

James Croppers Boiler House Rebuild

AT A GLANCE

- Customer: James Croppers
- Industry: Paper & Packaging Production
- Product: Yorkshireman Steam Boiler
- Goal: Replace old boilers and improve efficiency



James Croppers, a globally renowned industry leader in cutting edge materials and paper products, has been under the guidance of the Cropper family for six generations. With a multinational workforce and a presence in over 50 countries, the company's operations span the globe.

Founded in 1845, Croppers specialises in the production of paper, packaging, and advanced materials, incorporating innovative non-wovens and electrochemical coatings. They excel in providing customised solutions tailored to meet the unique requirements of their clients. These offerings range from substrates and components used in hydrogen electrolysis and fuel cells to personalised colours and textures in paper and moulded fibre packaging, designed to serve as eco-friendly alternatives to single-use plastics.

James Croppers is celebrated worldwide for its exceptional service, expertise, pioneering spirit, and numerous awards, all attesting to their unwavering commitment to the highest sustainability standards.

The Challenge - Because of the substantial on-site energy requirements, the energy centre comprises of three industrial steam boilers fuelled by natural gas and a turbine, accompanied by a waste heat recovery steam boiler.

Costly repairs and downtime due to the age of the boilers resulted in the decision to replace two of the failing boilers with a new, more reliable, energy efficient alternative.

In addition to boiler difficulties, Croppers faced key structural issues within the boiler house. Weak and rotting steel building framework, and a crumbling concrete floor. Both of these had to be completely replaced providing the new boiler with a strong and stable foundation. All these major structural works had to be completed while the plant continued to run which was extremely demanding and difficult for all involved.

The structural setbacks, although frustrating and costly, would ultimately ensure the new boiler house is equipped to the highest possible standard and will provide long term benefits with the option to continue to modernise the boiler house in the future.

The Solution - A new energy efficient Byworth Boilers Yorkshireman 18,000kg/hr steam boiler, a traditional three pass fire tube boiler, complemented with our Unity boiler house control system.

This solution has provided a state of the art boiler house management system, with increased efficiency and safer, easier operation.



JAMES CROPPER

EST. 1845



The Results - We caught up with Richard Graham, Power Plant Manager at James Croppers for a few words on behalf of the wider Site Engineering Team.

What was the main reason for choosing the Byworth Yorkshireman?

"The main reason for choosing the boiler we did was because the size fit our needs. Byworth is local to us here in the North West and the features offered on the boiler also matched what we were looking for. Cost and delivery options were also an issue where happily both matched our budget and schedule at the time of ordering.

You came to visit the factory, could you give us some feedback on your experience?

"A factory visit to us was vital when we started to establish a relationship with Byworth for the first time. How welcoming you were, how willing you were to show us without restriction what you do, and obviously how well run your production facility was at the time of our visit. It was clear you were not simply a parts assembly plant, but were totally involved in the entire design, build and customer service process."

What are your hopes in terms of performance and improvements?

Performance and efficiency was another key issue as our old boilers are poor by today's standards. When anyone has a fuel bill the size of ours every little saving is huge. In the management decision to buy this unit the 5-10% fuel savings would completely cover the cost of the boiler in less than 2 years running our proposed 7 days a week plans.

This boiler was also bought to 'bridge the gap' we faced between where we are as a fully Gas powered business and where we are going electrifying a chunk of our production. Our old boilers were and are very inflexible and not capable of being turned down efficiently as our electrification plans progress.

Also, our old steam plant had become increasingly hard to maintain and get spare parts for. This is not acceptable to us and will ultimately result in production failures and unplanned outages which are very costly.

In addition, we felt dealing with a local company would also allow us in the future to handle any requests internally to look at increasing the concentration percentage of Hydrogen in our Gas fuel if we chose to implement local Hydrogen production from surplus Solar, wind and hydro generation. Had we chosen a non-UK manufacturer we don't feel we would have had this future 'modification' or upgrade option.



Byworth

BOILERS

