

Summary Report of
UN Sub Committee of Experts
on the Transport of Dangerous Goods.
Twenty Fifth Session.

5 – 14th July 2004 held in Geneva.
Revision 1.

Only items applicable to metal IBC's and Tank Containers are summarised.

Transport of Gases.

28 proposals or information documents were discussed, but only 3 had any relevance to tank containers.

1/ It was agreed to delete UN No's 1014, 1015, 1979, 1980, 1981, and 2600 and place these gases in the "Not Otherwise Specified" (NOS) category.

The Dangerous Goods List in 3.2.1 did not specify any Portable Tank Instructions in columns 10 & 11 for these rare gas mixtures.

These gases were normally only transported as Limited Quantities in cryogenic receptacles.

The changes will now mean that 4 of these gases can be transported in Portable Cryogenic Tank Containers provided that Portable Tank Instruction T75 is complied with.

Although the UN did not quote the new UN (NOS) Numbers I think the following will apply:-

Old UN No.	New UN No.	Transport type.
1014	3157	Limited Quantities Only.
*1015	3158	Cryogenic Tank Container.
*1979	3158	Cryogenic Tank Container.
*1980	3158	Cryogenic Tank Container.
*1981	3158	Cryogenic Tank Container.
2600	3160	Limited Quantities Only.

T75 requires that Portable Cryogenic Tanks for these refrigerated gases marked * must comply with the full design requirements of section 6.7.4 and carriage conditions 4.2.3 . These sections may be found on pages 99 & 301 of the UN's Transport of Dangerous Goods 13th Edition. Volume II.

2/ The heading of Column 13 of P200 Table 1 has been amended from "Working Pressure, bar." To "Maximum Working Pressure, bar " to be consistent with rest of the Regulations. This Table is not relevant to Portable Tanks, only certain types of pressure receptacles (IBC'S)

3/ An Information only paper UNSCETDG/25 INF.4 on EN/ISO/DIS 21029-1: Design, Fabrication, Inspection, and Testing of Cryogenic Vessels were submitted by the Secretariat.

The Delegates will review the contents of this paper and propose which sections they wish to include in the Model Regulations.

There will be further discussions in Dec 2004.

The paper covers all aspects of Cryogenic Portable Tanks but is too long to summarize. Any interested parties may download the paper from the UN Web Site <http://www.unece.org/trans/doc/2004>

Metal IBC's

20 proposals or information documents were discussed but only one had any relevance to metal IBC's

The text in Chapter 6.5 has been thoroughly revised as document ST/SG/AC.10/C.3/2004/70 with numerous additional marginals and changes to existing paragraphs.

Corresponding changes have been made to Part 4.

These changes are too numerous to summarize and reproduce, but can be reviewed on the UN Web Site <http://www.unece.org/trans.doc/2004>

Tank Containers.

1/ The general requirements for the "Procedure for Incident Reporting" were reviewed generally as ST/SG/AC.10/C.3/2004/47 (DGAS)

There were numerous objections from other delegations which resulted in the document not being accepted.

A revised text will be submitted for the Dec. 2004 meeting.

2/ Two useful lists/documents which are regularly updated are published on the UNCE Website.

- a) Dangerous Goods List sorted by Class or Division - Subsidiary risk - Chemical characteristics (e.g. Ketones, Esters, Ethers etc., similar to the classification code in ADR/RID.)
- b) The First Draft of the Guiding Principles of the UN Model Regulations.

3/ Impact Testing of UN Portable Tanks.

Proposals submitted by Canada to change Sections 6.7.2.19.2, 6.7.3.15.1, 6.7.4.14.1, and 6.7.5.12.1 based on the Canada's National Standards were not discussed because of time restraints.

The document was submitted as an Information paper UN/SCETDG/25/INF27.

However Canada will submit an official document for inclusion in the Model Regulations for the Dec.2004 meeting.

I had a lunch time meeting with the Canadian delegate to discuss this document and they will consider any of ITCO's comments for inclusion in their final text.

The comments must be received by the second or third of Sept. 2004.

It is therefore worth scrutinising this 7 page document and seeing if ITCO are in complete agreement with its content before it is considered by the UN for inclusion in the Model Regulations.

The current references to the 4G impact test in ADR/RID/IMDG 6.7.2.18.2 and 6.7.2.19.1 are very basic, where as the Canadian document addresses all aspects as detailed below:-

- a) Permitted design variations from a previously tested tank.
- b) The Test Apparatus.
- c) The Impact Creation.
- d) Measuring & Recording System.
- e) Test Procedure.
- f) Analysis/Processing Data with Calculation Formulas.
- g) Alternative Validation method for 20 foot portable tanks.
- h) Recording Data.

