



Goonvean improves energy efficiency and cuts fuel bills by 6%

With a huge gas requirement for its drying equipment, Goonvean has been acutely affected by the recent instability of gas prices. At the company's sites in Cornwall, china clay (kaolin) is produced through several energy intensive processes including thermal drying. However, installation of Maxsys Fuel Systems, which utilise magnetic fuel treatment technology, has significantly boosted the site's energy efficiency. The recorded 6% reduction in fuel consumption equates to substantial monetary savings for the business, as well lower CO2 emissions.

The Challenge

Goonvean was established by a Cornish family in 1932 to exploit the natural resources found on the local land. More than 70 years later, Goonvean is the largest privately owned producer of kaolin in Europe. Due to substantial growth over the last 15 years, it now boasts a 170 strong workforce and a capacity that allows exportation of 70-80% of its product. Kaolin is processed and used as an essential ingredient in a range of different products, including ceramics, paint, pharmaceuticals and even car tyres, but the largest use of Goonvean's kaolin is in paper.

At the manufacturing sites, kaolin is washed from weathered granite, refined, blended, filter pressed and dried, a process that involves a large amount of heat which comes from direct gas fired heating systems. There are two main dryers, plus an additional unit that is used for further specialised drying.



The Solution

Maxsys were contracted to install a total of 20 Fuel Systems in a bid to boost energy efficiency.

Alex Newns, Process Manager at Goonvean, comments: "We learnt about the Maxsys Fuel Systems after receiving correspondence from their Project Sales Manager, Paul Meaby. The company promised typical fuel savings of 5%, which we felt was a claim that warranted further investigation. Our plant uses so much gas that the high cost of energy was becoming an increasingly heavy burden."

The Maxsys Fuel Systems work by applying a finely calibrated magnetic field to the fuel (oil or gas) feeding a combustion system (industrial boilers, ovens, dryers, kilns and furnaces). Additionally, the Fuel Systems have no moving parts and an electrical supply is not required, making them an extremely low maintenance investment.

Before the installation, Goonvean expressed concerns about how the Maxsys devices would be positioned. The dryers at the plant have lots of doors that workers need to be able to access regularly for cleaning and maintenance. However, since the Fuel Systems are a bespoke install, they can be positioned in a number of different ways. The Maxsys engineers listened carefully to Goonvean's concerns and designed an installation that meant the Systems would cause no disruption to the plant's activities.

The Outcome

The installation process was carried out without a hitch and analysis of fuel consumption at the Goonvean site has confirmed that gas savings of 6% have been made. This will allow Goonvean to achieve payback on the Fuel Systems within an impressively brief 19 months.

Mr. News comments: "The technology performed even better than promised. Such a marked reduction in fuel consumption is a fantastic result. As a company, we prioritise innovation that allows us to use natural resources carefully. An added bonus is that the installation of the Maxsys Fuel Systems led to lower CO2 emissions and a reduced carbon footprint for the company."



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