

WASTE RECOVERY

glass, tiles, sanitary ware, fiberglass and much more...



Glass waste recovery

Minerali Industriali recycled glass treatment combines traditional ore dressing processes with the most recent sorting technologies. In this way, Minerali Industriali ensure the total recovery of the glass waste: an eco-friendly solution with an high quality cullet production.

Treatment stages

The aim of the glass waste treatment is to remove external materials, first of all ceramic (because of the stones problems in the glass factories), metals, plastic and organic residual (with their high carbon rate).

Glass waste treatment is composed by three subsequent stages:

- 1- preparation stage: remove metals and the material part under 10 mm. This fraction's ceramic content is in fact hard to remove by the sorting machines;
- 2- optical sorting stage: remove ceramic by optical recognizing. The outcome of this selection is already an high quality cullet. It's also possible to reduce the Pb rate with UV sorting machines;
- 3- washing and milling stage: so far rejected material represents the 25% of the income waste, with 70% glass content, 30% of ceramic and an high carbon rate. Minerali Industriali is able to successfully recover this part by washing treatment (reduction of carbon rate) and a fine milling (<1 mm), allowing the ceramic melting in the glass factories without stones problems (Glassy Sand).

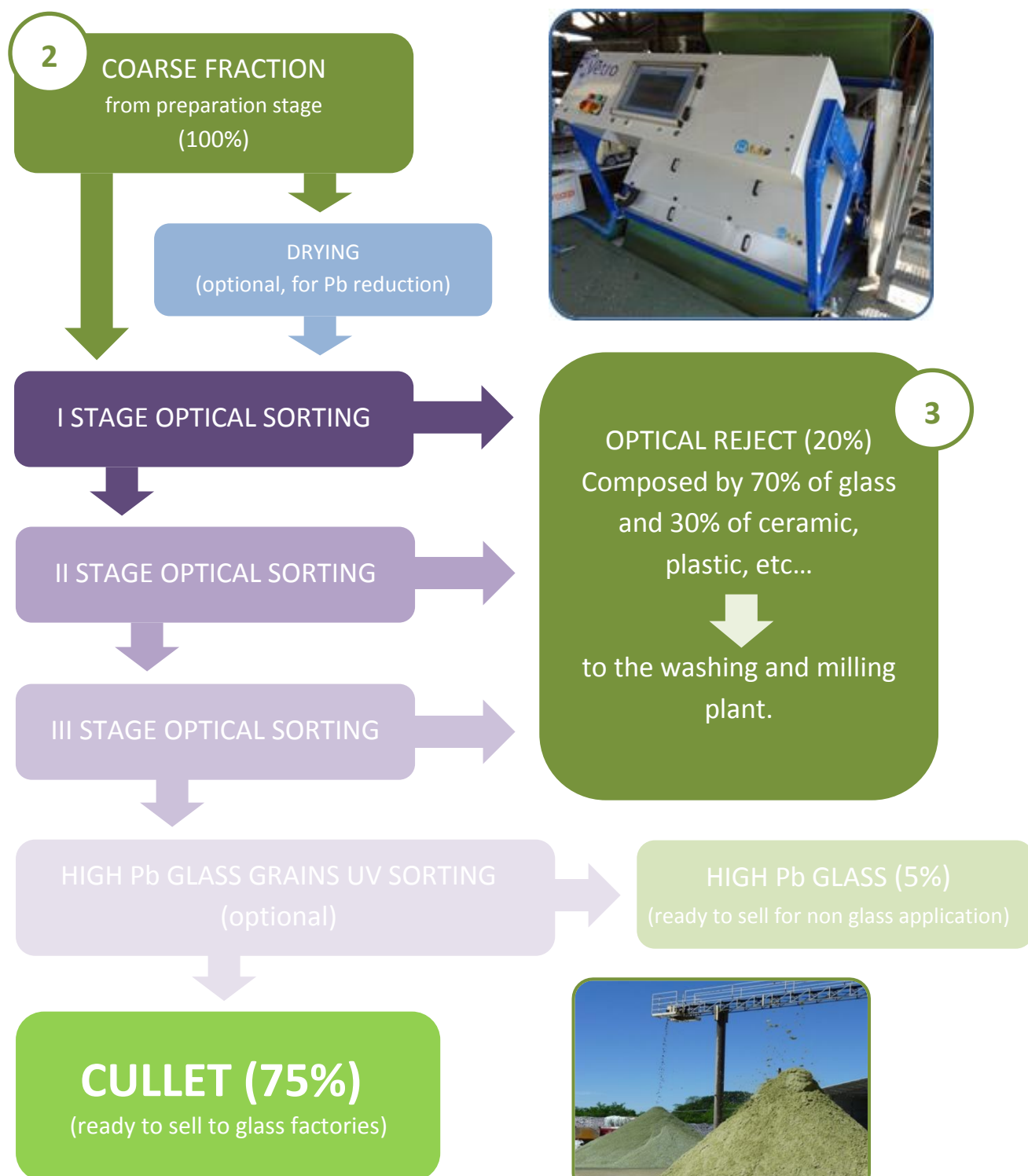
Glass waste recovery - 1st stage: waste preparation

