

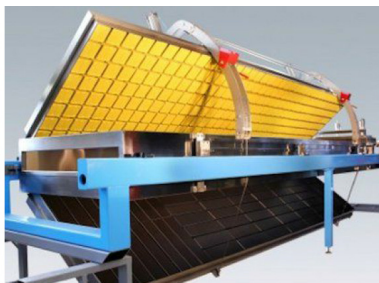


Ceramicx to showcase energy-saving breakthroughs for inline thermoformers at NPE

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An independent study commissioned by Ceramicx and conducted by Dr Robin Kent of Tangram Technology Ltd - Consulting Engineers for Plastics Products - has recently measured the detailed differences between the two plastic thermoforming systems.

Direct comparisons between the two thermoforming lines were undertaken using identical tools, products and cycle times. The measuring equipment used for all electrical testing was the Elcomponent SPC Pro. This is a device that measures all three-phases of the complete incoming supply to the thermoforming machine. It uses a single phase supply (phase to neutral) as a reference voltage for the calculations.



The Ceramicx based heating systems showed a decrease in the average power drawn from 56.16 kW to 32.85 kW, representing a 41.6 per cent reduction. Figures were also taken that showed a direct comparison between the two oven systems. With the machine base loads removed, the Ceramicx system then showed a measured energy saving of 45.8 per cent. Additional study work undertaken showed that yet further improvements and energy savings would be available using the new Ceramicx-based system.

Both machines were directly comparable and both are part of two in-line and fast cycling systems at the customer, loaded with the same tools both making the same polystyrene-based products for the Fast Moving Consumer Goods (FMCG) and food service markets.

The Ceramicx IR-based oven platen and control system was designed and built at the company's manufacturing facility in West Cork, Ireland before being shipped directly to the customer's manufacturing facility. The Ceramicx oven has a total of eight temperature sensors built into the system. These can be selected individually or grouped for control purposes. Additionally the heaters can be subdivided into as many as 132 separate zones, thus giving a wide range of control options.

The Ceramicx oven system features upper and lower heating platens together with power control systems, enclosures, switchgear, and PLC control.

A total of 420 World Class rated Ceramicx IR elements were deployed in this particular oven system. Each of these Ceramicx-made elements has its own unique and traceable heating fingerprint, the performance of which is documented and verifiable online. World Class Manufacturing is determined as part of the Benchmarking Competitiveness Initiative across companies globally, and is administered by Enterprise Ireland in Ireland, World class refers to being in the 90th Percentile of Companies of a similar size and industry focus.

The oven assembly itself is fitted with pneumatic cylinders which are operated manually via two solenoid valves. The lower platen is used as a counterweight, using steel rope and pulleys. The control systems offer the processor a choice of both open and closed loop control, together with cost-saving procedures in start-up and fault monitoring in addition to inline process energy control.

Ceramicx founder and Managing Director Frank Wilson said: "We are very pleased indeed to confirm through a programme scientific study and measurement what we have always intuitively known - that Ceramicx-built IR heat solutions give fantastic and immediate savings for fast-cycling thermoformers."

Brett Wehner, CEO of Ceramicx's USA distributor, Weco International, added: "What's exciting about this work is that it shows how fast-cycling thermoformers can make immediate savings on energy and energy cost in addition to the quality components produced. Not only that, their packaging can legitimately claim to be 40 per cent greener, with a de facto 40 per cent reduced carbon footprint. It really is win-win for the thermoformer".

Ceramicx has been building IR heat solutions for thermoformers for over 20 years. And since 2011 Ceramicx has been rated as a world-class manufacturer and supplier of IR based heating solutions including components, ovens and platens for the worldwide thermoforming industries. During the past four years Ceramicx has developed unrivalled expertise for cost-saving in-line thermoforming heat solutions and IR-based retrofits.

Weco/Ceramicx will be adding to and developing these energy saving messages in the coming months and as part of their joint preparations for the USA's triennial plastics exhibition, NPE March 23-27, Orlando, Florida.

"The Weco/Ceramicx NPE2015 booth will lay out these energy saving messages and benefits in full," said Wehner. "We will provide full production details on just how these numbers are achieved"

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