CASE STUDY

EURA GLASRECYCLING GMBH & CO. KG

EXTENSION OF THE EXISTING GLASS PROCESSING PLANT

REDWAVE®

GLASS SORTING

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EXTENSION OF THE EXISTING GLASS PROCESSING PLANT

Thanks to its outstanding plant construction expertise, REDWAVE has implemented the expansion of the existing glass processing plant in the best possible way.

The work was meticulous from the beginning. From the inventory to process design, 3-D planning and commissioning, it was a great collaboration.

Frederik Prinner, CEO, EURA GLASRECYCLING GMBH & CO. KG

CUSTOMER

EURA Glasrecycling GmbH & Co. KG, founded in 1993, bundles the competencies of the two partners, the REMONDIS Group as a logistics and waste disposal service provider and the Ardagh Group as a manufacturer of glass and metal packaging products. The company deals with the procurement of waste glass, its processing into oven-ready recycling glass and the sale of this product.

INITIAL SITUATION

EURA Glasrecycling GmbH & Co KG operates a cullet processing plant at the Germersheim site, which until mid-2019 produced fine-ground glass directly for the downstream melting furnace.

With the aim of producing broken glass instead of finely ground glass, REDWAVE was commissioned at the beginning of 2018 to adapt the existing system accordingly for 35 tons of work per hour and to equip it with additional sorting technology.

The old glass shards generated in this way were to be transported directly from production to the associated glassworks via buffer storage silos with automatic sample evaluation.

The fragments produced are subject to the highest quality requirements with regard to a remaining ceramic, stone and porcelain (CSP) content of less than 5 g/t and an organic content of less than 300 g/t.

In order to be able to meet these requirements, the existing plant building was expanded and existing plant components such as a drying plant, numerous screens and metal separation were supplemented by the latest REDWAVE sorting machines.

STOCKTAKING

PROCESS DESIGN

3D PLANNING

PLANT EXPANSION

INSTALLATION - MONITORING

COMMISSIONING

TRAINING - PLANT STAFF

The sorting machines previously used to separate lead-containing glasses were replaced by a REDWAVE XRF sorting machine, which sorts lead glasses and glass ceramics separately from the product stream in the same step. The separation of CSP is accomplished using six REDWAVE CX and CXF sorting machines with a grain size of 5mm or more. REDWAVE CX and CXF machines are equipped with the latest sensors consisting of a camera and lighting and sort non-transparent and metallic contaminants from the feed material. Another sorting machine of the REDWAVE CXF type sorts all rejected CSP flows from the sorting machines onto glass, which is returned to the main sorting stage and thus significantly reduces the loss of good product.

The fully automatic test evaluation system analyses the finished product before storage in the shard silos. Two intermediate silos form a buffer storage during the sample evaluation and release the material for storage after evaluation of the drawn sample.

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TECHNICAL DATA

PLANT THROUGHPUT	35 tonnes per hour
INFEED MATERIAL	Collected glass from southwestern Germany in mixed colours or colour separated <5,000 g/t KSP, <2,000 g/t organic
SORTING TASK	CSP separation, lead glass and glass ceramic separation, automatic sampling and analysis, cullet storage
TYPE OF MACHINE	1x REDWAVE 1370 XRF, 5x REDWAVE 1500 CXF, 2x REDWAVE 1500 CX, 1x REDWAVE SAS
FINISHED PRODUCT	< 5 g/t CSP, < 300 g/t organic