Squeezing More Value from Scrap

DEPARTMENTS >> TECHNICAL TIPS

How briquetting can bring extra value to recycling operations. As the technology and performance of briquetting have advanced, so have the potential benefits that it holds for recyclers and scrap processors.

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At its most basic level, briquetting is a process that compresses metal scrap and waste into compact, easy-to-manage round blocks (briquettes) with densities and resale values that rival those of solid metals. The idea of briquetting is not new – it has been around for more than 50 years – but the technology and benefits of using it have evolved greatly during the years. For example, old-style briquetting machines were big, loud, and high-maintenance. Today, briquetting systems made by companies like RUF are just the opposite. Engineering of RUF briquetting systems are specifically designed to run reliably and efficiently, delivering the same or better production rates while using less horsepower. The technological advancements we have made allow us to design machines that use innovative hydraulics and have smaller footprints that are easier to integrate into existing operations.

As the technology and performance of briquetting have advanced, so have the potential benefits that it holds for recyclers and scrap processors. Briquetting boosts the bottom lines of recyclers by adding value to the waste stream. For a relatively small investment, briquetting lets recyclers get more, higher quality product to mills more efficiently, reducing energy, labor, and transportation costs while increasing revenue.

Briquettes provide a degree of quality control to recyclers that is not possible with loose chips and other swarf.

Benefits of Briquetting

Flexibility: RUF briquetting systems can accommodate a wide range of different ferrous and non-ferrous materials, including steel, cast-iron, aluminum, copper, brass, bronze, magnesium, titanium, zinc, and more. In addition, they can accept them in practically any preprocessed form of swarf – the chips, turnings, filings, shreds, and shavings that any recycler may get from manufacturing operations. If it is metal, it is briquettable. RUF briquetters can even squeeze value out of the metal found in sludge and metalworking fluids (MWF).

Quality Control: Briquettes provide a degree of quality control to recyclers that is not possible with loose chips and other swarf. The compression of loose materials into briquettes forces many excess fluids and other contaminants out, creating a more homogenous product that is denser, less prone to corrosion, and more desirable to foundries and other re-users. This makes the recyclers' scrap more marketable, salable, and profitable. In addition to the scrap metal itself, if there is enough extraction and collection of MWF from batches of loose swarf from a particular source, it may be resalable back to the supplier or to other interested processors or manufacturers that have a need for it.

Increased Resale Value: Mills and foundries are in business to make money. It is that simple. Therefore, if a recycler can provide them with a product that is purer, denser, and as ready to melt as possible, they will pay a premium for it. Briquettes do all of that and more. Briquettes make life easier for mills and foundries because they are cheaper and simpler to transport, store, and melt than loose scrap. This saves money and increases profit margins in the end. Just imagine the savings foundries realize when they can place scrap that closely mimics the properties of solid metal directly into furnaces, without the special preparations often required for loose materials prior to charging. Briquettes also significantly reduce losses to oxidation and filter dust in furnaces. In light of these advantages, it is no surprise that foundries are willing to pay a recycler more for briquettes than loose scrap.

Storage & Logistics: Condensing tons of loose scrap metal into easy-to-manage, stackable briquettes makes a world of difference on recyclers' storage and logistics operations. In fact, some of the most striking benefits that briquettes offer come through time, money, and space savings associated with these areas. Briquettes allow recyclers to palletize their product before warehousing or shipping to mills and foundries – reducing volume by up to 20:1, meaning that the product delivered to market is significantly heavier and more valuable, and that, when compared to loose scrap, more of it can be transported or stored at the same or reduced cost. It is also much cleaner in terms of actual physical messiness (it is easier to manage a pallet of briquettes than overflowing bins of swarf) and residual chemicals. Because of forcing out most MWF and other contaminants during the briquetting process, less planning and costs accrue in safeguarding against potentially negative environmental impacts during shipping, processing, and storage.

RUF briquetters can squeeze value out of the metal found in sludge and metalworking fluids.

Energy, Maintenance, and Labor Savings: RUF briquetting systems are engineered for energy efficiency and built to last. The systems are all custom-outfitted to user specifications and deliver processing capacities of up to four tons per hour with very low wear and maintenance costs over the machine's lifetime. In addition, because they can process as much loose scrap as larger, more energy-intensive machines with less horsepower and smaller footprints, the savings on utilities alone can be significant.

On the labor front, because RUF briquetting systems can be set up to run automatically, 24 hours a day, with little or no human oversight, manpower can be used in more productive ways than machine watching, reducing labor costs and getting more from operators and technicians.

What It All Means

Briquetting is a cost-effective method for recyclers to handle and prepare loose scrap of practically any kind for resale to mills and foundries. It adds value to the waste stream by creating a higher-quality product is similar to that of solid scrap, transforming carts full of messy chips and other assorted swarf into pallets of neatly stacked, more marketable briquettes. RUF briquetting systems can help recyclers and processors achieve these benefits, as well as cost savings in storage, logistics, utilities, maintenance, and labor with custom-built systems tailored to their specific needs.

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Located near Cleveland in North Olmsted, OH, RUF is the North American subsidiary of RUF GmbH & Co. K in Germany – a global pioneer of advanced briquetting systems for more than 40 years. The quality and performance of its briquetting systems are proven worldwide with more than 3,000 currently in operation.