

SUCCESS STORY

Drying solution for producing
SRF (Solid Recovered Fuel) from
municipal solid waste at
Swindon Commercial Services, UK



SEPARATION FROM WASTE TO ENERGY

MAKING FUEL FROM WASTE A BURNING ISSUE

The background of the entire page is a photograph of an industrial facility. It features a large, multi-story blue structure with various pipes and walkways. A prominent, tall, silver-colored metal chimney stands in the center-right. To the right of the chimney is a large, grey, diamond-patterned structure. The foreground shows a paved area with some metal barriers and safety cones. The sky is clear and blue.

ANDRITZ

ENGINEERED SUCCESS

The challenge

Create valuable fuel from widely diverse waste

For the community of Swindon in the UK, an investment in a state-of-the-art municipal solid waste plant was a major commitment for the future.

Swindon Commercial Sales appointed Machinex for a turnkey solution which separates and processes the material to produce RDF and SRF. This turnkey facility represents a major step forward from the unsustainable landfill waste disposal methods of the past. The goals for the new municipal waste plant were ambitious:

- Process 48,000 tonnes per year of municipal solid waste as well as commercial and industrial waste
- Separate materials to produce refuse-derived fuel (RDF) and solid recovered fuel (SRF) for sale and use in industrial applications

A key part of this challenge was to find the right drying solution for RDF: one that is capable of handling light materials with widely varying moisture content and bulk density and producing fuel products consistently according to strict standards.



MORE THAN
95%
AVAILABILITY
OF DRYER

100%
COMPLIANCE WITH AIR
QUALITY STANDARDS

<20%
MOISTURE CONTENT
OF SOLID RECOVERED
FUEL (SRF)

ANDRITZ rotary drum dryer

Our solution

Flexible drying technology for consistent high-quality results

Based on its special features and several market references, an ANDRITZ Vandenbroek drum dryer was selected as the optimal drying solution. The main benefit is the Vandenbroek's proven ability to achieve SRF standards of 15-20% moisture content while creating a low amount of exhaust gas. The pre-dried materials can fluctuate between 50 and 20% moisture content, so careful process and equipment selection is needed to achieve consistent results. Due

to the special drum internals (MPS Multi Pass System), controlled product moisture content is achieved continuously. A Regenerative Thermal Oxidizer (RTO) was added to ensure efficient exhaust gas treatment in order to remove contaminants from discharged gases. The installed solution, completed in May of 2014, is able to achieve 12 t/h of throughput thanks to the drying system that ensures the flexible drying time needed for the fluctuating input materials.

Results

Less than 20% moisture with 95% availability

Following the performance tests, the drying plant has successfully achieved all its objectives, including SRF standards of less than 20% moisture content with more than 95% dryer plant availability. Additionally, drying of RDF results in a high calorific value, which makes the product an attractive alternative to several fossil fuels. For the community of Swindon, the result is now a consistent stream of high-quality RDF products,

along with air pollution control due to efficient off-gas treatment methods. In addition to reducing massive quantities of local waste, the end fuel products will provide valuable revenues to offset the costs of their investment. Currently, the plan is to export these products for sale in Germany until other industries in the UK are able to follow their lead towards the future of renewable fuels.

"ANDRITZ has a unique combination of references and proven RDF drying solutions. Their drying technologies and expertise have been key to this very successful installation."

JONATHAN MÉNARD

Sales engineer, Machinex Industries, Inc.



WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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