



Secretariat

Distr.
GENERAL

ST/SG/AC.10/1998/2
22 July 1998

Original: ENGLISH

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

(Twentieth session,
Geneva, 7-16 December 1998,
agenda item 2 (d))

**WORK OF THE SUB-COMMITTEE OF EXPERTS ON
THE TRANSPORT OF DANGEROUS GOODS**

**Draft amendments to the Model Regulations
on the Transport of Dangerous Goods**

New proposals */

New Entry for Refrigerating Machines

Transmitted by the expert from the United States of America

1. The Montreal Protocol on Substances that Deplete the Ozone Layer stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (i.e. chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform) be phased out by 2000 (2005 for methyl chloroform). On this basis, CFC replacement flammable refrigerant gases especially those containing hydrocarbon gases have become more widely used. One area where this is prevalent is in the manufacture of refrigerating equipment (i.e. refrigerators, air conditioners, humidifiers, heat pumps, ice making machines, etc.). The expert from the United States has received requests from refrigerating equipment manufacturers to include a new entry in the UN Recommendations and international modal regulations to recognize refrigerating machines which contain flammable refrigerants.

**/ Refer to ST/SG/AC.10/C.3/30, paras. 112-114.*

2. The ICAO Technical Instructions (TI) include an entry for “Refrigerating machines containing flammable, non-toxic, liquefied gas” under an 8000 series identification number. A special provision assigned to this entry indicates that refrigerating machines containing less than 100 grams of a flammable, non-toxic liquefied gas are not subject to regulation.

3. Currently according to the IMDG Code a shipper can only transport refrigerating machines containing flammable liquefied gases under the entry “Liquefied gas, flammable, n.o.s.”. When transporting by sea using this entry the shipper must acquire an approval from the competent authority if the liquefied gas is contained in thick walled metal tubes within the refrigerating machine as opposed to being contained in pressure vessels or compressed gas cylinders.

Proposal

4. Addition of an entry and special provision consistent with the ICAO TI for these refrigerating machines in the Recommendations and subsequently in the IMDG Code would be useful to eliminate the need for special approvals for transporting these machines. The expert from the United States proposes that an entry for REFRIGERATING MACHINES CONTAINING FLAMMABLE, NON-TOXIC, LIQUEFIED GAS be incorporated in the Recommendations. The following amendments are proposed:

(a) In the Dangerous Goods List add the following entry:

UN No.	Name and Description	Class or Division	Subsidiary risk	PG	Special provisions	Limited Quantities	Packagings and IBC's		Portable Tanks	
							Packing Instruction	Special Requirements	Portable Tank Instruction	Special Requirements
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
33xx	REFRIGERATING MACHINES containing flammable, non toxic, liquefied gas	2.1			xxx	NONE	P2xx			

(b) Add the following new special provision in Chapter 3.3:

XXX Not subject to these Regulations if the refrigerating machine contains less than 100 grams of flammable, non-toxic, liquefied gas.

(c) Add the following packing instruction in Part 4 of the Recommendations:

P2XX	PACKING INSTRUCTION	P2XX
<p>Each packaging need not conform with the requirements of Chapter 6.1. Outer packagings constructed of suitable material of adequate strength and design in relation to the packaging capacity and its intended use shall be used. The quantity of flammable liquefied gas shall not exceed 1 kg gram and shall be contained within metal tubing or refrigerating machine components which are designed and tested to at least three times the working pressure of the machinery. The refrigerating machines shall be designed and constructed to contain the liquefied gas and preclude the risk of bursting or cracking of the pressure retaining components during normal conditions of transport.</p>		