



Exclusive: World first in CRT glass recovery

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WEEE Recycler SWEEP Kuusakoski has acquired the world's first industrial furnace capable of recovering pure glass and lead from glass cathode ray tubes (CRT) used in televisions and PCs.

The waste electrical and electronic equipment (WEEE) recycler is the first to buy the furnace from Nulife Glass for commercial use. It is expected to be up and running in around six months' time.

The Lead Extraction Furnace is thought to be a breakthrough for the WEEE industry which has struggled to find a solution to recycle hazardous CRT glass ecologically since world demand switched to flat-screen televisions.

SWEEP's contracts manager Justin Greenaway said: "CRT glass has been a huge headache for the industry because it's very difficult to discard. Having this furnace available is a big jump towards genuine sustainable recycling for the industry."

Television sets containing CRT glass are no longer recovered in a closed-loop process to make new sets. Large electrical goods manufacturers have been closing plants in response, meaning end-of-life solutions for the glass have diminished. But there is set to be an influx of the televisions as people recycle more WEEE and replace old sets.

The furnace will be able to separate and recover the glass and lead. It works by heating the glass to over 1,000 degrees centigrade. By adding a compound, the two materials separate with the lead sinking to the bottom and the glass rising to the top.

SWEEP will sell pure lead to industry, while the glass can be made into decorative pebbles and sold through retailers, such as garden centres. These pebbles have already achieved 'End-of-Waste' status with the Environment Agency.

Inventor of the furnace solution and founder of Nulife Glass Simon Greer said he came across the idea for developing a way to recycle CRT glass 17 years ago when he was working with a bundle of end-of-life computers. For the past year, SWEEEP Kuusakoski has been working with Nulife to perfect the prototype furnace that he has built at his site in Manchester.

Comment: SWEEEP Kuusakoski managing director Patrick Watts



Sweep Kuusakoski MD Patrick Watts

No-one has had a problem with recycling televisions in the past because glass went into new televisions.

Four years ago, people would actually buy the glass from us because there was demand for the new CRT televisions but slowly this price has moved down from a positive to a negative to the point where, as demand for the glass decreased, it would now cost us £80 per tonne to have it processed to make it suitable for CRT re-use. This price is only ever-increasing as glass demand goes down.

Reuse of this glass in new televisions is dying. The costs of flat screen televisions, which do not use leaded glass, have been coming down in price so that, in some cases, they cost the same as the CRT televisions. Flat screens also use less energy, so they are a lot more attractive in countries where energy is limited.

Meanwhile, people manufacturing the televisions, such as Samsung, are closing down some plants.

So what do we do? Dumping it in landfill is very expensive because the material is hazardous and we need to recycle because the WEEE industry has recycling targets to meet. So that is why we have invested in the furnace. I am very happy that the furnace will provide a solution for the WEEE industry.