Spirax Sarco helps Abbey Corrugated achieve special accreditation from the Carbon Trust

A heat recovery system from Spirax Sarco has helped Abbey Corrugated become one of just 12 organisations across England and Scotland to be awarded the coveted "Carbon Trust Standard". The installation of the Spirax Sarco system was the most valuable energy saving project undertaken by Abbey during its ongoing energy reduction campaign, and reduced the amount of gas burnt in the company's boiler by almost a quarter.

The Carbon Trust Standard aims to promote credible reductions in carbon emissions. The scheme has been created by the Carbon Trust in response to both growing consumer mistrust of organisations' green claims and confusion among businesses on how to cut emissions. It takes account of the direct reductions achieved by participating organisations, rather than their involvement in schemes such as carbon offsetting.

The Carbon Trust Standard will be linked to the government's new carbon trading scheme – the Carbon Reduction Commitment (CRC). Participants in the CRC must purchase carbon allowances to cover their emissions. Revenue from the purchased allowances is recycled to participants based on their ranking in the CRC emissions reduction league table. Organisations holding the Carbon Trust Standard certificate for the CRC period will receive an improved league ranking and therefore an increased share of the recycled allowances.

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Abbey produces 160 million square metres of corrugated board annually at its site in Blunham, Bedfordshire. It uses most of its plant steam to heat the plates and rollers in its three corrugators. The skid-mounted FREME (Flash Recovery Energy Management Equipment) system from Spirax Sarco recovers the energy in condensate and flash steam from around the plant and uses it to preheat the feed water to the boiler. Supplying hotter feed water reduces the amount of work the boiler needs to do to raise steam.

First, hot condensate passes into a separation vessel where some of it flashes off as steam. Next, the condensate and the flash steam each pass through a separate plate heat exchanger where they heat the pressurised feed water. The flash steam also condenses. The two streams then recombine before returning to the boiler feedtank.

Dragon's Den star, Deborah Meaden presents Adrian Swindalls, Operational Director at Abbey Corrugated, with the Carbon Trust Award.

Before the project, water entered the boiler at around 68 or 70°C. It now arrives at between 138 and 142°C, according to Abbey Corrugated's Facilities Manager, Paul Gale: "There was a lot of work going on at the time, but it's fair to say that the savings from this project were in the region of 25% of the gas used by the boiler."

"This was one of the first projects we carried out in an intensive four years of energy savings," he says. "The system has since proved to be very reliable and we've had no issues with it since commissioning was completed."

Abbey has managed to reduce its overall carbon emissions by around 15% during its campaign. The company has used a wide variety of approaches, from promoting good practice among its staff to investing in a range of energy-saving equipment.

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