



DISMANTLING AND RECYCLING OF INSULATED CONTAINERS at the end of their lifetime

Olivo manufacture insulated containers made of Polyethylene double wall filled with expanded Polyurethane foam for thermal insulation. These containers are used, with refrigeration, mainly for the transport of foodstuff (chilled and frozen), sensitive medical or pharmaceuticals products, ... A container is made of plastic, metal pieces and polyurethane foam.

The lifetime of an insulated container can be up to 12 years, and then ?

Olivo are familiar with the recycling processes: the CO₂ used in some of their containers is recycled from the chemical industry. They wanted to consider what could be done with the containers which could not be used anymore. Thus, a new service was implemented by Olivo: the dismantling and recycling of old containers.



The dismantling centre for old containers entrusted to Olivo is located in Neulise (Loire, France), 50 kms from the Olivo plant. The containers are either collected by Olivo from their customers or directly sent by the customers to Neulise.

The dismantling process :

- The container body and door are dismantled.
- The metal accessories are separated (the metal waste –steel, stainless steel, aluminium- are sorted before being recycled)
- The inserts (brass/stainless steel) crimped into the polyethylene walls are cut. Still in polyethylene, they are heated to be separated, before being recycled.



- Two circular saws cut the side walls. A vertical saw cuts the top and bottom. The body is then sawn up into bi-material plates (polyethylene + expanded polyurethane foam). The walls are pulverized by a knife mill. The materials are separated by depression.

The recycling process :



- Polyethylene is saved under the shape of granules of various diameters which can be regenerated and reused. Up to 90% of the plastic can be recycled.
- The polyethylene saved is 100% recycled. Being a thermoplastic polymer, it is melted. The recycled polyethylene is generally extruded and used for the manufacturing of waste containers, street furniture,...
- Polyurethane is burned to produce energy. Research work is ongoing to find how to recycle and reuse it.
- The metal pieces are 100% recycled. They are melted and 100% reused without any loss of their physical properties.

For good management of the users' insulated container fleet, Olivo supplies them with a destruction certificate stating quantities, types, serial numbers and production dates of the dismantled containers.