This is the preliminary treatment of the glass waste recovery.



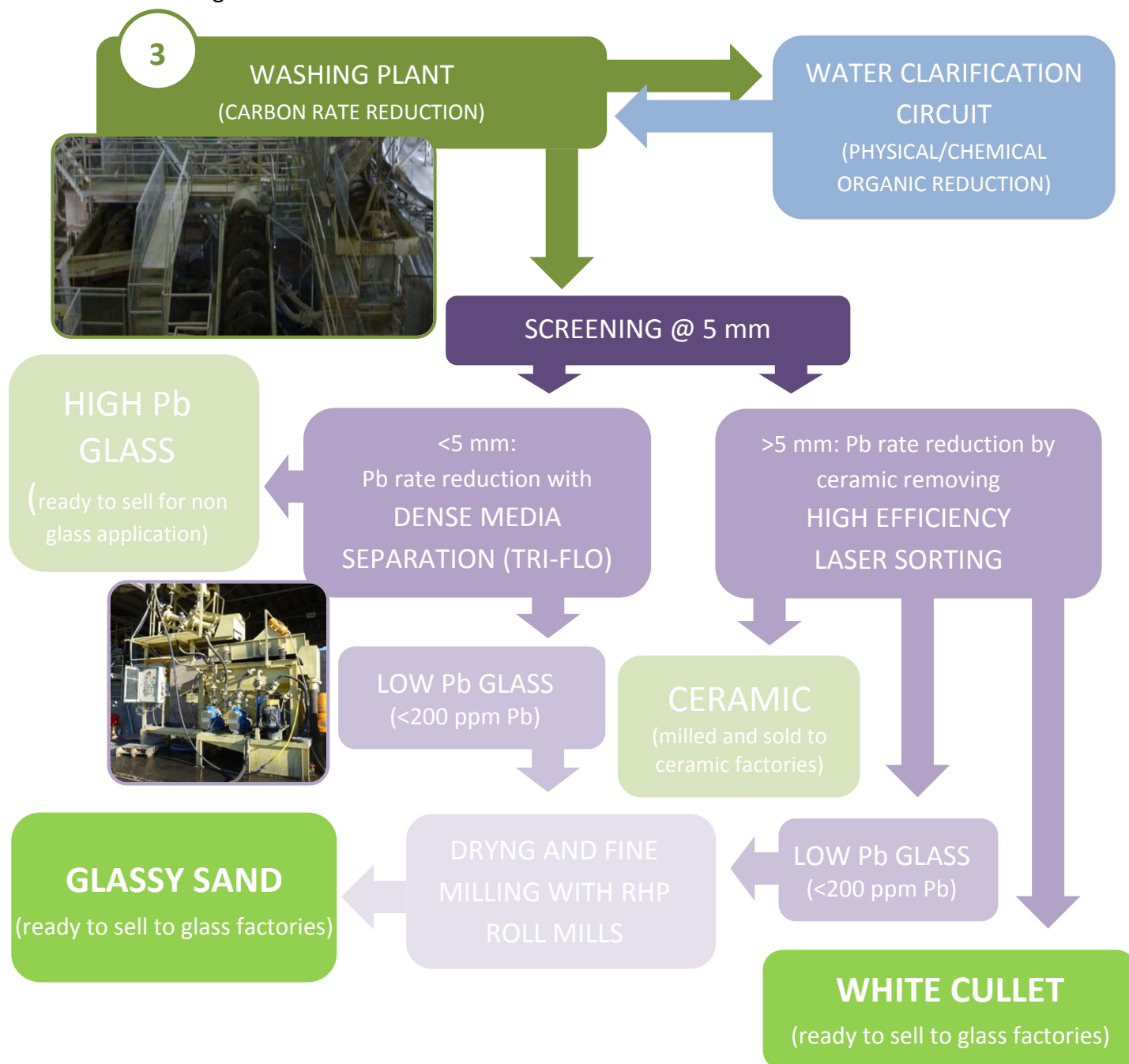
Glass waste recovery - 2nd stage: cullet production by optical sorting

