



COMBUSTION WITHOUT COMPROMISE

CASE STUDY

FOOD & BEVERAGE · UK

BOILER HOUSE BURNER REPLACEMENT

World leading soft drinks brand with Limpsfield · Milton Keynes, UK

BURNER

3 × Limpsfield LCN36

CONTROLS

Autoflame (existing, retained)

FUEL

Natural gas

INSTALLATION

Indoor · Milton Keynes,
UK

13%

ANNUAL FUEL SAVING

6:1

TURNDOWN RATIO,
LCN36

3% O₂

GUARANTEED, <10PPM
CO

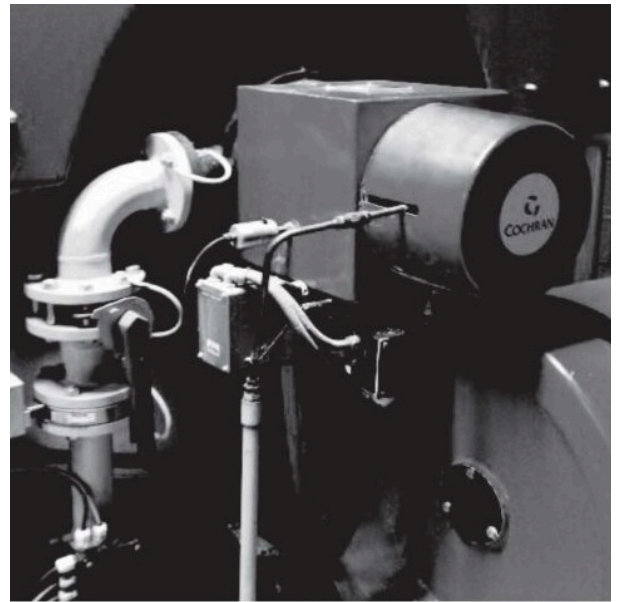
+23%

STEAM-TO-GAS RATIO
GAIN

01 THE CHALLENGE

This Milton Keynes plant had already retrofitted Autoflame controls onto its three Cochran Thermax boilers to improve repeatability. Combustion and emissions testing still showed the burners themselves were the constraint, inefficient and held back by low turndown ratios.

- Ageing burners limiting turndown and combustion control
- Existing Autoflame investment not yet paying back in fuel terms
- Rising gas costs and emissions scrutiny across the site
- Boiler house noise levels in need of improvement



BEFORE

Dated Cochran burners with retrofitted Autoflame controls

02 THE IMPACT

STEAM : GAS RATIO	RATIO	O ₂ / CO	ANNUAL FUEL
Before	4.49	n/a	Baseline
After LCN36	5.818	3% / <10ppm	-13%
Change	+23%	Guaranteed	-13% fuel

Fuel savings were evident immediately, with annual savings of 13% over the first year against a fairly rapid payback period. The engineering manager calculated steam generated divided by gas consumed moving from 4.49 to an average of 5.818 after installation, a 23% improvement. They went on to recommend Limpsfield burners and Autoflame controls for all their sites.

"We have calculated steam generated divided by gas consumed and the ratio has moved from 4.49 to 5.818 average after the install date, an improvement of 23%."

03 THE SOLUTION

Limpsfield replaced all three burners with LCN36 units, engineered specifically to suit each boiler and to work with the site's existing Autoflame controls. The new burners deliver a 6:1 turndown ratio with a performance guarantee of 3% O₂ while holding CO below 10ppm.

3 × LIMPSFIELD LCN36 BURNERS

One per Cochran Thermax boiler, 6:1 turndown

EXISTING AUTOFLAME CONTROLS

Retained and matched to the new burners

3% O₂ PERFORMANCE GUARANTEE

<10ppm CO across the complete firing range

BEYOND ONE SITE: A GLOBAL NET ZERO PROGRAMME

The group behind the plant is targeting net zero by 2040 and a 30% cut in absolute emissions by 2030. It already runs on roughly three quarters renewable electricity and has committed hundreds of millions to decarbonisation over the next three years. The site has since moved its materials handling fleet to lithium ion, so the burner upgrade sits as an early, measurable step in that wider programme.



AFTER

Limpsfield LCN36 burner using the existing Autoflame controls

For more information on the Limpsfield burner range, please contact your tech centre or Limpsfield direct.

Website www.limpsfield.co.uk

Tel 00 44 (0)1959 576 633



COMBUSTION WITHOUT COMPROMISE