liquids with relative densities higher than 1.8.

57. The expert from the United States of America said that he would submit a new proposal for the next session.

### **Use of the W marking**

Informal document: INF.17 (United Kingdom)

58. The Sub-Committee agreed to amend paragraph 4.1.3.5 in order clearly to reflect the fact that the W marking could be used for all packagings as provided in 6.1.1.2 and not only for combination packagings (see annex 1).

## **TRANSPORT OF INFECTIOUS SUBSTANCES**

### **Consignment of infectious substances**

Informal document: INF.3 (Australia)

59. The expert from Australia amended her original proposal to request the deletion of section 5.5.1.2, the provisions of which, in her opinion, could not be complied with in practice. This proposal was supported by the experts from Canada and the United States of America and the representative of ICAO.

60. It was pointed out that it was difficult to take a decision on an informal document to which substantive amendments had been made orally. The provisions of 5.5.1.2 did not concern transport documents in particular but rather arrangements between consignors, carriers and consignees to ensure the follow-up of consignments and compliance with rules concerning inspection and import or export permits in accordance with WHO requirements for the protection of public health.

61. The expert from Australia was requested to submit an official proposal to the next session if she wished to maintain this proposal.

## **Plant pathogens**

Informal document: INF.4 (Australia)

62. The Sub-Committee took note of the suggestion by the expert from Australia to include plant pathogens in Division 6.2 and invited her to submit a proposal at the next session.

63. The expert from the United Kingdom suggested that invertebrates and nematodes should be included.

## **Revision of provisions relating to Division 6.2**

Informal document: INF.11 (Canada)

64. The Sub-Committee took note of the report of the expert from Canada on the problems mentioned in the discussions on Division 6.2, and invited all the experts to cooperate with the expert from Canada so that work could advance.

## **Genetically modified organisms**

Informal document: INF.20 (Secretariat)

65. The Sub-Committee took note of the work done by the Conference of the Parties to the Convention on Biological Diversity in the context of the implementation of Article 18 of the Cartagena Protocol on Biosafety (Article 18: Handling, transport, packaging and identification).

66. In this context, the Sub-Committee was informed that a meeting of experts had been held in Paris from 13 to 15 June 2001 to consider how to reply to the requirements of paragraphs 18.2 (b) and 18.2 (c) of the Protocol regarding the documentation accompanying consignments of living modified organisms, in view of the main systems of regulations or directives currently governing their international carriage. The meeting of experts had recommended in particular that the Sub-Committee should be invited to give its opinion on its capacity to adjust - if necessary - the Model Regulations on the Transport of Dangerous Goods (Division 6.2 and Class 9), to help the Parties to the Protocol to meet the obligations stemming from the paragraphs in question.

67. The expert from Australia said that there was no reason to apply the Model Regulations to living modified organisms which were not dangerous when carried. She thought that the texts of the Model Regulations currently applicable to UN No. 3245 were not adequate.

68. Other experts considered that the provisions of present paragraph 2.6.3.1.4 did not permit all the cases arising in practice to be settled satisfactorily. It would be difficult to improve the situation, however, unless there were accurate criteria which would enable micro-organisms and genetically modified organisms to be classified according to their nature and the danger they represented during carriage, to people, animals or the environment. More appropriate conditions of carriage could be developed if the Conference of the Parties defined clearly the organisms which were to be the subject of transport regulations.

69. The expert from the United Kingdom expressed the hope that rules applicable to the transport of genetically modified organisms considered to be dangerous would not be dispersed among various sets of regulations since that would prejudice their effective implementation.

70. The Chairman invited the expert from Canada to continue in her role as leader in that regard, in accordance with the mandate entrusted to her by the Committee (ST/SG/AC.10/27, para. 149). All the experts were invited to reflect on these matters and to correspond with the expert from Canada. The expert

from the United States of America offered to cooperate with the expert from Canada in this area with respect to genetically modified microorganisms.

## **LISTING AND CLASSIFICATION**

### **Correct assignment of UN numbers to substances and solutions with respect to physical state (liquid or solid)**

Document: ST/SG/AC.10/C.3/2001/14 (Netherlands and Germany)

71. The observer from the Bahamas, as a former Chairman of the Committee, noted that the problems discussed in document ST/SG/AC.10/C.3/2001/14 had persisted for more than 20 years and would continue to recur regularly if not tackled now. The document reviewed the issues comprehensively and provided the opportunity to resolve them once and for all during the current biennium.