After the preparation treatment, the glass is introduced in the optical sorting stage, to remove the ceramic grains.



Glass waste recovery - 3rd stage: Glassy Sand production

Previous stages rejected fraction has a consistent percentage of high melting material (ceramic) and an high carbon rate (typically 2% in weight) due to the presence of plastic and residual liquids on the bottles: this material can't be used directly in glass melting. Thanks to its ore dressing experience, Minerali Industriali apply a washing treatment to reduce the carbon rate and a fine milling process to allow the remaining ceramic part to be melted without stones problem in glass factories. The result is Glassy Sand. In addition, Minerali Industriali has developed an high dense media treatment and an high efficiency laser sorting to reduce the Pb level in the glass.

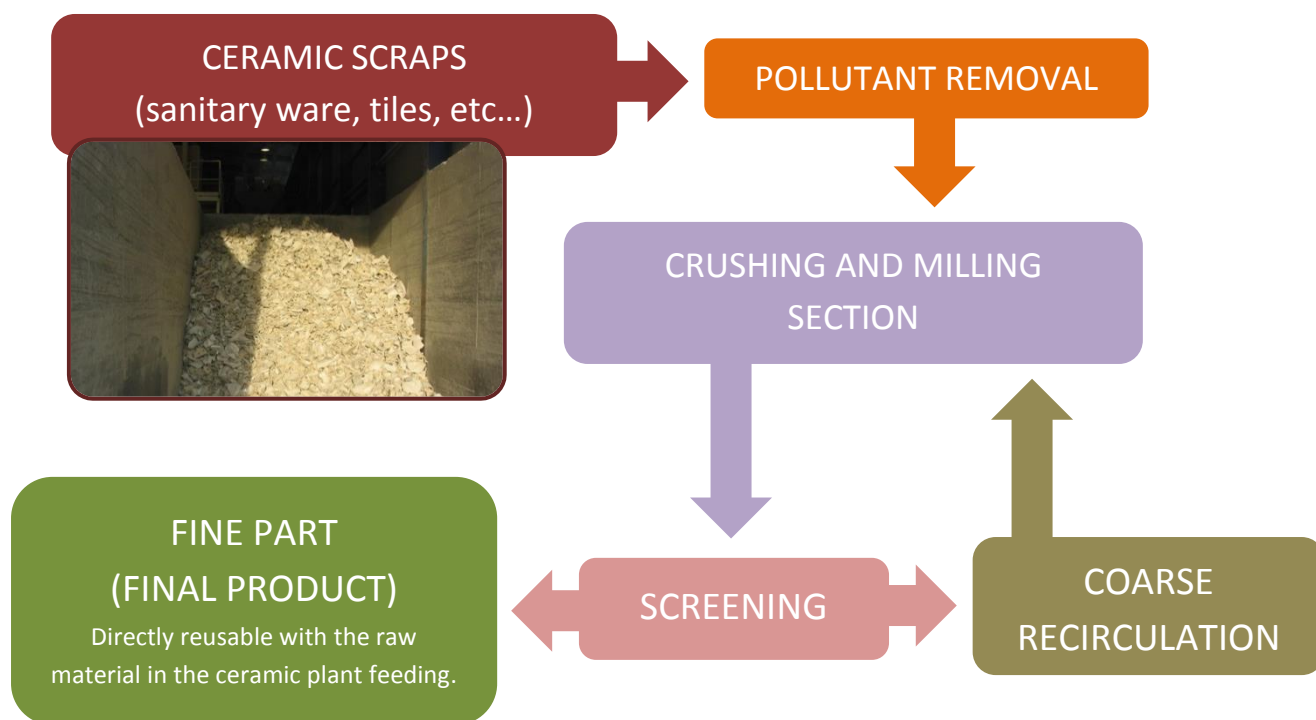


Ceramic waste recovery: sanitary ware and tiles

