

RECYCLING IS ADDED VALUE

Recycling for efficient utilization



Bergisch Gladbach, 22 February 2017

Page 1/2

BALING LINE IN PLYMOUTH IN OPERATION

New Sutco® product: Plymouth's baling line processes 38 tonnes of household waste per hour and is „Made in Germany“.

The South West Devon Waste partnership procured an EfW CHP Facility from MVV Environment Devonport Ltd in Plymouth. As part of this project Sutco RecyclingTechnik (part of the LM Group) custom-built the shredding and baling line situated within the plant.

The shredding and baling line is situated over several floors in the baling zone within the installation. The shredding and baling line has two functions, as an independent crushing machine for bulky items, or for the primary use during the stops or maintenance periods of the incinerator.

The baling line is designed to process a nominal capacity of 38 Mg/h of domestic wastes (MSW). Initially, the waste is deposited in the main reception waste bunker, where it can be fed directly into the (baler line) feed hopper using the overhead cranes. The wastes drop through the hopper and into the shredder where it is reduced to a more manageable size dropping through the shredder on to a plate feeder and then belt conveyor, into the Twin ram baler. The baler then presses the waste into cubes and automatically ties them using plastic ties which hold the bales together. Once tied the bales are pushed out of the baling chamber onto a conveyor then onto the wrapper. The wrapper wraps the bales sealing them completely with plastic film.

The bales are then transported via two conveyors to be collected. Once at the end of the conveyors the bales are collected via the overhead crane equipped with special bale lifting accessory and transferred to the bale storage area. Once

the maintenance period is finished these bales can be then placed in the incinerator for processing and because of the plastic ties instead of metal ties does not add extra metals to the bottom ash produces from the process.

Any defective bales obtained from the baling process are sent into the drop down table where a visual control process is carried out prior the sending of them to the wrapper machine. In the case of defective bales, the drop down table sends the bales through a hopper, and from there into a container. The sending of the bales through the drop down table is a manual process, with an operator giving the command locally or by using the central control system. Alternatively, the shredder can be used as an independent crushing machine. Once shredded the once bulky items drop through the shredder onto the plate feeder the material is sent over one conveyor back into the waste reception bunker the gate valve protects the waste bunker against dust when the plant is not running.

Following the baling and wrapping process conveyors are placed to collect any spillages and leachate from the baling machine and transport them to a container for storage. The dust created in this area removed with a system that includes 4 extraction points and a de-dusting filter, ventilator and pipelines in the waste reception bunker.

The conveyors which move towards the wastes bunker and the baling machine are all covered. The dust collected is



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Page 2/2

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stored in a container placed under the filter. Using this dust system, two complete air changes are ensured in the baling area.

To protect the system should a fire break out a fire damper is placed above the equipment next to the drop down table. Normally this is open and closes using gravity after the generation of the fire alarm. The protection system sends control signals to the baling line, produces an acoustic alarm and causes an emergency stop to the entire shredding and baling line.

The shredding and baling line is electrically designed as a Black Box System. The interchange of data control (for shred-

der, baler and wrapper) is carried out with a Profibus Interface and the PLC/DCS System of the baling plant. The control cabinets and the central computer are situated within the control room.

This is the latest of the Sutco turnkey installations within the UK for more information go to www.sutco-uk.com.

ORIGINAL NEWS ENTRY ON OUR WEBSITE: goo.gl/WWgj86

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