UNITED NATIONS

ST

Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2002/2
12 February 2002

ORIGINAL : ENGLISH

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
(Twenty-first session, 1-10 July 2002, agenda item 6 (b))

PACKAGINGS (including IBCs and large packagings)

Miscellaneous proposals

Transmitted by the expert from Spain

Justification

In paragraph 4.1.1.1 of chapter 4.1 of the existing Recommendations, it is stated that: "packagings, including IBC's and large packagings shall be constructed and closed so as to prevent any loss of contents when prepared for transport which may be caused under normal conditions of transport, by vibrations, or by changes in temperature, humidity or pressure (resulting from altitude for example).".

Particular attention must be paid to the effect of vibrations on packagings during transport, especially in air transport. In the past, reference was made in the ICAO Technical Instructions to the fact that vibrations in an aircraft, could reach amplitudes of 5 mm at 7 Hz (corresponding to 1g) or other amplitudes with higher frequency. But the negative effects of vibrations on packagings are not specific to air transport. They can also be observed during railway and road transport, because the adequate measures to prevent these negative effects have not been taken into account by the manufacturers in the design of the packagings.

On the other hand, according to paragraph 6.1.1.2 and in order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in 6.1.4 provided that they are equally effective, acceptable to the competent authority and able successfully to withstand the applicable tests.

For example, due to the progress in technology and machinery, the manufacture of drums able to withstand the proposed vibration test is now possible, provided that the drums are equipped with chimes with 3 mechanical seams instead of 2 in the union between the body and the bottom of the drum.

It has also been noted that some bottoms designed to improve the resistance of the drum to vibrations were not efficient and that they had less resistance to vibrations than a simple flat bottom of adequate thickness. (See figures in pages 3 to 5).

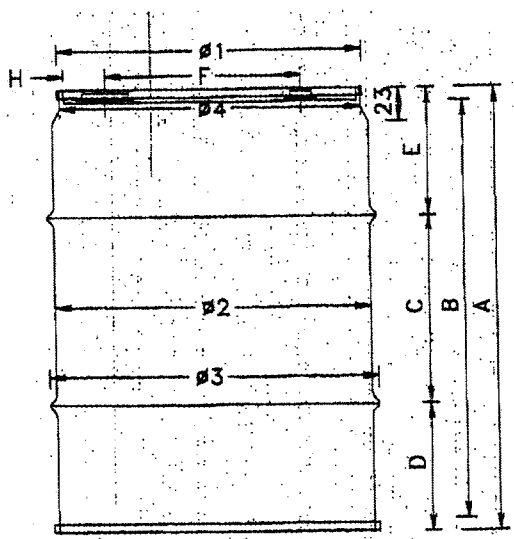
Proposal

Add a new paragraph 6.1.1.6 to read as follows:

"6.1.1.6 Manufacturers shall guarantee that packagings intended for the transport of liquids have been designed taking into account the effects of vibrations during transport in accordance with the requirements of 4.1.1.1. The required level of resistance to vibrations during transport can be determined with the following test:

The packaging, full of water and closed, shall be placed on a vibration platform and subject to a vertical movement of 2.54 cm (1 inch) displacement amplitude (measure taken from peak to peak) at a frequency which makes a piece of 1.6 mm thickness made of metal or other material (such as a fibreboard or plate piece) to pass between the bottom of the packaging and the platform. The test is successful if after one hour and a half for packing group I packagings, one hour for packing group II packagings and half an hour for packing group III packagings, no evidence of leakage is found.

Manufacturers shall carry out the test on different types of packagings to find the most suitable seam unions, closures and bottom and body thickness in terms of resistance to vibrations without any evidence of leaking.".



