



COMBUSTION WITHOUT COMPROMISE

CASE STUDY

FOOD & BEVERAGE · USA

BOILER HOUSE BURNER UPGRADE

Polar Beverages with The Wilkinson Companies · Worcester, Massachusetts, USA

BURNER

2 × Limpsfield burners

BOILERS

Hurst 200hp & Easco 500hp

FUEL

Natural gas

INSTALLATION

Indoor · Worcester, MA

-25%

BTU INPUT VERSUS THE
OLD BURNER

8:1

TURNDOWN ON THE NEW
500HP BURNER

3% O₂

OR LESS THROUGHOUT
THE FIRING RANGE, 0 CO

30ppm

LOW NOX ON THE NEW
PROCESS LINE BURNER

01 THE CHALLENGE

Polar Beverages, the largest independent bottling company in the United States, run their Worcester, Massachusetts plant on a Hurst 4 pass 200hp firetube boiler. The existing burner had too little turndown and was sized well beyond the process demand.

- Existing burner sized well beyond the actual process demand
- Too little turndown, forcing the burner to cycle numerous times an hour
- System running inefficiently as a result of the oversized burner
- Facilities team needing regular attention to keep the boiler room running



Polar Beverages, founded in 1882, the largest independent bottling company in the United States, family owned across four generations of the Crowley family.

02 THE IMPACT

The first Limpsfield burner proved reliable enough that the facilities team no longer felt the need to routinely check the boiler room, and the resulting energy savings unlocked an Eversource energy savings incentive. The success of that project led Polar Beverages to specify a second Limpsfield burner for its new process line without hesitation.

"That burner is so reliable, I feel like I don't even need to go into that boiler room anymore."

KEN WALL, DIRECTOR OF FACILITIES, POLAR BEVERAGES

03 THE SOLUTION

The Wilkinson Companies installed a new, energy efficient Limpsfield burner on the Hurst boiler, around 25% smaller in Btu input than the burner it replaced. The smaller, better matched burner improved turndown and largely resolved the cycling problem.

The following year, Polar Beverages returned to Wilkinson for a new process line, sizing a 500hp low pressure steam Easco boiler with a second Limpsfield burner: gas fired, low NOx, high turndown, and 3% O₂ or less throughout the firing range while ensuring 0 CO.

A FAMILY BUSINESS SINCE 1882

Polar Beverages produces and distributes from three locations: Worcester, Massachusetts; Albany, New York; and Fitzgerald, Georgia. Brands include Polar Seltzer, Adirondack, Clear & Sparkling, O Water and Frannie's. The Crowley family has owned and operated the company continuously across four generations.

LIMPSFIELD BURNER, HURST 200HP BOILER

Around 25% less Btu input, improved turndown

LIMPSFIELD BURNER, EASCO 500HP BOILER

8:1 turndown, 30ppm NOx, 3% O₂, 0 CO

INSTALLED BY THE WILKINSON COMPANIES

Relationship began in 2015, two successful projects since

INVESTING IN WORCESTER

Beyond the boiler house, Polar Beverages played a key role in bringing the Boston Red Sox Triple A affiliate, the Worcester Red Sox, to the newly built Polar Park in Worcester, which opened in 2021, reflecting the company's long term investment in its home city.

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

Website www.limpsfield.co.uk

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