



Thorntons

Increasing Steam Capacity, Efficiency and Safety

Turnkey Upgrade Case Study

Location: Thorntons Confectionary, Alfreton, Derbyshire.

Challenge: To deliver turnkey replacement of boiler plant within the confines of the existing boilerhouse footprint, in order to meet increasing steam demand.

Solution: To provide three high efficiency Wee Chieftain boilers and associated equipment. Strip back and removal of existing steam plant and pipework, redesign and install of new plant and pipework.

Results: Increased efficiency, output and a safety compliant plant that meets increased steam demand and current safety legislation.

Thorntons is a world leader in confectionary production. As a result of increasing steam demand and Health and Safety legislation, a proposal was submitted by the Thorntons Engineering team to senior management for Capital investment to upgrade the existing boiler plant.

Project Background

The old setup consisted of two boilers capable of producing 5.0 tonnes/hour and 2.5 tonnes/hour respectively. However, due to limitations on the gas supply, Thorntons were only capable of running the 5.0 tonne/hour boiler, to serve a plant that required 6 tonnes/hour.

This resulted in inefficient plant, poor quality steam due to water carry over, water hammer, inefficient steam traps, deterioration of steam system pipework and a boilerhouse that did not meet current safety guidelines.

The Company consulted their gas supplier on the feasibility of uprating their supply, and once confirmed they engaged Cochran to design and build a system that would meet their operational requirements and comply with current Health and Safety legislation.

Project Scope

To design and install new boiler plant that would increase the amount of boilers, but still fit within the limited footprint of the existing boilerhouse.

This involved the stripping out of existing equipment in order to accommodate the installation of three new Cochran boilers, chimneys, water treatment equipment and the associated service and steam pipework.

Cochran were also responsible for the associated civil works required for pipework installation, incorporation of a third boiler and an aesthetic upgrade of the existing boilerhouse to the standards to be expected of a new state-of-the-art boilerhouse.



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The Solution

Thorntons received turnkey custom-built steam plant, incorporating highly efficient boilers which now deliver the following benefits:

- Inclusion of flue gas economiser to increase overall plant efficiency.
- Reduced gas usage.
- Boiler redundancy that enables a programme of boiler maintenance to be carried out whilst maintaining the operational continuity.
- A sequence system that satisfies the requirements of the plant whilst operating the boilers in their most efficient manner.
- Production of high quality dry steam resulting in reduced operational issues and maintenance of steam traps.
- A balanced and ergonomically designed plant that meets operational requirements, whilst meeting all requirements for an unmanned plant.

Choosing Cochran

Thorntons engaged Cochran as the solution provider not just because of competitive costing considerations, but also because of their ability to deliver a technical solution to match the Company's requirements.

The project was executed on time and on budget.

Cochran now looks forward to building on this positive new relationship with Thorntons by providing high quality service support and maintenance on an ongoing basis.



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