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Spain: Bulk Bag Discharger Speeds Operation

A Spanish plastics company was able to reduce manual handling using a Bulk Bag Discharger.

The company collects, sorts and recycles plastic scrap, which involves compounding and pelletizing of resins using a mineral additive in powder form. Previously, operators manually dumped 25 kg sacks of the mineral powder (particle size of 10 µm) into a hopper from which the material gravity fed into an extruder along with the recycled material. The process was slow, laborious and dusty.

“Now, the powder is discharged automatically from 700 kg bulk bags and conveyed to the extruder pneumatically at high rates, with less labor and little or no dust using a bulk bag discharger and a pneumatic conveying system from Flexicon,” the provider underlines.



Photo: Rapp Advertising/Flexicon

The process

Once a forklift positions a bulk bag alongside the Bulk-Out model BFH-C-X bulk bag discharger, a hoist and trolley suspended from a cantilevered I-beam lift the bag into position on the discharger frame. The clean side of the bag spout attaches to the clean side of a Tele-Tube telescoping tube by means of a Spout-Lock clamp ring. The tube maintains constant downward tension on the bag as it empties and elongates, promoting material flow into the 226 liter hopper and containing dust.

A Flow Flexer agitation device raises and lowers edges of the bulk bag to promote the flow of mineral powder into the hopper, which is fitted with an agitator to promote the flow

of material into a rotary valve at the pneumatic conveyor's inlet. A Power-Cincher flow-control valve cinches the bag spout concentrically, allowing partially empty bags to be tied off and removed with no leakage. The 75 millimeters diameter, 38 meters long stainless steel conveying line of the Pneumati-Con pneumatic system delivers up to 1,000 kilograms per hour of the material to a filter-receiver and the hopper above the extruder. The mineral powder is separated from the air stream by a filter-receiver that includes a 220 liters capacity receiving hopper. Four air-jet fluidizers in the bottom of the hopper promote the flow of material as a volumetric feeder meters it into the extruder.

System operation is under PLC control, including timed filter cleaning,

starting and stopping the pneumatic conveyor based on level sensor readings, and opening as well as closing of valves.

Flexicon's Bulk-Out bulk bag dischargers – also referred to as bulk bag unloaders, FIBC unloaders and FIBC dischargers – are offered in numerous frame configurations. All dischargers are offered with a broad range of accessories (many patented). “A range of integral flow promotion devices is available, as are dedicated bulk bag conditioners that loosen bulk solid materials that have solidified during storage and shipment, enabling bulk bag unloaders to discharge the material through bag spouts,” the provider points out.

➔ www.flexiconeurope.de

Spanish Facility Uses New Shredder

Spanish waste management company Madegan has commissioned a new shredding system that will enable the family-run business to process up to 20,000 tons of waste per year. The new machine is to boost the capacity and flexibility of its Madrid facility. Following an extensive three year research project, Madegan headed to Austria to visit the global shredder manufacturer Untha and procured the XR mobil-e – a new shredder that has quickly become renowned for its ability to efficiently process a variety of wastes. When fully operational, the shredder will allow Madegan to process a number of waste streams down to a homogenous particle size of 30-40mm. Supplied on tracks and with an in-built conveyor, it can easily be moved around the Madrid site and plugged back in.



➔ www.untha.com