



Energy Engineered to Restore a Scaled Boiler and Cut Gas Costs by 28.5%

How a controlled acid clean of a silica-scaled 6 MW boiler saved a Queensland food manufacturer approximately \$45,000 per month and returned the plant to full steam independence on a single boiler

Industry

**Food manufacturing,
Pet food production**

Location

**Yatala,
Queensland**

Delivered by

O'Brien

Solution

**Acid clean of 6 MW steam boiler
with 1.25 MW rental boiler
for production continuity**

Scope

**Inspection, Temporary Steam
Supply, Controlled Acid Clean,
Reassembly**

Partnership

**4-year ongoing
service relationship**

The Challenge

A 6 MW steam boiler at the Yatala facility was producing only 4,800 kg/hr against a rated output of 9,100 kg/hr, forcing the site to run an auxiliary 4 MW boiler simultaneously to meet production demand. O'Brien identified excessive silica scale deposits within the tube bundles as the cause. Over 18 months, O'Brien and the site's water treatment provider progressed a careful online descaling program, but stubborn high-silica deposits remained and required a specialist chemical response.

28.5%

Reduction in
Gas Consumption

~\$45K

Estimated Monthly
Gas Saving

6 MW

Boiler Restored to
Full Independent Operation

18 Months

Controlled Descaling Program
Before Acid Clean



The Solution

O'Brien developed a staged plan to restore boiler performance while keeping the site operational. A 1.25 MW rental boiler was installed alongside the auxiliary 4 MW boiler to maintain production while the 6 MW unit was taken offline. O'Brien then completed a controlled acid clean using inhibited hydrofluoric acid, selected for its effectiveness against high-silica scale and carefully managed to protect the boiler metal and preserve the long-term condition of the asset.

- Supply and installation of 1.25 MW rental boiler for temporary steam continuity
- Confined space entry and removal of all baffle plates
- Full reassembly of boiler and all ancillary equipment upon completion
- Disconnection, blanking and isolation of all ancillary equipment and connections
- Controlled acid clean using inhibited hydrofluoric acid to protect boiler metal
- Ongoing boiler service and maintenance support

The Outcome

Following the works, the 6 MW boiler now operates the plant independently, eliminating the need for the auxiliary 4 MW unit. Real Pet Food reported a 28.5 per cent reduction in gas consumption, representing an estimated saving of approximately \$45,000 per month. The result reflects the value of a technically controlled, patient approach to boiler performance recovery delivered end-to-end by a single partner.

Single-source responsibility. End-to-end.

O'Brien Energy delivers industrial energy solutions across boilers, hot water systems, heat pumps, service, maintenance and energy consulting. With over 20 years of expertise, we take full accountability from design and supply through to installation, commissioning and long-term support. Through our strategic partnership with Oilon, we also offer industrial heat pumps for facilities looking to reduce gas dependence and meet tightening emissions obligations.