



Spirax Sarco engineered system saves £150,000 per year for Corus

A Spirax Sarco packaged plate heat exchange system is delivering energy savings worth £150,000 a year at Corus's Llanwern strip steel processing plant near Newport, South Wales. The skid-mounted system was designed, supplied and commissioned by Spirax Sarco and uses waste heat from the steel works' slab furnaces to preheat boiler feed water.

The new system uses heat from flash steam to pre-heat the site's boiler feed water.

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The site's five reheating furnaces each take 20-tonne slabs of steel and heat them to 1,250°C ready for rolling into coils. The furnaces also drive five waste heat boilers. Three of the boilers produce high pressure steam at 12 bar g, which is distributed around the site via the steam main. The remaining two waste heat boilers generate steam at 1.7 bar g, a pressure too low for most of the processes around the site and Corus was struggling to make full use of the steam.

Spirax Sarco Engineered System enables Corus to use this low-pressure steam to preheat the feed to the site's main boiler.

Corus decided to opt for an engineered system to keep on-site disruption to a minimum. "We could have scheduled a conventional build but we wanted to minimise the workload

on Corus," explains Process Energy Specialist Mr Richard Charlton, Corus. "We wanted to have a main contractor who would oversee everything, including all the pipe and electrical work. In fact, Spirax Sarco handled it all and there was no problem."

Mr Charlton initially estimated that the added waste heat recovery would save around £130,000 per year, but he now says the system is recovering £150,000 to yield a payback of less than 12 months.

The project is part of an ongoing programme of energy optimisation at Llanwern, in which Corus has generated some £29 million in energy savings over five years. "The main driver is obviously cost," says Mr Charlton, "but we're also very conscious of the environmental benefit in terms of the reduction in greenhouse gas emissions."

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