Waste Recycling

Plastics Auto-Sorting System with Colour Seperation

Overview

To design, manufacture and install a state of the art optical Plastics Auto-Sorting System.

Problem

The client's waste in-feed stream was made up of approximately 56% of plastics (PET and HDPE), and these plastics required separation by type and then into either "natural" or "coloured" fractions.

Solution

The client operated an existing Materials Recycling Facility (MRF) which was upgraded by GAME Engineering Ltd. This line was extended and upgraded by GAME to auto-sort and recover plastic bottles as an output stream over and above the present output streams. The work required some modifications and alterations to the existing line but now means the client is capable of full material by material segregation and removal.

The new upgrade consisted of installing a Titech Optical Plastics Auto sort solution for the removal of PET and HDPE, with the PET and HDPE then colour sorted. The line operated at a target throughput of 5TPH with a peak running target of 6.25TPH.

Result

The line was designed on the basis of an in-feed stream of Steel 25%, Aluminium 5%, HDPE 28%, PET 28%, PVC 2%, Residue 12%

Operational targets were set at plant availability 95%, Aluminium hit rate 95% previously unbaled waste, Aluminium hit rate 90% previously baled waste, Aluminium purity 99% previously unbaled waste, Aluminium purity 98% previously baled waste, bottle flattening efficiency of 99% and screening efficiency of 98%.

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