



Lime used for Flue Gas Treatment at Grimsby Energy from Waste project

TIRU chose a British Lime Association member to help with Flue Gas Treatment (FGT) at their NEWLINCS Grimsby Energy from Waste centre.

Grimsby is the first TIRU group contract in the UK. The contract comprises a unit for collecting and storing recyclable waste, a composting operation and an Energy from Waste facility. It also includes two civic amenity sites for refuse.

The Energy from Waste facility is equipped with a Cyclergie oscillating kiln handling 7 tonnes per hour and a turbine generator of 3.2 MW.

The Flue Gas Treatment process is carried out using hydrated lime, which reduces acid gas emissions such as hydrochloric and sulphuric acids by turning them into harmless solid calcium salts. This technology is used worldwide with great success.

The Flue Gas Treatment System is located behind the stack. As the flue gas travels through the boiler, down through the economiser section into the venturi mixing column, activated carbon and hydrated lime are injected into the flue gas stream at the base of this column.

The flue gas then passes through the bag filter housings which are coated with the hydrated lime / activated carbon mixture, removing final impurities and dust particles, before passing out to the main discharge stack.

Sharon Hunt, Operations Director at the Grimsby site said “We are very pleased with the performance of the Flue Gas Treatment system, which is helping us to meet the new, lower emissions limits of WID (waste incineration directive)”

North East Lincolnshire Council administers 160,000 inhabitants in 68,000 homes, which produce about 88,000 tonnes of waste products a year. The electricity and superheated water produced on the site are sold to the industrial manufacturer adjacent to the site.



Technical Data

Process:

Incineration by Cyclergie oscillating kiln with energy recovery

Nominal Capacities:

Incineration: 56,000 tonnes per year, 1 kiln handling 7 tonnes per hour.

Composting: 3,000 tonnes per year.

Sorting / Recycling: 10,000 tonnes per year.

Thermal output of each furnace:

16.5MW (14,200 therms per hour).

Turbine generator set:

Power: 3.2MW.