



PLASTIC FANTASTIC

BY KATY ATTWOOD

Successful trials of state-of-the-art plastics sorting technology have been completed by Intercontinental Recycling Ltd (IRL) at their plant in Skelmersdale, Lancashire. Installed in October 2007 by German manufacturer Stadler, the plant separates post-consumer plastic bottles into the various polymers for further reprocessing into clean, recycled resources for re-use in various critical applications.

Receiving material from kerbside collections, bring schemes, municipal and commercial collections UK-wide, the Skelmersdale plant compliments IRL's plastics processing capabilities, as part of a group of companies already successfully operating facilities worldwide. This places them at the forefront of the resource change culture in the plastics marketplace.

"We have a number of plants around the world," commented Ravi Chanrai, MD of IRL, "but as each area has a unique waste stream, so all our plants are different. This plant at Skelmersdale consists of two processing lines, each delivering about two tonnes of clean, recycled polymer per hour ready for manufacturing into new products."

Concerned by the amount of plastic material going to landfill and for export, IRL saw a gap in the market for strategically situated sorting plants for local recyclate collections.

Ravi continues, "We are passionate about what we do and have found that exported material is not always separated properly making for a lower category end product. Recycling plants close to collection and bring points reduces the carbon footprint of the recycled material, which, in our view, makes economic and environmental sense."

The initial separation phase, critical for producing clean, high quality raw material ready for manufacturing into a wide variety of recycled plastic products, consists of a feeder and incline conveyor to a small sorting house where any large contaminants can be removed from incoming material. Following this, material is passed through magnetic and eddy current separators for the recovery of metals before being transferred to the Stadler manufac-

tured STT 2000 twin-deck ballistics separator.

Ballistics separation is the ideal technology for the sorting of material by size, shape and dimension and gives an even distribution of material in preparation for optical sorting further along the processing line. IRL's STT 2000 ballistics separator gives a three-way split between flat materials (paper/card/film), screened fines and three-dimensional rolling fraction ready for optical sorting. The rolling fraction is cleaned again on the second screen surface.

Constructed with 6mm steel plate for the side walls and support frame made of 40mm steel plate, the STT 2000 is an extremely robust machine and ideal for light packaging waste; all mixed paper; film and hollow bodies; municipal, commercial and industrial waste.

The machine consists of six longitudinal, rigid and perforated screening paddles forming an inclined table on the top deck and a further six paddles on the bottom deck. The paddles are mounted on crankshafts which move in a circular path relative to each other throwing material upwards and forwards. Depending on the physical properties, material either bounces down the inclined deck (rolling containers) or is carried up the deck (film/paper). The paddles are constructed from 4mm steel with Hardox plating for high wear resistance and can be adjusted manually to suit incoming material. The action of the paddles helps to remove adhesions on materials and the modular shaft design reduces costs for replacement and wear parts.

The rolling fraction at IRL consists of plastic bottles ready for optical sorting by polymer. The flat fractions consist of paper, cardboard, film

and other such contaminants and the fine fraction consists of any glass, stone or other small contaminants that may be present.

"We believe everybody in the UK wants to recycle but they want to know the materials they diligently save are being used to produce useful products rather than being exported. The plastics recycling market in the UK can only increase as manufacturers come under ever greater pressure to use more recycled materials," Ravi explains.

"Stadler are a great supplier and we have found their engineering quality and back up service to be excellent," Ravi concludes.

STT 2000 TWIN-DECK BALLISTICS SEPARATOR

The STT 2000 twin-deck is one in a range of three ballistics separators manufactured with typical German engineering excellence by Stadler. With paddle angle adjustment of between 10° and 25° and two working areas of 8.4m² each, the STT 2000 twin-deck has a drive output of 2 x 4kW, weighs 8 tonnes and can achieve a throughput rate of 90m³/h.

Stadler, renowned world-wide for their engineering excellence, are manufacturers of turn-key sorting plants for co-mingled recyclables, MSW, RDF, paper/card and plastics; ballistics separation machinery; trommels and conveyers. Stadler offers customers the opportunity to test their material at the Stadler Technology Centre in Altshausen. The material is run through a particular machine and the resulting fractions analysed against the customer's needs. Wilson Recycling Machinery Ltd is the exclusive UK agent for Stadler machinery.