

Shredder revolutionises recycling recovery rates for WEEE specialist



Some complex projects don't always go 100% right first time. But, thanks to the knowledge and tenacity of the UNTHA UK team, WEEE recycling specialist Altech now has a comprehensive shredding system which has maximised recyclate recovery and revenue...

Overview

Company: Altech trading company

Shredder: UNTHA RS100

Input Material: WEEE

Output / Goal: WEEE recycling

Altech Trading Company is a WEEE (Waste Electrical & Electronic Equipment) recycling specialist with more than 30 years' industry experience. Predominantly handling redundant telecoms infrastructure and IT devices ranging from servers to circuit boards, Altech's secure facility in Southend-on-Sea provides a turnkey WEEE recycling service, from collection to disposal.

The company's focus is to ensure legislative and environmental compliance for utmost peace of mind for clients.

Typically processing 2,500 tonnes of WEEE per year, Altech also works hard to maximise recycling rates for optimum sustainability and revenue yield.

Acknowledging the value of the composite materials found within waste electronic equipment, Altech had sought to mechanically break down some of its WEEE streams, to liberate the high-worth recyclates inside. In conjunction with the manual stripping of high-grade units, this approach would also enable the sorting and segregation of varied material types, to aid onward recycling.

Altech's first machine investment was a second-hand hammer mill. However, when up and running, it soon showed its limitations. Further marketplace research therefore brought the team to UNTHA.

Renowned for engineering robust shredding technology that can handle complex applications with ease, Altech was particularly interested in the high torque, slow speed design of UNTHA's four shaft machines. It seemed that the precision cutters and screen would achieve a more refined shred than if the WEEE was simply shattered with the hammer.

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UNTHA
shredding technology



Although several brands were assessed during the research phase, UNTHA's pitch impressed Altech and the RS100 was installed soon after.

On the basis of the requirements outlined during initial discussions, UNTHA's Austrian headquarters specified what it deemed was the best-fit blade configuration for Altech's complex WEEE application. But as the albeit heavy duty shredder processed the varied and complex waste streams, the cutters became far less effective after 400 hours.

UNTHA's WEEE shredding specialists therefore visited the site to re-evaluate the machine set-up. A new cutter configuration was devised and installed and, more than 12 months later, the blades were still in successful operation.

Now, Altech has a comprehensive WEEE shredding system in place which feeds the downstream segregation equipment with a high quality, homogenous fraction that can be separated with ease.

Devices ranging from modems and servers to computer towers and telecoms modules are all processed in the RS100, at a rate of up to 1.5 tonnes per hour. The machine's capacity would allow for greater throughputs but with a keen eye on quality,

Altech is keen to not overwhelm the next-step kit within the plant.

The particle size can be adjusted according to the particular screen configuration utilised at any given time. When the WEEE fraction exits the discharge conveyor, it then travels through a series of sophisticated equipment including an overband magnet to remove ferrous metals, an eddy current separator to remove the circuit boards from non-ferrous materials and an optical sorter to finally clean anything that the ECS hasn't already separated.

High quality material streams are then sent for recycling, with steel and aluminium handled in the UK for example and precious metals refined in Germany.

"Whilst this project was far from straightforward, I am delighted that we now have a sophisticated, easy-to-use shredding system in place that has improved our recyclate recovery rates and presented us with new business opportunities. We're now processing WEEE that would have been uneconomic to handle without this UNTHA shredder on hand, which means more projects, reduced costs and greater revenue yield."

Colin Warren, Managing Director, Altech

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