

Ceramicx helps Linpac further slash EPS carbon footprint

Linpac produces EPS (Expanded Polystyrene) for a range of foodservice packaging solutions at its St. Helens site. The company has a focus on improving the environmental performance of all of its product ranges and the opportunity to improve the EPS extrusion and thermoforming processes to further minimise the production carbon footprint had to be investigated.

The reduction in production carbon footprint was achieved by upgrading selected thermoforming product lines from conventional heating systems to Ceramicx infrared-based heating. Linpac Innovation Director Alan Davey said: "Production innovation is as much a part of our brief as product innovation. EPS packaging is a perfectly fit-for-purpose packaging solution and we are delighted at Linpac to be reducing its environmental impact even further with these energy saving technologies."

Linpac's Infrared (IR) heating supplier Ceramicx uses proprietary know-how and instrumentation to accurately map the invisible IR heat flux spectrum thus enabling the company to build the lowest energy IR heat source and control.

In order to enable and prove the new IR heat system, a substantial amount of study work was undertaken prior to, and during, the St Helens upgrade process. These studies were commissioned for Linpac by Ceramicx and were conducted at the St Helens site by Dr. Robin Kent of Tangram Technology, who measured the detailed differences in the heat and energy performance between two identical thermoforming lines.

Under test, the Ceramicx IR heating systems showed a decrease in the average power drawn from 56.16 kW to 32.85 kW, representing a 41.6% reduction in energy. Figures were also taken that showed a direct comparison between the two oven systems. With the machine base loads removed, the Ceramicx IR-based system then showed a measured energy saving of 45.8%.

David Parker at Linpac said: "We wanted to ensure that all the proposed system changes and energy reductions were scientifically measurable and verifiable. This was achieved and we are now scaling up the benefits in similar production work across the Linpac group."

Frank Wilson, Ceramicx founder and managing director said: "Ceramicx is delighted and honoured to be working with pioneering inline thermoformers such as Linpac; for our part, helping provide the low energy and low-carbon solutions via our special expertise in infrared heating.

As newly-joined members of the British Plastics Federation we are also looking forward to spreading our environmental know-how and best practice throughout the UK and Global packaging industries generally. We plan to spread a good part of 2016/17 raising the low-carbon IR heat message through our publishing and communications work; through entering environmental awards and by talking to inline thermoformer of packaging on a one-to-one basis. Linpac has been delighted with the ongoing solutions that we provide."

Tony Corbin