

IMOG – BELGIUM

Optimised and Automated Separation of PMD Material in existing Sorting Line



CUSTOMER

IMOG is an intermunicipal public sanitary authority in South West Flanders. IMOG ensures the integrated waste management for 11 municipalities with well over 230,000 inhabitants. At IMOG's PMD sorting facility more than 4,000 tonnes/year of separately collected mixed light packaging material (PMD) and PP material are processed.

SITUATION

IMOG was looking for a solution to upgrade the existing manual sorting line with optical sorters to achieve a higher level of automation, resulting in the increased purity of the sorted waste. At the same time, the personnel, who incidentally are very difficult to recruit, could be reduced. The time frame for the upgrade installation was extremely tight and the process could only be interrupted for three weeks duration.

TECHNICAL DESCRIPTION

Blue PMD plastic bags are fed into a bag opener and then move on to a trommel screen. Fines from the trammel screen are collected and the over spill (blue bags, etc.) is separated by hand.

The medium fraction is passed under an over-belt magnet to remove all ferrous materials and on to the two REDWAVE optical sorters. Sorting is performed by a 3-way system, with near-infrared and colour detection. The four different PMD fractions are reliably separated in accordance with strict FOST PLUS criteria. The first REDWAVE optical sorter ejects PET in one channel and HDPE + TetraPak in the second channel. The second REDWAVE carries out fine sorting of both of these channels into four clean fractions; clear PET, blue PET, TetraPak cartons and HDPE. The remaining material stream is passed over an eddy current separator and final recovery hand picking station. The system has a throughput of approximately two tonnes / hour.



Picture. Input: Plastics / PMD before sorting

TECHNICAL DATAS

Type of machine	REDWAVE NIR/C
Input	Plastics / PMD
Separation	PET – in the first channel HDPE and TetraPak – in the second channel Rest – pass
Sensor system	Near-infrared and colour detection
Working width	1200 mm
Sorting system	3-way system

Type of machine	REDWAVE NIR/C
Input	Plastics / PMD
Separation	Fine sorting of both of these channels into four clean fractions: clear PET, blue PET, TetraPak cartons and HDPE
Sensor system	Near-infrared and colour detection
Working width	1200 mm
Sorting system	3-way system



Picture: REDWAVE sorting machines – output fractions

KEY FEATURES:

3-way system: The REDWAVE has a robust and unique 3-way design which allows that allows a single sorting machine to sort a wide variety of defined fractions. Variable sorting tasks: Due to the different sorting options within the REDWAVE programming the sorting tasks can be changed over in a matter of seconds.