Sanitary ware and tiles manufacturing processes always produce a small quantity of scraps, but its accumulation may become a problem. Recover this fraction means to reduce the scraps stock and to produce a pre-fired raw material, with the same quality of the final product and with saving firing energy properties.

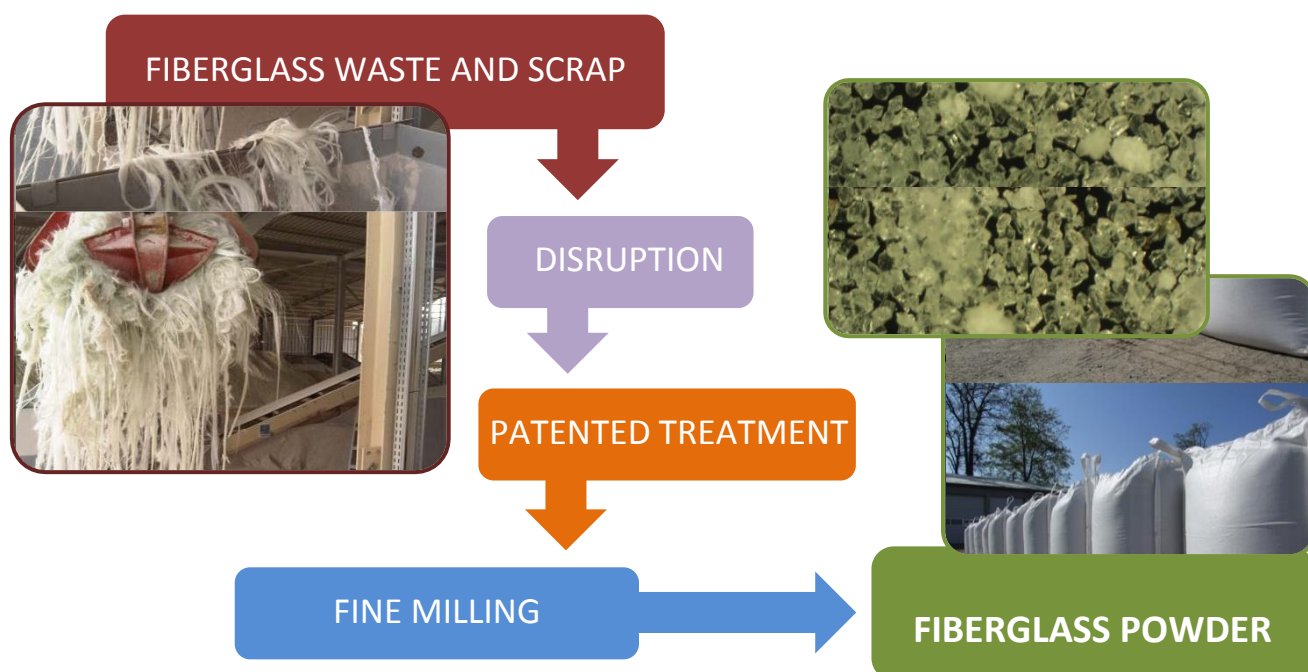


Minerali Industriali ceramic waste treatment plants are a real solution, successfully installed in many ceramic ware factories.



Fiberglass recovery

Fiberglass waste and scrap are usually disposed in landfill: currently fiberglass waste can't be reintroduced in the melting process. Minerali Industriali patented an innovative technology to recover this precious material. The result? A regenerated raw material ready to be used in the normal fiberglass production.



and much more...

Minerali Industriali successfully treats and recovers artistic glass, lamp glass and CRT monitor front glass. Minerali Industriali is also available to study, propose and realize tailored made solutions to recover a large variety of waste or scrap (ashes neutralization, sludge treatment, foundry rejects, etc...).

