

# Redwave glass recycling day

At the Redwave Glass Recycling Day in September 2013 in Gleisdorf, Austria, the new Redwave CX – Redwave CFX three-way sorting technology for waste glass processing was demonstrated for the first time to international visitors.

The event was primarily dedicated to the presentation of the new glass sorting machines, Redwave CX for material 6-50mm and Redwave CFX for fine material 2-12mm.

Redwave CX and CFX machines are equipped with a completely reworked three-way system.

By rearranging the valve units, the same high performance at the first and second eject is guaranteed even for fine material, and air consumption is reduced even at higher ejection rates of up to 60%.

According to the company, the machine concept, in combination with quick-action eject valves and optimised nozzles, allows for the design of more compact sorting plants with fewer sorting steps without loss of quality or yield of the final products.

## Detection system

The Redwave colour identification system can also be extended beyond the RGB range to neighbouring wavelengths. From the additional information gathered a variety of special glasses can be recognised which have no distinguishing features in the RGB range.

With one eject from the front and one from the rear the distance and hence time between material scanning and ejection is equal for both ejects.

The company said the three-way

design guarantees the same performance for the first and second eject. The Redwave CX has a modular design with different working widths from 500-1500mm.

The Redwave CX and CFX sorters can be used for processing container and float glass from 2-50mm for the following sorting tasks:

- Separation of CSP (ceramics, stones, porcelain) and metals;
- Colour sorting (flint, green, amber and other colours);
- Separation of laminated glass, acrylic glass and plastics; and
- Separation of many special glasses.

## Separation of contaminants

Another focus at the event was the presentation of various sorting technologies for separation of other contaminants and impurities such as plastics, PVB, lead glass or glass ceramics with cullet.

With the Redwave XRF-G (X-ray fluorescence), the removal of lead glass and glass ceramics was demonstrated. The X-ray fluorescence sensor analyses the elemental composition of the feed material regardless of the colour and moisture.

Lead-containing glass and glass ceramics can be clearly distinguished from conventional glass and separated. The separation of lead glass and glass ceramics is done with one sorting stage

(one machine). If required the machine can be designed as a three-way system.

A new technology in glass cullet processing is the use of near infrared sensors (NIR-G) - also presented at the Recycling Day. The Redwave NIR-G sorting machine is used for the removal of plastics and paper that cannot be separated by means of air extraction or other air separation systems.

## Quality Management

To complete, a presentation of the Redwave QMS Quality Management System was given. The QMS system retrieves and evaluates sorting data and information collected by the optical sorters. If any deviation from pre-set values is recognised, messages and warnings are automatically created and sent to the operator.

If, for example, the content of impurities is exceeding at the second sorting stage, a warning is generated with the advice to check the function of the upstream sorter.

Another component of the quality management system is the Redwave SAS automatic sampling and sample analysis unit. The unit is integrated into the plant and analyses the quality of the finished products. ■

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