Facility: MRF & RDF Plant

Input Stream: General Waste

Company: Blakeley’s Waste Management, Wigan

O.Kay Engineering were chosen by Blakeley’s Waste Management to design and install their new MRF for General C&I waste. The facility produces high quality recyclables and an RDF fraction for the European Energy Market.

Key Facts

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>General Waste</th>
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<tr>
<td>Throughput</td>
<td>20tph</td>
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<tr>
<td>Recycling/Recovery rate</td>
<td>70% Recycling. 30% Recovery as RDF</td>
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<tr>
<td>Output</td>
<td>Mixed Papers, Cardboard, Mixed Plastics, Ferrous Metal, Non Ferrous Metal, Polythene, RDF, wood</td>
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<td>Key Equipment</td>
<td>Bag splitter, trammel, ballistic separator, Fines Screen, Air box, 5 x Titech, Picking cabins.</td>
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In every aspect the plant uses latest technologies to reduce operating costs and boost performance. O.Kay engineering and Blakeley’s worked in partnership in design contributions and the selection of the equipment. The facility gives Blakeley’s the ability to increase the rate of recovery of their general waste. The investment has enabled Blakeley’s to provide a greater recycling service to their customers and increase their customer base, so there has been a double return from the new plant.

Graham Knight, Managing Director for Blakeley’s Waste Management is “incredibly pleased with the process equipment installed by O.Kay Engineering. The plant operates exactly as promised. O.Kay Engineering took time to listen to our requirements and understand our business. Their attention to detail throughout the design phase is demonstrated by the delivery of a waste processing facility that performs over and above our expectations.”

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The Blakeley’s MRF has a Siemens SCADA control system across all the equipment. In addition to the standard main SCADA computer within the control room, the Operations Manager is also able to use a remote screen across the plant in order to change the settings on each piece of equipment and optimise the plant performance depending on the waste flowing through the facility. This ensures optimum plant performance at all times.

Process Description

Reception, trommel & oversize
1. Waste Reception Area
2. Bag opener and metering drum
3. Presort loading conveyor
4. Presort cabin
5. Trommel feed conveyor
6. Trommel (xxmm & xxmm & xxmm)
7. Trommel 350mm return line
8. Trommel oversize sorting line
9. Oversize material for RDF

Fines Treatment
10. Fines transfer conveyor
11. Overband magnet
12. Finger screen (10mm)
13. Fines Air Knife

Mid Fraction
14. Overband Magnet
15. Mid fraction transfer conveyor
16. Ballistic Separator
17. 2D line (from ballistic separator)
18. 3D line (from ballistic separator)
19. Quality control lines for all products
20. Control Room
Process description continued....

State of the art optical sorting technology treating the 2D and 3D fractions from the ballistic separator.

In total there are 5 Titech machines working to produce 6 high quality products from a dirty, and varied waste streams.

The Titechs’ positively sort to produce the following products:

- Mixed plastics
- Wood
- Mixed paper
- Card
- Jazz Film
- Natural Film

The by-product of the separation is RDF which is baled and wrapped on site for sale into the European Energy Markets.

Life-long After-care, Servicing and Same-day Support

At O.Kay Engineering, we don’t want to sell you just a new machine/plant and then disappear. We believe in life-long customer after-care, service and support. Whether you want just a friendly chat about the best way to maintain your equipment, or you would like us to come out and service your kit, you can call O.Kay Engineering around the clock and speak to an engineer within minutes.

For emergencies and breakdowns, we have our own modern UK manufacturing facility from which we run our large support fleet and from where we can respond quickly with the supply of parts and same-day solutions.

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