

AFRICA - PET bottle recycling in Kinshasa, Congo, with SOREMA technology

SOREMA, a global benchmark for polymer washing and recycling plants, is pleased to announce that a new recycling plant for post-consumer PET bottles has been installed in the Democratic Republic of Congo at OK Plast factory, in cooperation with the Austrian company Starlinger.

SOREMA has here made the sorting, grinding and washing stages, key steps in PET bottle recycling technology. Starlinger recycling technology has provided the pelletizing line for bottle-grade rPET pellets.

OK Plast recycles about 50 tons of plastics waste per day from the city of Kinshasa. The plant has been successfully commissioned and is another step in the continued expansion of recycling in Africa, helping to solve the plastic waste problem and providing new job opportunities for local communities.

Prior to this latest installation in Africa, SOREMA had already built and started washing and recycling plants in Nigeria, Algeria, South Africa, Egypt and Tunisia.

This turnkey plant was built for OK Plast with the aim of producing rPET flakes for food packaging applications. It achieves a useful production of 1,100kg/h of washed rPET flakes starting from PET bottles, which OK Plast receives through a series of collection points installed in different corners of the city of Kinshasa.

This production unit built by SOREMA, contributes to the development in Africa of the circular economy through the Upcycling of rPET, as it is reintegrated in increasing percentages in the production of preforms, bottles and containers for food use.

The Bottle-to-Bottle rPET washing line includes several stages: automatic feeding, prewashing and de-labeling, followed by wet grinding, hot washing, flotation and finally rinsing and drying stages. The line incorporates, on two sorting stages, color and material detectors for both bottles and flakes. Finally, the Sorema-Scada 4.0 digital monitoring system enables efficient local and remote control of the entire line.

The latest development in SOREMA's PET washing plants is the upgrade of the bottle prewash system. This module washes bottles after dry-presorting, removing shrink and no-shrink labels. During washing, all external contamination is removed, which may also include sand and grit in addition to organic material.

The next stage involves grinding the bottles into flakes using water grinder produced by PREVIERO's, PRH series.

The batch cycle hot washing module ensures the highest quality of flakes for BtoB processes with improved separation of organic contaminants and glues, minimizing the consumption of water, energy and chemicals.

After drying and sorting by color, the flakes, thus properly treated, are conveyed to a Starlinger recoSTAR PET iV+ plant to produce rPET high quality pellets suitable for producing new containers intended for direct food contact.

Key to SOREMA's success in recycling plants is its continued ability to monitor the evolution of plastic packaging waste and adapt its technology offerings accordingly.

Sorema can also offer its customers the possibility of complete recycling and washing tests, in its pilot plant at the "Recycling Research Center" - RRC in Alzate Brianza, to determine the mass balance and evaluate the final quality of the pro

