Ultimate Fiber and Film Sorting

AMSTERDAM, Netherlands – September 09, 2016 – Bulk Handling Systems (BHS) is excited to announce its plastic film identification and removal system, utilizing NRT’s FiberPure™ Optical Sorter with the option of a Nihot pneumatic extraction system. Plastic film has long been a problem in materials recovery facilities (MRFs), and these advanced technologies effectively targets either plastic film or fiber, depending on the material mix and customer requirements.

The combination of the NRT FiberPure™ Optical Sorter and Nihot air extraction system create a one-step approach, enabling operators to better capitalize on the evolving mix of fiber and film than with standalone air or optical equipment. This solution significantly lowers labour costs and maximizes the purity and recovery of both fiber and plastic film.

Why was this solution created?
The combination of the NRT FiberPure™ Optical Sorter and Nihot air extraction system was designed to fulfil the market’s undelivered demand for a technology solution to separate plastic film from high volumes of fiber with high purity rates on both fiber and film. In this application a stand-alone NRT is capable of detecting and ejecting on film or fiber and creates a high quality split between these materials. When the integrated Nihot air extraction system is installed it will also upgrade the ejected materials with a density split creating an even more pure fiber and film fraction. The combination allows operators to use their existing sorting process for two- or three-dimensional sorting as it is easy to retrofit, the Nihot air extraction system can also transport materials to any desired position in the process, making this automated solution an easy retrofit with a fast return on investment.

This unique combination of sensor-based sorting technology and air technology is helping recycling companies throughout the world achieve ground-breaking recovery and purity results in some of the most complex and challenging plastics or fiber recycling applications. UK-based Waste Management company Biffa chose BHS as a partner for adding a specialized 8-tph Glass Clean-Up System and Container Clean-Up System to its existing Materials Recovery Facility (MRF) in Aldridge, UK, greatly increasing the quality and recovery of glass, fiber and clean containers. Biffa Divisional Engineering Manager Neil Arlett reports the Container Clean-Up System, featuring a NRT FiberPure™ Optical Sorter and Nihot air extraction system, paid for itself in just 9 months’ time. The NRT FiberPure™ Optical Sorter removes an additional 3 tph of fiber from the existing container line, increasing mixed paper recovery as well as the purity of containers with the result that the container line manual sorting was significantly reduced. Based on the results of the Biffa Aldridge facility Biffa has now ordered a second NRT FiberPure™ Optical sorter to upgrade their Edmonton facility as well.
**Solution benefits:**
- Creates a clean plastic film and fiber commodity
- Reduces labour costs
- Improves separation efficiency
- Recovers high caloric value commodities
- Allows operators to achieve high throughput
- Minimal footprint allows for an easy retrofit and saves valuable space

**BHS Process**
From Single Stream to MSW, all 2D material coming from a BHS Polishing Screen is fed to the NRT FiberPure™ Optical Sorter using the entire width of the acceleration infeed conveyor. By use of an air curtain the material will stabilize on the belt. The NRT is in this case setup to target film depending on the material stream to maximise recovery. This is the optimal point in the BHS operation process for the simultaneous identification of film types followed by the extraction of these materials. The NRT detects and ejects material in flight and the plastic film fraction is aspirated via an opening above by a Nihot air extraction system. Non-ejected material (i.e. paper) lands on a default conveyor and heavier plastics are captured in the far chute (such as partially filled plastic bags). At the end of the process the clean plastic film is captured in a Nihot Rotary Air Separator (RAS) which separates the light material (fractions) from the conveying airflow and discharges the materials into a bay or onto a conveyor.

1 BHS Polishing Screen  
2 BHS Fiber Pure™ Screen  
3 NRT FiberPure™ Optical Sorter  
4 Nihot pneumatic extraction system  
5 Nihot Rotary Air Separator (RAS)

**BHS to Showcase Optical Sorter at RWM**
The NRT FiberPure™ Optical Sorter will be on display at RWM in Birmingham, UK. Please visit BHS when you would like to know more at hall/stand: SS30-T31.
Bulk Handling Systems (BHS)
Bulk Handling Systems (BHS) designs, engineers, manufactures, and installs unparalleled sorting and handling systems throughout the world for the recycling, solid waste, C&D, C&I and power generation industries. BHS has united premium brands to develop some of the most advanced and highest performing material recovery facilities (MRFs). Together with affiliates Nihot (air separation) and NRT (optical sorting) a choice for customers providing industry leading end-product qualities, low residue and the highest throughput rates available.

www.bulkhandlingsystems.com
nrtsorters.com
nihot.nl

Further Information:
Wendy Wiedijk
Phone: +31 (0)20 58 220 30
wendyw@bhsequip.eu