

EREMA presents the new global innovation VACUNITE at PETnology

New bottle-to-bottle process for food-contact-grade rPET pellets stands out through highly efficient decontamination, compact design and low energy consumption.

Paris/Ansfelden, 27 November, 2018 – With the presentation of its newly developed VACUNITE technology yesterday at the PETnology conference in Paris, EREMA once again demonstrates its role as innovation leader. The Austrian producer of plastics recycling machines brings together its VACUREMA[®] bottle-to-bottle process with newly patented, vacuum-supported solid state polycondensation (SSP) from Polymetrix in this innovation. What makes this combination so special: all thermal process steps take place in nitrogen atmosphere. The result is rPET pellets which are unique in quality and far exceed all food-contact requirements.

With VACUNITE EREMA expands its portfolio for PET recycling solutions. This technology is the answer to the challenges which PET recycling will have to face in the future. Christoph Wöss, EREMA Business Development Manager for the bottle sector, sums up these challenges as follows: "The growing commitment in society to handling plastics in a responsible way means that both political requirements and voluntary pledges of major beverage brands call for a significant increase in the amount of recyclate in end products. To fulfil these requirements, even more material in general and with varying quality due to different collection systems has to be recycled while, at the same time, the big brands are becoming even stricter with their requirements regarding the recyclates produced.

The best technologies in one plant

The focus of the next development of the PET recycling technology was on improving quality even further – which has been accomplished in impressive style. "Our new development brings together the best of what is technically possible," says a convinced Wöss. The process is based on the combination of proven VACUREMA[®] technology which has been enhanced for this application and the newly patented, vacuum-supported nitrogen SSP from Polymetrix. All thermal process stages take place in nitrogen atmosphere, largely eliminating flake and pellet discoloration and reliably removing additives which could lead to undesired reactions in the melt. Another benefit of VACUNITE: the vacuum support cleans the nitrogen which means it can be returned to the previous processing stage and nitrogen consumption is reduced as a result. Any remaining dust

particles are removed from the pellets before filling to avoid preform contamination. "Using vacuum support and nitrogen atmosphere creates rPET recyclates which far exceed all existing food contact requirements, even those of the major beverage brands," emphasises Wöss.

But VACUNITE is special not only because of the exceptional quality of the output material. The recycling technology also stands out through its comparatively compact build, low energy consumption and, compared to vacuum SSP systems, considerably lower maintenance. Depending on machine type, 50 to 60 square metres of floor space is sufficient for the SSP part. The height and substructure also have less impact on the dimensions of the plant building compared to other SSPs. The energy consumption of VACUNITE for the entire production process from the flake to the final pellets amounts to a mere 0.35 kWh per kg.

"With VACUNITE we offer our bottle-to-bottle customers a new technology in addition to the existing portfolio which sets new standards at all levels from technical performance to rPET quality," says Manfred Hackl, CEO EREMA Group with conviction and he adds: "There is a great amount of interest. A first customer in Europe has already decided to invest in a VACUNITE recycling plant prior to the official product launch."

Photos:



Christoph Wöss presents VACUNITE at the PETnology conference in Paris. Photo credit: PETnology



In VACUNITE EREMA brings together its VACUREMA® technology with the newly patented, vacuum-supported nitrogen SSP from Polymetrix. Photo credit: EREMA

EREMA Engineering Recycling Maschinen und Anlagen GmbH

Since it was founded in 1983, EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H has specialised in the development and production of plastic recycling systems and technologies for the plastics processing industry and is regarded as the global market and innovation leader in these sectors. The product portfolio of the Austrian plastics recycling experts covers:

- Plastic recycling systems for standard applications and production waste
- Plastic recycling systems for heavily printed/contaminated post-consumer waste
- FDA-approved PET recycling systems VACUREMA® and VACUNITE (e.g. for bottle to bottle recycling)
- Inline PET applications (e.g. for fibre, film and strapping)
- COREMA® plastic recycling system for the production of highly filled and customised compounds
- Fully automatic, self-cleaning melt filters
- Pelletising systems

EREMA Group

The companies EREMA – with the two business units POWERFIL and KEYCYCLE – 3S, PURE LOOP and UMAC are part of the EREMA Group. Besides subsidiaries in the USA, China and Russia, the company group has around 50 representatives in all five continents as a reliable network to realise customised plastics recycling solutions for customers around the world. Around 500 people in total now work for the Austrian company group which is headquartered in Ansfelden near Linz.

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