



STEINERT HELPS HUFNAGEL PREPARE ITS NEW COMMERCIAL WASTE SORTING FACILITY

To meet today's needs and future opportunities

CHALLENGE

With a total processing capacity of 300,000 tons each year, including over 100,000 tons of commercial waste, Hufnagel Service is a European center for innovative waste treatment. With the global trend toward increasingly stringent recycling regulations, Marc Hufnagel, the company's Managing Director, knew that Hufnagel would need to continue to build on its history of innovation to keep up. "It was important for us to meet the requirement of the new German commercial waste ordinance, it was most important that we were able to hit the required reuse and recycling rates as best we can."

With a wide variety of materials in the company's waste flow, Hufnagel tested his material at STEINERT's test plant to ensure his new facility was optimized for high-quality sorting of many different materials.

STEINERT was on board right from when we started designing the plant. And the huge advantage of working with them was that we were able to run extensive trials in the STEINERT test center with our own material.

MARC HUFNAGEL
Managing Director
Hufnagel Service GmbH

CASE STUDY: Waste Recycling
CLIENT: Hufnagel Service
www.hufnagel-service.de

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PROCESS

The trials took place at the STEINERT test center, which enables material tests on an industrial scale, so the quantities and preparation stages match those of a real material recovery facility. Testing is very realistic and simulates the customized requirements, feasibility, and return on investment for each specific sorting facility. Using the test results, STEINERT was able to recommend the variety of technology needed to give Hufnagel the flexibility it needed for success.

+ The UniSort PR EVO 5.0 Near Infrared (NIR) sorting machine was recommended for its particularly high spectral and optical resolution. STEINERT's NIR machines sort materials such as wood, paper, cardboard cartons, various plastics, films, and minerals. This allows Hufnagel to separate wood from the waste flow while also detecting and separating different types of wood—including chipboard, OSD or MDF, multiplex, fresh-coated, or varnished wood. Metals are separated using magnets and STEINERT Eddy current separators. "Alongside ferrous and non-ferrous metals, we also sort wood, paper, cardboard, and plastic. Both hard plastics and films. And we also process them both in mixes and sorted by pure grade fractions." Hufnagel says.

+ The UniSort Black was recommended for its ability to detect and separate dark impurities from other materials. Specially designed for this particular challenge, it cleans out black foreign matter like rubber, plastics, and leather from mineral products consisting of stone, ceramic, demolished concrete, and other materials that can be identified by near-infrared.

+ STEINERT's classic products also play a role in Hufnagel's sorting plant. The STEINERT Eddy C® non-ferrous metal separators sort all non-ferrous materials like aluminum from other materials, and standard overhead suspension magnets separate out iron.

RESULTS

Depending on the input material and market conditions, the Hufnagel company decides which products to recover from the waste flow. The UniSort PR is used to separate polyolefin and other 3D plastics and to separate the fraction containing paper and cardboard, helping Hufnagel achieve a purity of up to 95%.

"It is important to us that we can manufacture sorted products to a quality level that means they can be integrated into the circular economy well and on a sustained basis, and thanks to the STEINERT units that we use we feel very well-equipped for the future," Hufnagel says.



“In our plant, we also use a UniSort Black which allows us to sort out dark objects and is particularly useful in eliminating impurities such as rubber or dark plastics when cleaning our minerals. And it delivers excellent results.”

MARC HUFNAGEL
Managing Director
Hufnagel Service
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