Ragus Sugar
Upgrading Boilerhouse Efficiency

Burner Replacement Case Study

Location:	Ragus, Slough.
Challenge:	To significantly and cost-effectively improve the efficiency of Ragus' 20 year old YGNIS boilers.
Solution:	Installation of low NOx burners alongside the latest control tech, with associated mechanical/electrical installation and ancillary equipment.
Results:	Substantially improved burner efficiency and hydrogen-firing readiness, combined with MCPD-compliant emission reductions and extended operational life of Ragus' existing twin YGNIS boilers.

Cochran recently delivered a significant efficiency upgrade at Ragus' Slough factory, installing new burners and controls to their aging YGNIS steam boilers.

The upgrades marked an important step in Ragus' ongoing drive for better resource optimisation and environmental stewardship, in line with their wider environmental, social, and governance (ESG) goals.

Project Profile

Ragus manufactures a broad range of speciality syrups and crystalline sugars for use in industrial food and drinks applications, inevitably requiring substantial amounts of process steam during their manufacture.

Despite being installed 20 years ago, Ragus' twin YGNIS steam boilers remained in excellent working condition, nevertheless it was identified that significant improvements in efficiency and emissions reductions in line with the new statutory requirements of MCPD could be achieved by utilising low NOx burners and the latest control technology.

Though state-of-the-art some 20 years ago, Ragus' old burners were highly inefficient by modern standards. In addition, their outdated controls meant they were either 'turned-up to 11' or switched off altogether; inevitably leading to wasteful, and costly excess gas consumption during periods of reduced demand.

The Solution

Choosing to replace the burners and controls rather than the entire boiler system, has not only extended the operational lifespan of Ragus' existing equipment but has also minimised the significant capital expenditure and environmental impact associated with boiler replacement.

Twinned with the latest Cochran-installed digital control technology, steam requirements are now monitored constantly, with the low NOx burners automatically modulated in response to real-time demand.

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Positive Results

Whereas the old burner setup was effectively locked in to operating at maximum capacity, the new low NOx burners now typically run at 60-70 % when full power isn't necessary. This smart, demand-driven operation has already delivered substantial fuel savings.

- Improved boilerhouse efficiency, cutting overall operational costs.
- Reduced natural gas consumption - with future proofing for potential hydrogen firing.
- Lower boilerhouse electricity consumption.
- Reduction in harmful NOx emissions.

Looking Ahead to Hydrogen

A notable feature of the new low NOx burners is their capability to burn alternative fuels, including emerging hydrogen technologies. While the current fuel source remains natural gas, like many forward thinking businesses Ragus is already preparing for the transition to hydrogen championed by Cochran.

Add Cochran Efficiency to ANY Boiler

Ideal for use in boilerhouse upgrade projects and already gaining plaudits for the benchmark efficiency and emissions achieved in conjunction with Cochran's own world famous boilers, UltraNOx, its associated controls, and Cochran's leading-edge Eclipse and Synergy computer boilerhouse management systems can all be installed on ANY manufacturer's shell boiler... Delivering Cochran levels of efficiency WITHOUT the need for complete boilerhouse equipment renewal.

+44(0) 1461 202 111

www.cochran.co.uk

Cochran Ltd, Newbie Works, Annan, Dumfries & Galloway, UK DG12 5QU.

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