Schwerin, Mecklenburg-West Pomerania: FVH as a pioneer in plastics recycling

FVH Folienveredelung Hamburg GmbH & Co. KG uses heavily contaminated film scraps as a raw material source at its production facility in Schwerin to make high-quality polyethylene plastic pellets. The high demand among customers is confirmation of the sustainable business model of application-oriented specified pellets which are sold under the brand name ecophoenixx®. With the HydroDyn® washing plant technology and an INTAREMA® 2021 TVEplus® from EREMA, 100 per cent of the polyethylene input material can be reused – recycling or rather "reclaiming raw materials" in the sense of a circular economy.

Initial conclusions following the commissioning of the FVH recycling plant in Schwerin clearly show that the brand "ecophoenixx" for specified pellets will establish itself successfully on the European raw material market of the film manufacturing industry. "The plastics are prepared in the HydroDyn washing system from Vecoplan. Here, any heavily contaminated film scrap raw materials which in part also have very thin material thicknesses can be cleaned through specific friction and high-turbulence water flow, and adhesive labels and other pulp removed to leave a max. 5 ppm residual contamination," says Michael Hofmann, Managing Director of FVH. The cleaned and washed shreds are then processed in an INTAREMA® 2021 TVEplus® to make high-quality LD-PE pellets. "The INTAREMA not only fulfils our expectations, it surpasses them," emphasises Hofmann. Thanks to the interplay of a modern cleaning process and the INTAREMA® system, FVH achieves a stable and excellent pellet grade which is already being shipped to customers in silo vehicles. The world's first triple Laserfilter – which achieves a filtration quality of 90 micron with the PE-LD melt and a throughput of up to 2,700 kg/h – was made for the plant by EREMA. "As we only accept cleaned input material for the actual pelletising process in the INTAREMA and it does not have to filtrate any pulp but only residual contaminants such as foreign polymers, we achieve unparalleled quality stability," says Hofmann.

Circular economy as an entrepreneurial mission

Secondary raw material producers are being increasingly confronted with heavily contaminated and more inhomogeneous raw materials from film waste. At the same time, it can be seen that the market price of these raw materials is increasing continuously in order to be able to refinance the

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costs of raw material collection. Due to the current political stance against landfills and in favour of increased recycling, secondary plastics producers and processers are called upon to maintain the value chain of the recycling process through innovative business models. The circular economy is not a buzzword, it is more a political commitment of the European Union. It represents a lever to reduce environmental pollution, cut down energy consumption and use raw material sources which were previously considered to be more or less unprocessable but contain valuable polymers. FVH has demonstrated in an impressive manner that the political efforts are not just theoretical approaches to solutions, they are already being brought to life by a few pioneers. "We are delighted to work with a company like FVH which not only has a proactive approach to the mission of even more sustainable resource management in Europe but also puts it into practice," says Clemens Kitzberger, Business Development Manager for Post Consumer at EREMA. The current order situation at FVH shows that it is on the right track – in the direction of LD-PE plastic pellets with the highest degree of purity. The next step Hofmann is planning is to add application-oriented, certified and specified pellets to the portfolio.

About FVH / ecophoenixx

FVH processes raw materials from waste film in agriculture, trade & industry and household collections to make LD-PE base pellets which – once homogenised and mixed to make specified pellets – are ideal for the production of bin liners, packaging and agricultural films. The plant in Schwerin with a workforce of around 40 employees went into operation in April 2016. The current production capacity is 20,000 t/year of LD-PE pellets. FVH aims to drive forward the use of environment-friendly premium specified pellets under the ecophoenixx brand and sharpen the awareness of large film manufacturers with regard to a closed and economically attractive raw material recovery loop. There are plans to expand the current capacity to 80,000 t/year by the end of 2018 for this purpose.

Photo (from left to right): Stefan Kaiser (Vecoplan), Clemens Kitzberger (EREMA) and Michael Hofmann (FVH) in front of the INTAREMA® 2021 TVEplus® at the FVH recycling plant in Schwerin

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