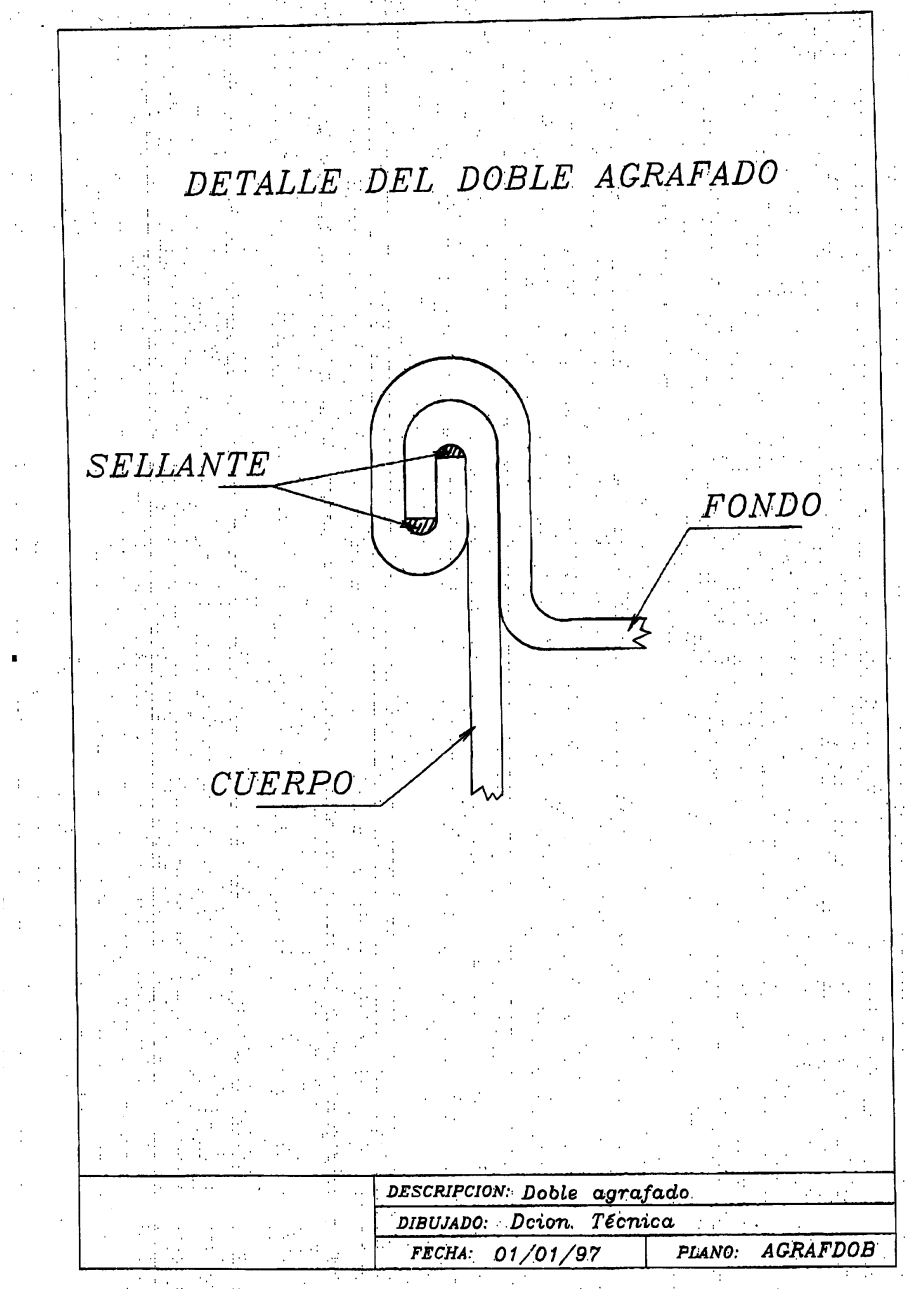
TIPO DE ENVASE: 3ARTJ01

CAPACIDAD: 30 Lt.

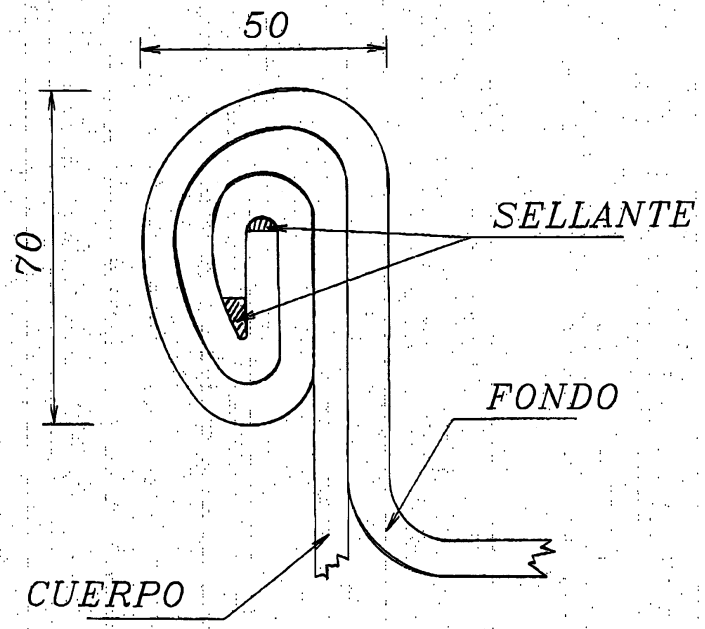
ESPESOR CUERPO: 0,5 mm

ESPESOR TAPA Y FONDO: 0,6 mm

AGRAFADO: DOBLE


DETALLE DEL DOBLE AGRAFADO
SELLANTE
FONDO
CUERPO
DESCRIPCION: Doble agrafado
DIBUJADO: Dcion. Técnica
FECHA: 01/01/97
PLANO: AGRAFDOB

DETALLE DEL TRIPLE AGRAFADO



DESCRIPCIÓN: Triple agrafado	
DIBUJADO: Dcion. Técnica	
FECHA: 01/01/97	PLANO: AGRAFTRI