

Munchers' Vital Role In Alternative Fuel Production



TR Munchers from Mono® NOV are playing a vital role in the smooth running of SRM's award winning waste management plant at Heysham in Lancashire.

SRM is one of Europe's largest companies in the field of organic waste disposal, processing around 300,000 tonnes a year. Solving waste problems through recycling or energy recovery is its speciality, and the ISO14001 registered company operates a total of seven sites in the UK. SRM was acquired by the worldwide building materials group Heidelberg Cement in 1999 because of the considerable business synergy which it had with their cement-producing operations.

The major part of the Heysham plant's work involves the processing and blending of organic wastes such as process paints and printing inks to produce Cemfuel® – a secondary liquid fuel (SLF) used as a replacement for fossil fuels in cement kilns. Before the advent of SLFs, this waste had no use and went into landfill or incineration. The very high temperatures achieved in the cement kilns, around 1450 degrees Celsius, ensure complete combustion of all organic materials.

A closer look at the general nature of wastes entering the process immediately reveals the importance of the Mono Munchers given that solvents typically contain a significant proportion of solids. Rags, in particular, can account for some 10 – 12% and experience has shown that coarse screening is too impractical because it results in

constant blockages necessitating in a high level of routine maintenance. The Munchers reduce solids to a dimension that will pass through a 6 – 8mm mesh.

The TR Munchers fitted in this process are from the latest generation of twin shaft grinders. In common with other members of the Muncher Family, TR models are twin shaft, slow speed, high torque grinders. Each shaft is fitted with a series of interleaving cutters and spacers that give real "positive displacement" grinding of solids. The operation of the shafts at differential speeds produces a tearing action on solids, while the leading edge and sides of the cutter teeth crop and shear to produce small pieces. At the same time the circumferential land of the cutter crushes friable or brittle material. The low speed, typically 50 – 80 rpm gives a high torque capability while saving power and minimising abrasive wear rates.

Ideally suited to the application, the layback cutter shafts on this type of Muncher are set at an angle to the incoming flow - a design which is more effective in capturing irregular shaped objects. If a rejection cycle is necessary, the object can drop into the built-in trash trap set below and clear of the cutter stacks. In the present configuration the Munchers can cope with 60 cubic metres of waste solvent an hour.

Muncher:	CT205 TR Muncher
Product:	Paints, inks, resins waste
Capacity:	60 m ³ /h
Drive:	4kW motor, ATEX approved



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Mono® NOV

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