



Maxsys Fuel Systems generates 6% savings on gas fired steam raising boilers at Mondi Packaging

Mondi is one of the world's leading international paper and packaging groups with a substantial global presence, employing 34,000 people at 112 sites across 34 different countries. The company is continually striving for a consistent high level of improvement in environmental performance in all its operations, making efficient use of raw materials and energy, while focusing on innovation and best available technology.

The Challenge

Mondi has total belief in its established strategy and is convinced it will help them realise the objective of becoming the world's best performing paper and packaging business.

Acknowledging the full effects of inflation busting gas price increases over the last few years, in an industry where energy intensive steam generation is part of its process, Mondi has focused on reducing energy usage and carbon emissions.

At the Holcombe Mill steam is required for drying the finished product, produced from 100% reclaimed waste paper and card. It is also used for dispersion, which is heating of the pulp to spread any wax and glue additives to improve the visual appearance of the finished sheet. Further along the process, the paper is dried on large steam heated rollers.



This heavy steam demand is provided by one central boiler house which raises around 20 to 25 tonnes of steam per hour.

The boiler house comprises two Richard Westgarth Maxecon boilers, a larger version with two burners and a smaller single shell unit. The larger version is on load as the lead boiler, whilst the smaller one is on hot standby and top-up duty as necessary.

The boilers are equipped with Saacke burners and while retaining their dual fuel capability, are primarily run on natural gas – having fully modulating operation to ensure maximum efficiency. The system has an approximate usage of over 152,000,000 kW per annum.

The Solution

It was agreed that the Maxsys Fuel Systems would be installed directly into the 4" gas supply lines to the Saacke burners on the Richardson Westgarth steam raising boilers, the largest of which is the duty boiler. Three bespoke Maxsys Fuel Systems were manufactured and installed during April 2007.

Working closely with Mondi Packaging, independent assessors ABB were asked to observe the current metering and monitoring facilities available on the plant and produced a "Test Protocol" that outlined the performance characteristics of the plant, and detailed a list of variables that would be recorded in order for the plant efficiency to be monitored.

The Outcome

Analysis of the post installation data showed that the gas consumption was lower by 6% for an identical amount of steam generated following the installation of the three Fuel Systems. This equated to a substantial saving of over 733,000 kW of gas during the post data period of just over a month.

These savings in turn provided a reduction in CO2 emissions of over 139 tonnes during the post data period (equivalent to 1412 tonnes every year).

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