



Spirax Sarco Engineered Systems help reduce utility consumption by 20% at pharmaceutical site

Spirax Sarco Engineered Systems have helped cut utility consumption by 20% at GlaxoSmithKline's (GSK) Barnard Castle factory, as part of the pharmaceutical company's campaign to reduce energy consumption.

Five engineered systems provide low-temperature hot water at 80°C to feed various production processes. Six further systems provide domestic hot water at 60°C. Their capacities range from 135 to 1150kW.

GSK manufactures tablets, creams, ointments and sterile liquids for injection at its 63-acre Barnard Castle site in Country Durham. Previously, steam from the site's three 11,000 kg/h boilers was used to generate hot water via shell-and-tube heat exchangers that each fed a storage tank. "We were heating and storing large volumes of water, even when demand was low," says Mr. Scott Hodgson, Engineering Team Manager. The Spirax Sarco Engineered Systems are saving energy by heating only the amount of water demanded by the process.

Maintenance costs are also lower. The shell-and-tube heat exchangers required regular stripping down for insurance inspections. "It was both labour intensive and in some situations posed significant manual handling risks," says Mr. Hodgson. The compact plate heat exchangers in the Spirax Sarco systems are not classed as pressure vessels and do not need insurance inspections.

The Spirax Sarco systems also eliminate any potential risk from Legionella that can arise when hot water is stored.

The changeover began when one of the shell-and-tube exchangers failed an insurance inspection in 2001. GSK decided to replace it. The first Spirax Sarco Engineered System was so successful that GSK has since replaced all its shell-and-tube units.

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Spirax Sarco Engineered Systems are supplied skid-mounted and come complete with all necessary peripheral pipework and equipment. Spirax Sarco supplied a full turnkey project on this occasion, taking responsibility for the installation and changeover to the new systems. Many of the changeovers were carried out during silent hours to avoid interruption of services to production. According to Mr. Hodgson, there were several advantages to adopting this modular approach. These included easier specification

and commissioning, as well as a more compact package of ancillary equipment. “The new units have tidied up the plant rooms, freeing up loads of space,” he says. “But our biggest benefits were a reduction in manual handling, in maintenance and insurance costs.”

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