CLOSED LOOP RECYCLING, UK: food-contact approved rHDPE with VACUREMA®

London-based recycling company Closed Loop Recycling began producing food-contact approved rHDPE from milk bottle material in 2008. The existing plant capacity was increased to 4,800 kg/h early in 2014. As in the past, Closed Loop Recycling has remained committed to VACUREMA® technology from EREMA.

The processing steps are made up of high-quality preparation with a hot wash plant from B+B Anlagenbau of Krefeld, Germany and subsequent extrusion with upstream decontamination from EREMA. This process enables Closed Loop Recycling to produce rHDPE pellets from HDPE milk bottles for direct food contact.

Efficient decontamination and extrusion

Two VACUREMA® Advanced 1716 TE systems are used to process the already cleaned HDPE regrind and produce food grade HDPE recycled pellets from it which is then reused in the production of milk bottles. In the course of expansion, Closed Loop Recycling installed what is now the third system of this kind, each with a capacity of 7,000 t/year. The deciding success factors of VACUREMA® are above all the highly efficient, food contact compliant decontamination upstream of the extrusion process and additional extruder degassing. The patented pre-treatment of the HDPE flakes at raised temperature and in high vacuum before the extrusion process removes moisture and migration materials from the feedstock very effectively and in a stable process environment.

Food Contact Control (FCC)

Another benefit for Closed Loop Recycling is that the parameters for direct food contact compliance are monitored and archived continuously in the recycling process on all VACUREMA® systems. The automatic operating mode with Food Contact Control (FCC) supervises the recipe data stored and if levels go beyond defined limits an alarm is triggered automatically and (optionally) material flow is diverted away from current production.

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