ISO TC104/SC2 and its Working group have been deliberating on a single International Impact Standard since 1996 and as yet no proposals have been published nor are imminent.

This situation is causing confusion for tank container manufacturers and in some cases has caused manufacturers the burden of needless duplicate testing, this ultimately is born by the tank owner. The Canadians therefore will try to get their document approved at the next UN meeting.

If it does not succeed at the Dec.2004 meeting I am sure it will be during 2005.

The permitted design variations proposed from an already tested design without additional testing are as follows:-

- (a) A decrease in the initial maximum design temperature ;
- (b) An increase in the initial minimum design temperature ;
- (c) A decrease in the maximum gross mass ;
- (d) A reduction in capacity resulting only from variations in diameter and length ;
- (e) A change of location or modification to nozzles and manholes provided that an equivalent level of protection is maintained, and the most unfavourable configuration is used for the purposes of the strength calculations;
- (f) An increase in the number of baffles or surge plates ;
- (g) An increase in the wall thickness provided the thickness stays within the range permitted by the welding procedures specifications ;
- (h) A decrease of the maximum service pressure, maximum allowable working pressure, or maximum working pressure, as the case maybe ;
- (i) An increase in the insulation system effectiveness from using a greater thickness of the same insulation material, or the same thickness of a different insulating material having better insulation properties ;
- (j) A change to the service equipment provided that the untested service equipment is located at the same place and exceeds the performance specification as the existing equipment, and is approximately of the same size and mass as the existing equipment;
- (k) The use of different grades of the same type of material for the construction of the shell or frame. Provided that the results of the design calculations for the different grade, using the lowest specified values of the mechanical properties of that grade, meet the results or the design calculation for the existing grade. Also the alternative grade is permitted by the welding specification and that the alternative grade is compatible with the dangerous intended for transport.

If any of our members feel there are other variations which should be included please advise Jack Hopkins.

It will save money and future problems for our industry if we can cover as many known variation as possible with out further testing.

I will check to see if we can publish this document on our web site as it is not classified as ‘ Restricted ‘

Any comments should be addressed through Willy to Jack Hopkins and to be received by the last week in Aug.2004.

Any Other Items.

1/ Consultative Status were granted to **IDGCA** (International Dangerous Goods and Containers Association.) (Russian and other Eastern Block Countries.)

2/ High concentrations of Formic Acid UN no 1779 and Propionic Acid UN No 1848 can be flammable.

Formic Acid: To limit the current UN 1779 (PGII) to >85% and add sub Risk 3. This liquid will require a Class 8 and Class 3 label.

Formic Acid cont.

Create two new entries (10 to 85 %) (PGII) & (<10 %) (PG III)

Both without sub risk 3.

Tank Tables amended T7 & TP2 replaced with T4 /TP1

T7 = 4 bar Minimum Test: T4 = 2.65 bar Minimum Test.

TP2 = 95 % Filling: TP1 + 97 % Filling.

Both new UN No's will require Class 8 label only.

All other columns in the Portable Tank Instructions remain unchanged.

Propionic Acid: To limited the current UN 1848 (PGIII) to (10-90%)

Create a new entry for (>90 %) (PG II) with sub risk 3.

The new entry will require Class 8 and Class 3 labels.

The 'T' codes remain unchanged.

Chromium Trioxide Anhydrous UN No1463, class 5.1 PGII add sub risk 8

This liquid will require Class 5.1 and Class 8 labels.

The 'T' code remains unchanged.

New UN entries for paints with subsidiary risks.

Class 3 with sub risk 8 (PG I, II, III) UN No 1263

Class 8 with sub risk 3 (PG II). UN No 3066

New entries in tank table TP8 for Class 8 (page 114 in regulations)

TP27, TP28, TP29 allocated to Class 3 (page 115 in regulations)

Both UN No's require Class 3 & 8 labels.

The 'T' codes remain unchanged.

Crotonaldehyde, Stabilised (UN NO 1143)

Remove stabilised. The labels and 'T' code remain unchanged.

Relaxation of Portable Tank assignments for Hydrazine Solutions (UN No 2030- PG I, II, III in line with rationalised approach.

New 'T' codes and 'TP' codes will be specified.

Jack Hopkins - July 2004.