

DSF Refractories completes three-year installation of new automated brick press



Customer Story

DSF Refractories & Minerals – one of the UK's oldest and largest shaped refractory manufacturers – has completed a £3 million modernisation programme. To bring the project to fruition, DSF partnered with Siemens, which coordinated the technical delivery alongside tailored financing, enabling smooth investment without any upfront payment.

The project included the installation and financing of a Laeis press, a robotic offloading and conveyor system, and key structural upgrades – enhancements that have together doubled output.

British manufacturing is regaining momentum. According to Grant Thornton's Manufacturing Growth Index for 2025, the top 200 privately-owned manufacturing businesses in Great Britain – part of the country's growth engine – reported annual profit increases of 45% across two years.

This momentum matters for refractories, which supply materials that withstand high temperatures to steel, cement, glass and chemical producers, among others. External demand is growing too, with UK trade in refractory products more than double 2006 levels, as of Q3 2025.



"We're ticking three main boxes: increased throughput to the factory; repeatable, consistent quality; and a safer, more attractive work environment. This is especially important given that market conditions have become even more competitive."

Matt Handley, Strategic Operations Director at DSF

As demand and production rise, there is an increased focus on efficiency and sustainability, to help reduce the environmental impact of industrial supply chains – while continuing to make essential materials.

In these increasingly competitive market conditions, DSF's investment protects cost efficiency by strengthening productivity, quality consistency and safety – all while reducing manufacturing downtime.

Refractory heritage

DSF Refractories & Minerals is an independent refractory manufacturer and processor of minerals based in the Peak District National Park in the centre of England. DSF has operated at its current manufacturing site for over 130 years. The largest shaped refractory manufacturer in the UK, DSF employs around 150 skilled people and exports to over 60 countries worldwide.

DSF are specialists in large and complex shapes, and refractories designed for very high temperatures and arduous conditions. Materials range from 40% to 99% alumina and a range of special compositions such as zircon, bonded AZS (Alumina-Zirconia-Silica) and mag-alumina spinel.

DSF's shaped refractories are used in a wide range of processes, from glass production, and iron and steelmaking to petrochemicals, carbon black, lime recovery, and various rotary kiln applications.

An ageing press

Until recently, DSF's production relied on six Johnson brick presses ranging from approximately 50 to 60 years old. Brick presses turn loose material into strong, precisely formed bricks, squeezing the material under high pressure inside a mould – making modern equipment essential for productivity and quality.

While these machines had served the business reliably for decades, increasing maintenance requirements, limited automation capability and process inefficiencies made modernisation a strategic priority.



"It was a big investment for us, but the available data and the due diligence carried out by the Siemens team convinced us that it was a no-brainer. The press is now up and running and we have already hit a record in refractory output, so fortunately we were right!"

Matt Handley, Strategic Operations Director at DSF

After detailed discussions and due diligence with Siemens, DSF identified a state-of-the-art Laeis automated brick press, and a Kautenburger offloading robot to automate lifting and palletising the manufactured bricks, as the ideal upgrades. These promised a step-change in output and efficiency, but the investment was out of reach without financial support.

Siemens proposed an integrated approach. By uniquely pairing technology insight with flexible funding from Siemens Financial Services (SFS), the Siemens team acted as an extension of DSF, making the acquisition affordable and turning the modernisation project into a reality.

Two heads are better than one

The Siemens team provided a seamless solution encompassing technical design, installation management, supplier coordination and a financing solution tailored to DSF. Because Siemens provided both the technical expertise and the financing, DSF only began payments once the project was fully installed and ready for production – easing pressure on the manufacturer's financial planning, particularly given the scale of the investment.

Philip Bearn, Director at DSF, shared, "This is the first time we have managed equipment acquisition at this scale. We felt the Siemens teams were just as committed as we were to making it a success, supporting with technology and financial advice. They supported with the management of our individual suppliers, the payments, and the admin behind the scenes.

"We especially appreciated the clarity of the financial solution and processes – Carolyn Newsham of SFS created a single hire purchase agreement. This would have been virtually impossible through traditional banking, especially given the large amount.

"This also helped us to easily apply for grant funding from the Invest to Grow funding programme at the University of Derby. The new press will be a game changer for our business, and the project would have been impossible to achieve without Siemens."

Dramatic transformation

Following two years of planning and due diligence, installation began in January 2025 and was completed a year later. The investment has delivered a 100% increase in output, with the potential to increase production as market demand requires, while also reducing downtime, maintenance costs, energy usage and manual handling. The press has already achieved record refractory output.

Matt Handley, Strategic Operations Director at DSF, explains, “We’re ticking three boxes: increased throughput to the factory; repeatable, consistent quality; and a safer, more attractive work environment.” The press’s advanced capabilities will also allow DSF to experiment with material development for new marketplaces, such as EV battery and hydrogen production.

Investing in growth

This transformation has strengthened DSF’s market position, resilience and sustainability, while smoothing cash flow. Looking ahead, DSF is already exploring future investment in a robotic kiln placing system, which would place the bricks made by the press into the kiln – to maintain competitiveness, continue supporting local employment, and secure long-term growth in a niche but essential global industry.

Watch the press in action [here](#).

Talk to the team



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