

IICL - TB 018, June 27, 2019

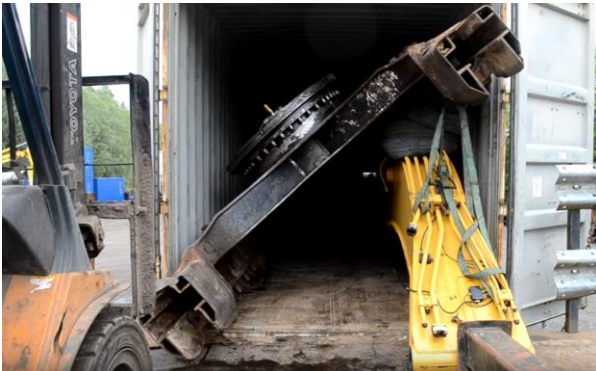
Title: Clarification on misuse of containers.

Reference: This technical bulletin (TB – 018) addresses the misuse of the container equipment directly related to cargoes loading, transport and unloading operations. The TB also highlights the importance of proper packaging and liners used **to protect the cargo and the container from damages.**

Purpose: Provide warning to container users of extensive damages caused to containers when misused and subject to improper packing, securing, loading and unloading operations of cargoes. The examples below show some examples of misuse of containers and the damage effect resulting from them. In the scenarios showed below, the repair costs are expected to be extremely high. This bulletin applies to dry van and open top containers.

The following photos depict some examples of misuse of containers which cause damage to the interior coating, flooring, external paint, panels, etc. In most cases the proper repair actions require complete refurbishing of the interior coating system, floor replacements and other expensive repairs.









In addition to the situations shown above, the following is also observed:

Bulk loading of cargoes without proper packing, lining and lashing materials, bags, bulkhead devices and other appropriate forms of protecting the cargo and the container. Here below some examples of cargoes that may cause severe damage to containers.

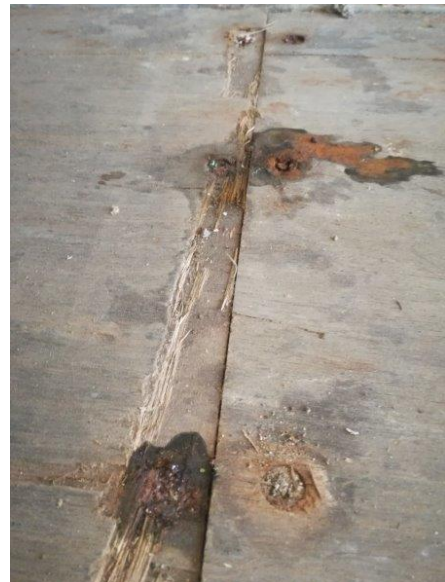
- Minerals
- Coal
- Scrap metals
- Used engines and parts
- Cocoa beans
- Fish meal

The photos below depict some of the conditions resulting from the misuse of the equipment.

Below: Coal contamination



Below: Cocoa bean contamination





Below: examples of damages caused to the interior coating and floor due to improper loading and unloading methods





The IICL suggests that the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (CTU Code) 2014 be observed.

https://www.unece.org/fileadmin/DAM/trans/doc/2014/wp24/CTU_Code_January_2014.pdf

Below are two excerpts from the code of practice that address the situations mentioned above.

Note: Excerpt of Annex 7 page 25

- 5.3.1 Non-regulated solid bulk cargoes may be packed into CTUs provided the boundaries of the cargo spaces are able to withstand the static and dynamic forces of the bulk material under the foreseeable transport conditions (see chapter 5 of this Code). Freight containers are equipped with shoring slots in the door corner posts which are suitable to accommodate transverse steel bars of 60 mm square cross section. This arrangement is particularly designed to strengthen the freight container door end for taking a load of 0.6 P, as required for solid bulk cargoes. These bars should be properly inserted. The relevant transport capability of the CTU should be demonstrated by a case-related certificate issued by a recognized consultative body or by an independent cargo surveyor. This requirement applies in particular to general purpose freight containers and to similar closed CTUs on road vehicles, which are not explicitly designed to carry bulk cargoes. It may be necessary to reinforce side and front walls of the CTU by plywood or chipboard facing in order to protect them from bulging or scratching (see figure 7.53).



Figure 7.53 Lining a 40-foot container with chipboard panels

Note: Excerpt of Annex 7 page 26

- 5.3.3 If crude or dirty material will be transported, the CTU boundaries should be lined with plywood or chipboard for avoiding mechanical wastage of the CTU. In all cases an appropriate door protection should be installed consisting of battens fitted into suitable recesses and complemented by a strong plywood liner (see figure 7.55).



Figure 7.55 CTU with wall liners and door barrier loaded with scrap

- 5.3.4 Scrap and similar waste material to be carried in bulk in a CTU should be sufficiently dry to avoid leakage and subsequent contamination of the environment or other CTUs, if stacked ashore or transported in a vessel.
- 5.3.5 Depending on the internal friction and the angle of repose of the solid bulk cargo, the CTU may be inclined to a certain degree, to facilitate the loading or unloading operation. However, it should always be ensured that the walls of the CTU are not overstressed by the filling operation. It is not acceptable to turn a CTU by 90° to an upright position for filling, unless the CTU is especially approved for this method of handling.

For questions about this technical bulletin you may contact technical@iicl.org