

Panasonic Develops High Efficiency CRT Recycling Technology Using Laser

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Panasonic has developed a recycling technology using laser beams to separate the front panel and back part (funnel) of a cathode ray tube (CRT) used in TV sets.

This laser-cut technology, which is implemented at PETEC's plant in Hyogo Prefecture, allows for separating CRTs quicker and cleaner than before. With this highly-efficient technology, Panasonic is poised to respond to the increasing demand for recycling used CRT TVs, tons of which are expected to be thrown away as the shift to digital terrestrial broadcasting is scheduled for completion in 2011 in Japan.

As different types of glass are used in the front panel and funnel, it is essential to separate them without mixing for recycling. The conventional method uses an electrically heated wire around the joint area of the front and funnel to separate them. However, this method not only requires time for the heating process but causes thermal stress fractures by the local heating, requiring manual corrections to clean the cut surfaces.

Panasonic's CRT recycling technology utilizes [laser](#) radiation to drastically reduce the processing time with much less manual work, allowing one tube to be processed in 50 seconds, three times faster than the previous method. The laser head of the innovative system has a "surface profiling" function to maintain a constant distance between the focal point and surface of the glass. Coupled with the "radiation energy" control adjusting [laser beam](#) light intensity to the circumferential

velocity, the system achieves a high quality cut with no mixing between the front and funnel glass.

Moreover, Panasonic's laser cutter is fully automated to measure the size (from 14 to 36 inches) and types (normal and wide) of CRT TVs and process with the [laser](#) conditions (38 different sets of conditions) suited to the size and type of each CRT.

Source: Panasonic

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