72. The Sub-Committee decided unanimously to adopt option A1 concerning solids and solutions, namely, that a separate UN number should be assigned to them, on the understanding, however, that a UN number would only be attributed to solutions if they were carried in significant quantities. However, the implications for individual substances should be taken on a case by case basis.

73. The Sub-Committee also adopted the same option (B1) for a separate number for entries currently covering both liquids and solids.

74. The experts from Germany and the Netherlands would prepare a new document for the next session with the substantive amendments to the list of dangerous goods.

75. Meanwhile, the experts were invited to check entries for which a separate UN number would be justified for solutions, and to consider the inconsistencies mentioned in annex 3 to the document. Comments should be sent in writing to the experts from the Netherlands and Germany intersessionally.

### **Classification of substances hazardous for the aquatic environment**

Documents: ST/SG/AC.10/C.3/2001/15 (Belgium)  
ST/SG/AC.10/2000/4 (Germany)  
ST/SG/AC.10/C.3/2000/4 (Argentina)

Informal document: INF.7 (United Kingdom)

76. After an exchange of views on the various documents, the Sub-Committee considered that it would be preferable to work on the basis of a single document. Since OECD's work on mixtures had been completed, the Sub-Committee invited the expert from the United Kingdom to submit a new proposal based on INF.7 but taking pure substances and mixtures into account.

77. Experts wishing to differ from the approach presented by the United Kingdom, which reflected the decisions taken to date by the Sub-Committee, should submit proposals for amendments to the basic proposal.

78. The expert from Argentina informed the Sub-Committee that, taking into account comments received by the expert from Germany, a revised proposal would be submitted for the next session.

**Special provision 279 for UN No. 1548, aniline hydrochloride**

Document: ST/SG/AC.10/C.3/2001/21 (Germany)

79. The expert from Germany was requested to justify his proposal by providing the data at his disposal. The proposal was postponed until the next session.

**Calcium hypochlorite in tablet form**

Document: ST/SG/AC.10/C.3/2001/25 (South Africa)

80. The expert from South Africa said that she would prepare, together with the expert from Germany, a revised proposal for the next session.

**Criteria for the corrosiveness of liquids and solids belonging to Class 8, packing group III, for steel and aluminium**

Document: ST/SG/AC.10/C.3/2000/24 (Germany)

81. This document remains on the agenda for the next session, and the expert from Germany will provide additional documentation.

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

**Classification of ammonium nitrate emulsions, suspensions and gels**

Documents: ST/SG/AC.10/C.3/2001/6 (Report of the informal working group)  
ST/SG/AC.10/C.3/2001/23 (Sweden)

Informal documents: INF.5 (Norway)  
INF.28, INF.30 (United States of America)  
INF.19 and INF.19/Corr.1 (Canada, France, Germany and United Kingdom)  
INF.36 and INF.37 (Sweden)

82. The set of documents was submitted for preliminary consideration to an ad hoc working group which presented its conclusions in informal document INF.44. The conditions were adopted by the Sub-Committee as follows:

- Deletion of special provision 306 for UN No. 3375, replaced by new provision 309;
- Packing instruction P099 was kept and instruction P505 was not adopted;
- The question of carriage in IBCs and tanks required consideration in greater depth. The United States would prepare provisions for July 2002;
- Table 10.4 was adopted, but the text referring to test series 8 (d) was put in square brackets;
- Test series 8 (a), 8 (b) and 8 (c) were adopted, but test series 8 (d) still needed to be discussed;
- The proposal by Sweden for a special entry 1.5D was not adopted (1.5D entries which could be used for emulsions already existed);
- The proposal by Sweden to authorize the carriage of 1.5D emulsions in tanks was not adopted.

The adopted texts are reproduced in annexes 1 and 2.

83. The Working Group advised the Sub-Committee that discussions on authorizing the transport of 1.5D explosives in tanks should be considered in the future work programme since such transport are carried out around the world.

**UN No. 3242 - Amendment to special provision 215**

Document: ST/SG/AC.10/C.3/2001/2 (ICCA)

Informal document: INF.15 (ICCA)

84. The proposal by ICCA was adopted with amendments (see annex 1).

**Classification criteria for fireworks**

Document: ST/SG/AC.10/C.3/2001/13 (Netherlands)

Informal document: INF.19 (United States of America)  
INF.38 (Germany)

85. Several experts recalled that the accidents and other problems due to fireworks did not call in question the validity of the present classification system which was appropriate. They were due to failure to comply with classification rules, something which as often as not was deliberate in order to save considerable expenditure on tests or additional costs relating to conditions of carriage, or because some shipping companies did not accept goods classified in the most dangerous divisions.

