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CRT Recycling

Overview

Cathode Ray Tube (CRT) televisions and monitors make up a significant portion of the global electronic waste stream. They possess nominal commodity value, and because they contain leaded glass, CRT devices are difficult and costly to recycle. As a result, CRTs are often exported to be dismantled and discarded in regions with substandard environmental protection and labor laws.

ECS Refining offers one of the few complete domestic solutions for CRT devices and boasts the most sophisticated, full-circle recycling process in the world.

CRT Dismantling

The first stage in ECS Refining's CRT recycling process is to separate the bare cathode ray tube from its enclosure. The glass tubes need to be in tact when they enter the glass separation stage, so monitors and televisions must be dismantled manually. Once the bare CRT has been removed, the remaining components enter the [electronics recycling](#) process where they are shredded and separated into various commodity types including plastic, copper, printed circuit board, and steel. These are sold into secondary markets to be remanufactured into new products, and the bare cathode ray tube moves on to be further refined into clean glass.

CRT Glass Separation

The second stage in the CRT recycling process utilizes a proprietary technology that separates the lead-bearing glass (known as the funnel) from the clean glass (known as the panel). This CRT glass separation process is highly efficient and allows ECS to isolate the glass types with unprecedented accuracy. The panel glass, which is high in quality, can be refined and reused for a number of applications, including the automotive, fiberglass, bead, and lighting industries. The leaded funnel glass proceeds to the final smelting stage where the lead is removed.

CRT Glass Smelting

The final smelting stage is similar to the [secondary lead smelting](#) process that many other recyclers use in that the lead-bearing funnel glass is heated to a molten state so the lead can be extracted. Once it has been extracted, the lead is formed into ingots and sold as commodities. However, unlike the other leaded smelters, this process does not result in useless slag that must be discarded in landfills. Instead, ECS Refining "re-nourishes" the melted glass after removing the lead. This proprietary process produces clean, new glass that can be used for countless applications.

Please [contact us](#) to learn more about our CRT glass process.


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