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Sorema's film-to-film recycling technology substantially boosts productivity Polish recycler

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With years of experience in recycling post-industrial waste into polyethylene regranulate, P.P.H.U. ANNA Recykling, based at Celestynów near Warsaw, has now expanded its activities to include post-consumer film recycling.

As demand rapidly started rising for high-quality material derived from post-consumer plastic films, the recycler, who has been in the business since 1995, sensed an opportunity. In 2019, the decision was made to start up a post-consumer waste recycling project.

In collaboration with Sorema, an Italian manufacturer of mechanical recycling systems for plastics, P.P.H.U. ANNA developed and built, among others a purpose-designed flexible washing line that complied the parameters required for the production of high-quality material derived from stretch and post-industrial films, deriving from agricultural and post-consumer films, raffia and jumbo-bags.

The film-to-film recycling line additionally includes various other modules available from Sorema, such as the low speed and high torque hydraulic shredder, a flexible prewashing installation with a high friction module and Sorema's prewashing centrifuge,

to process a wide range of contaminated materials. At the end of the line is a fluff storage unit, which feeds an extruder with a dehumidified material.

Sorema can supply both complete systems and single modules in order to upgrade our systems or already existing systems.

Eastern Europe has always been a good market for Sorema, mainly for technical projects and for medium-high productions, said a company spokesperson, in response to a few emailed questions.

As a result of the new line, PPHU ANNA's productivity expanded well beyond expectation. The line reaches an output up to 1000kg/h of a perfectly decontaminated and granulated material at a competitive quality/price ratio.

What about odour-related issues?

"We have intensive hot washing technologies that remove organic and inorganic surface contamination and that reduce or eliminate odour problems," the company said. "However, as in the case of polyolefins, all odours are completely eliminated with post extrusion treatments of 'odour removal'. These processes are normally provided by extruder suppliers.

The line produces material that is suitable for extrusion on the blown films lines and is currently supply to converters both in Poland and abroad. One customer, Bogucki Folie, is already producing a new B-ECO PE film with a three-layer structure based on 100% recycled material derived both from post-consumer and post-industrial waste - 'thus closing the cycle of the circular economy' said Sorema.