86. It was suggested that the most pragmatic means of avoiding such accidents would be to organize seminars in which the competent authorities could exchange information on means of applying the regulations more efficiently and of carrying out enforcement checks.

87. The expert from Australia said that the competent authorities did not always have the necessary means for effective enforcement of the regulations; she suggested that the problem should be brought to the attention of the Economic and Social Council so that it could recommend that all States should provide themselves with such means.

88. Several experts supported the proposal by the Netherlands to establish a classification of fireworks by default. It was, however, noted that such systems existed in various States and that they were established to meet the needs of various regulations (transport, storage, use, etc.). It should be ensured that a classification system by default was based on the classification criteria of the Manual of Tests and Criteria. It would also be advisable to compare the results of tests in countries which had carried them out.

89. Although several experts would have liked these questions to be discussed in sessions of the Sub-Committee, the Sub-Committee finally accepted the offer of the Netherlands to convene an informal working group which would meet in The Hague from 16 to 18 October 2001 to prepare proposals in accordance with the following mandate:

- (a) basic agreement on the interpretation of the test results of test series 6 (a), 6 (b) and 6 (c);
- (b) development of a classification system by default based on existing systems and proposals on how such a system could be introduced into the Recommendations.

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

Informal document: INF.14 (IAEA)

90. The Sub-Committee took note of the status report presented by IAEA on the revision of the IAEA Regulations for the Safe Transport of Radioactive Material. The Sub-Committee also noted that additional changes would be discussed by the IAEA Revision Panel at its next session (12-16 November 2001). The accepted changes will be submitted to the 8-22 March 2002 TRANSSC meeting for approval. If the Sub-Committee had additional changes to propose or comments on the already accepted changes, it would be appropriate to submit them to the Revision Panel. The outcome of the Revision Panel meeting will be presented to the Sub-Committee at its next December session, and if the Sub-Committee had comments on the adopted changes, it could still submit them to TRANSSC.

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

Document: ST/SG/AC.10/C.3/2001/10 (Argentina)

91. This document was withdrawn.

Document: ST/SG/AC.10/C.3/2001/12 (United States of America)

92. The expert from the United States of America said that he had received comments on his proposal and that he would submit a revised proposal for the next session.

## **GLOBAL HARMONIZATION OF SYSTEMS OF CLASSIFICATION AND LABELLING OF CHEMICALS**

### **Eighteenth Consultation of the IOMC Coordinating Group for the Harmonization of Chemicals Classification Systems**

Informal document: INF.47 (ILO)

93. The Sub-Committee took note of the provisional record prepared by ILO for the meeting held in Geneva from 24-25 May 2001.

### **Hazard communication**

Informal documents: INF.18 (ILO)  
INF.45 (ILO)

94. The Sub-Committee took note of the draft record (INF.18) prepared by ILO for the Seventh meeting of the ILO Working Group for the Harmonization of Chemical Hazard Communication (Geneva, 21-24 May 2001, and of the proposal prepared by that group concerning harmonized hazard communication tools for the globally harmonized system of classification and labelling of chemicals (INF.45).

Informal documents: INF.27 (IATA)  
INF.26 (ILO)

95. The Sub-Committee noted that it had been invited by the ILO Working Group to provide advice on an issue raised by IATA during the discussion of the shape of pictograms to be used in the GHS.

96. The representative of IATA explained that employees in air carrier companies are trained to associate diamond shape labels with transport hazards, and he feared that using the same shape for all GHS pictograms would create confusion and could disrupt significantly air transport operations. He proposed that the shape of pictograms intended for non-transport regulatory purposes be different from a diamond shape.

97. The representative from ICAO said that a working group of the ICAO Dangerous Goods Panel had discussed this problem on the basis of informal papers provided by ILO and IATA and the working group shared IATA's concern. However, she said that members of the Dangerous Goods Panel had not been informed of the full contents of the ILO Working Group proposal and had not had the opportunity to discuss the question at national level prior to their session. The expert from the United Kingdom highlighted that this was because the issue was raised in a late informal paper.

98. The expert from the United States of America found the paper from the ILO to be misleading in that the GHS document (INF.45) did not preclude the presence of GHS diamonds depicting GHS hazards not covered by transport requirements on transport packages and the GHS diamonds could be as large as transport labels. He noted that many more substances would bear the GHS diamonds than currently bear transport labels. He agreed with IATA that the presence of GHS labels on transport packages could decrease safety in relation to undeclared dangerous goods in air transport and that it could complicate compliance with stowage and segregation regulations applicable to all modes and could cause confusion for emergency responders responding to dangerous goods incidents. He noted that no decision was required until the December meeting and asked that no decision be taken until then to allow better understanding of the implications.

