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Group of Experts for the revision of the IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units

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Updates on the second draft of the Code of Practice for Packing of Cargo Transport Units

Proposal of amendments to the second draft of the CTU Code

Transmitted by the European Chemical Industry Council (CEFIC)

Amendments to the second draft of the CTU Code proposed by the CEFIC are presented below for consideration by the Group of Experts.

Amdt. 1

Add a new definition: **Operator/owner of a CTU**

5.1.10.x *The operator/owner of a CTU is "responsible" that*

- *in case of container CTU with a reduced stacking capacity (less than 192,000 kg marked on the CSC Safety Approval Plate), this fact is communicated to the forwarder/carrier; by marking the container.*

Amdt. 2

Change 9.2.3.6

9.2.3.6 *Potential points of leakage may be detected by observing whether any light enters a closed unit. At least two persons are needed for this check; the person who remains outside must be fully aware of the process of shutting and opening the doors and be capable of doing so. To complete the check one person should enter the container and the doors may be closed but should not be locked. Holes or gaps will be evident by the light entering the CTU. In carrying out this check, care should be taken to ensure that no person becomes locked inside a unit.*	**NEW!** *9.2.3.6* *Potential points of leakage may be detected by observing whether any light enters a closed unit.* ~~*At least two persons are needed for this check; the person who remains outside must be fully aware of the process of shutting and opening the doors and be capable of doing so. To complete the check one person should enter the container and the doors may be closed but should not be locked. Holes or gaps will be evident by the light entering the CTU. In carrying out this check, care should be taken to ensure that no person becomes locked inside a unit.*~~ ***Operational safety hazards must be taken into account.***

Justification:
Why these CTU checks have to be made by two people is not entirely clear. On the other hand it is a question of occupational safety. Maybe some clarification should be helpful. A CTU check by the packer is necessary but industry do not need any recommendation about "how to do".

Amdt. 3

Change 10.2.3.6

	NEW!
10.2.3.6 Void spaces should be filled and may be favourably stuffed by empty pallets inserted vertically and tightened by additional timber scantlings as necessary. Material which may deform or shrink permanently, like rags of gunny cloth or solid foam, should not be used for this purpose. Small gaps between unit loads and similar cargo items, which cannot be avoided and which are necessary for the smooth packing and unpacking of the goods, are acceptable and need not to be filled. The sum of void spaces in any direction should not exceed 15 cm. However, between dense and rigid cargo items, such as steel, concrete or stone, void spaces should be further minimized, as far as possible.	*10.2.3.6* ***In the case of form locking*** *void spaces should be filled and may be favourably stuffed by empty pallets inserted vertically and tightened by additional timber scantlings as necessary. Material which may deform or shrink permanently, like rags of gunny cloth or solid foam, should not be used for this purpose. Small gaps between unit loads and similar cargo items, which cannot be avoided and which are necessary for the smooth packing and unpacking of the goods, are acceptable and need not to be filled. The sum of void spaces in ~~any~~* ***horizontal*** *direction should not exceed 15 cm. However, between dense and rigid cargo items, such as steel, concrete or stone, void spaces should be further minimized, as far as possible.*

Justification: Void spaces cannot be avoided during transportation

Amdt. 4

Change 10.2.3.8

10.2.3.8 If dunnage bags are used for filling gaps, the manufacturer's instructions on filling pressure and the maximum gap width should be accurately observed. Dunnage bags should not be used as a means of filling the space at the doorway, unless precautions are taken to ensure that they cannot cause the door to open violently when the doors are opened. If the surfaces in the gap are uneven with the risk of damage to the dunnage bags by chafing or piercing, suitable measures have to be taken for smoothing the surfaces appropriately. The blocking capacity of dunnage bags should be estimated by multiplying the nominal burst pressure with the contact area to one side of the blocking arrangement and with a safety factor of 0.75 for single use dunnage bags and 0.5 for re-usable dunnage bags (see Annex 4 and Annex 7).	**NEW!** *10.2.3.8 If dunnage bags are used for filling gaps, the manufacturer's instructions on filling pressure and the maximum gap width should be accurately observed. ~~Dunnage bags should not be used as a means of filling the space at the doorway, unless precautions are taken to ensure that they cannot cause the door to open violently when the doors are opened. If the surfaces in the gap are uneven with the risk of damage to the dunnage bags by chafing or piercing, suitable measures have to be taken for smoothing the surfaces appropriately. The blocking capacity of dunnage bags should be estimated by multiplying the nominal burst pressure with the contact area to one side of the blocking arrangement and with a safety factor of 0.75 for single use dunnage bags and 0.5 for re-usable dunnage bags (see Annex 4 and Annex 7).~~*

Justification:
The source of the calculation method is missing and therefore it is not possible to follow this calculation / argumentation.

Amdt. 5

Change 10.5.1.1

10.5.1.1 Tank CTUs to be transported by road, rail or sea should be filled to at least 80% of their volume for avoiding dangerous surging, but never more than 95% of their volume, unless specified otherwise. [A filing ratio of maximum 20% is also accepted. A filling ratio of more than 20% and less than 80% is only permitted when the tank shell is subdivided, by partitions or surge plates, into sections of not more than 7500 l capacity.]	**NEW!** *10.5.1.1 Tank CTUs **filled with liquids having a viscosity less than 2680 mm²/s at 20°C and** to be transported by road, rail or sea should be filled to at least 80% of ~~their~~ **the CTU's** volume for avoiding dangerous surging, but never more than 95% of their volume, unless specified otherwise. ~~[~~ A filing ratio of maximum 20% is also accepted. A filling ratio of more than 20% and less than 80% is only permitted when the tank shell is subdivided, by partitions or surge plates, into sections of not more than 7500 l capacity. ~~]~~*

Justification:
The 20/80 rule for non-viscosity liquids is well known from DG regulations (e.g. IMDG-Code, ADR) but an exception for high viscosity liquids is missing

Amdt. 6

Change 10.5.2.2

10.5.2.2 During transport the contents of a flexi-tank will be subject to dynamic forces without significant retention from friction. These forces will act upon the boundaries of the CTU and may cause damage or complete failure. Therefore the payload of a CTU should be appropriately reduced, when it is used for carrying a loaded flexi-tank. The reduction depends on the type of CTU and on the mode of transport. When a flexi-tank is loaded into a general purpose ISO box container, the mass of the liquid in the flexi-tank should not exceed [50%] of the payload of the container, to prevent the container from suffering bulging damages.	**NEW!** *10.5.2.2 During transport the contents of a flexi-tank will be subject to dynamic forces without significant retention from friction. These forces will act upon the boundaries of the CTU and may cause damage or complete failure.* ***The design / construction of a flexi-tank should prevent the container from suffering bulging damage.*** *~~Therefore the payload of a CTU should be appropriately reduced, when it is used for carrying a loaded flexi-tank. The reduction depends on the type of CTU and on the mode of transport. When a flexi-tank is loaded into a general purpose ISO box container, the mass of the liquid in the flexi-tank should not exceed [50%] of the payload of the container, to prevent the container from suffering bulging damages.~~*

Justification:
The manufacturer of flexi-tank should be responsible for the construction of suitable flexi-tanks. Eventually unified production standards /test standards would be helpful.