



Tate & Lyle saves energy with Spirax Sarco Engineered System

A Spirax Sarco EasiHeat™ Engineered System has helped Tate & Lyle to reduce energy costs significantly at its Manchester facility.

The EasiHeat was installed as part of a bigger project that included a new boiler. The whole project is expected to pay for itself within about two years, with early estimates suggesting that the EasiHeat itself will achieve a payback of less than 12 months. “It’s early days, but we know we’re saving money,” says Mr. Alan James, Project Engineer, Tate & Lyle.

The EasiHeat steam-to-hot-water package also enables Tate & Lyle to cope with peaks in demand for liquid sugar that it could not previously meet.

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The facility in Trafford Park, Manchester, produces fifteen-tonne batches of liquid sugar for delivery by road tanker. The company previously used three electric boilers to fill a 60-tonne storage tank with hot water overnight, ready to supply the next day’s production process. “We had 60 tonnes for use each day, but if someone rang up and asked for extra, we couldn’t do it because it took too long to heat the water up,” says Mr. James. Electricity was a convenient but expensive option for heating the water, the original design dating back to an era when energy usage was not a major design factor.

Spirax Sarco’s solution was the EasiHeat system, which supplies up to five tonnes of instantaneous hot water per hour, eliminating the need to run the boiler to heat water overnight. The new steam boiler is switched on at the start of each day and in just 20 minutes there is enough hot water to begin processing sugar. “We’re no longer limited by the capacity of the hot water tank,” says Mr. James. “We can expand production to meet demand.”

The process dissolves solid sugar in 90°C water and cools the resulting liquid sugar solution to 30°C prior to shipping. During cooling, fresh water is heated to 40°C, which is then fed to the EasiHeat system where the system’s internal plate heat exchanger heats it to 90°C to supply the process.

The Liverpool based Tate & Lyle engineering team who carried out the project did so as part of their service to internal and external clients. “The results following six months of production are pleasing,” says Mr. James.

Spirax-Sarco Limited
Cheltenham UK
GL53 8ER
t: +44 (0)1242 521361
f: +44 (0)1242 573342
ukenquiries@SpiraxSarco.com
www.SpiraxSarco.com/uk

spirax
/sarco