

# LCD PANELS RECYCLING SYSTEM



The patent covers all the LCD panel treatment steps, starting from the initial shredding to the final recycling step of glass and indium, applying a "zero waste" approach, where all the materials of the original LCD panel are recovered.

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**KEYWORDS:**

Environment

Rare metals recovering

Zero waste approach

Recycling

LCD



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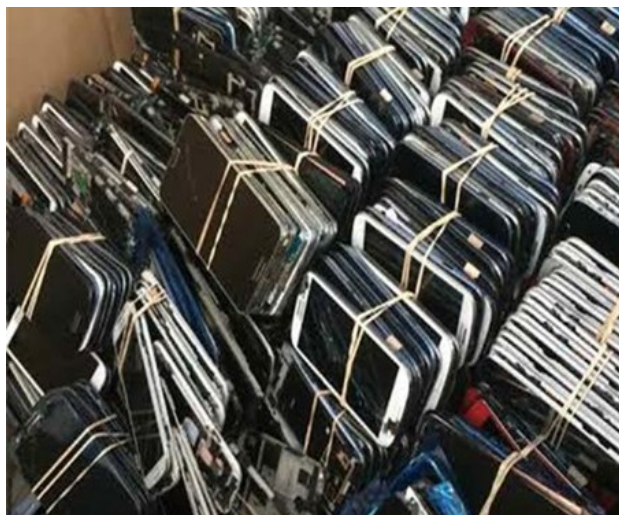
# LCD PANELS RECYCLING SYSTEM



## DESCRIZIONE:

Current techniques for recovering devices that use LCD panels require the disposal of the screen as non-hazardous waste. However, the content of potentially recoverable material, such as glass, the main component of the panel, and ITO, a film composed of indium oxide (90%) and tin oxide (10%), has pushed research towards the development of new recovery processes. The patented process allows a zero-waste treatment to be carried out, optimizing the steps for the extraction of indium with a new pre-treatment and a new valorization of a fraction previously considered as waste.

The patented process has numerous advantages compared to the known systems for treating LCD screens at the end of their life and can be used in any recycling facility used for treating special waste.



## VANTAGGI:

- Extraction efficiency greater than 90%
- Significant reduction in the consumption of raw materials
- Environmental and economic sustainability of the process

## APPLICAZIONI:

- End-of-life LCD screen treatment
- Recovery plants
- Rare metals recovery