99. The view of IATA and of the expert from the United States of America were supported by the representative of HMAC.

100. Almost all the other delegations who took the floor on this subject said that they could not share these concerns. The objective of the GHS work was to harmonize existing labelling systems, and the proposal by the ILO Working Group on Hazard Communication not only met that objective but also took full account of the transport labelling system. Very little changes would need to be made to the existing transport labelling system, while huge changes would be necessary in all other regulatory systems. In practice, there would be only two or three additional pictograms for hazards which are not covered by transport regulations, and if the shape of the pictogram was a diamond, the hazard symbols would be different anyway from those used in the transport system. They considered that the problem raised by IATA was a minor problem, concerning a very limited number of workers, and these problems were largely counterbalanced by the huge advantages of a harmonized system for the industry, the large majority of other workers, consumers, regulatory bodies and emergency services. Training air transport employees to recognize such new pictograms was not deemed to be such a problem, especially as these employees are requested to follow regular training courses.

101. Various experts said that there would be some time before the GHS system could be implemented and there would be plenty of time to consider and plan for transport training needs. This should be easier to achieve in air transport than in other modes. The need for, and cost of, training in other sectors of industry would be much greater. However, the advantages of unified labelling for logistical chains should significantly outweigh these costs. Concerns about jeopardizing safety in air transport seemed not to be valid. Packagings already included supply labels of many different types, yet this did not cause air transport handlers undue difficulties. Indeed with harmonized supply labels, the risk of undeclared dangerous goods in air transport should be minimized. Many thought that supply would be improved.



102. On the question of label size and language, these were issues yet to be addressed by the GHS Sub-Committee. However, it was noted that the Model Regulations did not include hazard signal words and would be unlikely to use them in future. Regulation 5.2.2.2.1.1 already permitted labels of varying sizes in transport. The observers from Switzerland and Portugal felt that these were important issues that needed to be considered fully. They were also concerned about possible confusion arising from the use of diamond shape.

103. Some experts indicated that emergency responders, such as CTIF, had supported the GHS labelling proposals and saw no difficulty with potential confusion arising from the diamond shape. Indeed some delegations considered the diamond shape would help emergency responders in sectors other than transport. The diamond shape was more generally recognized as a warning than any other shape, as shown in various comprehensibility studies.

104. The Chairman put the question to the vote and the Sub-Committee decided at a large majority to support the ILO proposal that a diamond shape pictogram should be used for all regulatory purposes.

### **Physical hazards**

105. This sub-item was discussed by the joint ILO/UN Working Group on the Harmonization of the Classification Criteria for Physical Hazards. The report of the Working Group is reproduced as annex 3 in document ST/SG/AC.10/C.3/38/Add.2.

### **OTHER BUSINESS**

Document : E/2001/44

106. The Sub-Committee took note of the report on the work of the Committee of Experts on the Transport of Dangerous Goods during the biennium 1999-2000 which had been submitted by the Secretary-General to the Economic and Social Council at its 2001 substantive session.

Informal document : INF.12 (Australia)

107. As proposed by the expert from Australia, the Sub-Committee invited the secretariat to make the Model Regulations on the Transport of Dangerous Goods available free of charge for Governments and the public on the web site of the UNECE Transport Divisions in all available languages, if possible.

### **Documents carried forward**

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

ST/SG/AC.10/2000/22  
ST/SG/AC.10/C.3/2000/24  
ST/SG/AC.10/C.3/2001/13  
ST/SG/AC.10/C.3/2001/15  
ST/SG/AC.10/C.3/2001/20  
ST/SG/AC.10/C.3/2001/21  
ST/SG/AC.10/C.3/2001/31  
UN/SCETDG/19/INF.7

### **Deadline for submission**

109. The deadline for submission of documents for the next session is 14 September 2001.

## **CONDOLENCES**

110. The expert from the Netherlands informed the Sub-Committee that Mr. Dick Groothuizen, former member of his delegation, had passed away in January 2001. The Chairman expressed to the delegation of the Netherlands condolences on behalf of the Sub-Committee and invited the Sub-Committee to observe a minute's silence in memory of their colleague who had contributed so heartily to the development of the UN Recommendations on the Transport of Dangerous Goods and in particular the Manual of Tests and Criteria.

## **ADOPTION OF THE REPORT**

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

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