

Massive energy-saving breakthrough for inline thermoformers



Weco Ceramicx has just confirmed 40% energy savings at leading inline thermoformer Linpac Packaging. The savings were proved by retrofitting a Ceramicx infrared heating solution to an existing production line - and then comparing the results to an identical thermoforming line at Linpac.

Direct comparisons between the two thermoforming lines at Linpac Packaging were undertaken using identical tools, products and cycle times.

Direct comparisons between two thermoforming lines at the customers were undertaken using identical tools, products and cycle times.

The Ceramicx based heating systems showed a decrease in the average power drawn from 56.16kW to 32.85kW, representing a 41.6% 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%. Additional study work undertaken showed that yet further improvements and energy savings would be available using the new Ceramicx-based system. (Please see Table 1 and Table 2 for more data)

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.

Table 1

	Current 1 (amps)	Current 2 (amps)	Current 3 (amps)	Power (kW)
Thermoforming Machine 1 Calrod System	84.5	82.0	90.3	56.2
Thermoforming Machine 2 Ceramicx System	53.8	53.2	63.3	32.8
Reduction in phase current	30.7	28.8	27.0	23.4
Saving (%)				41.6

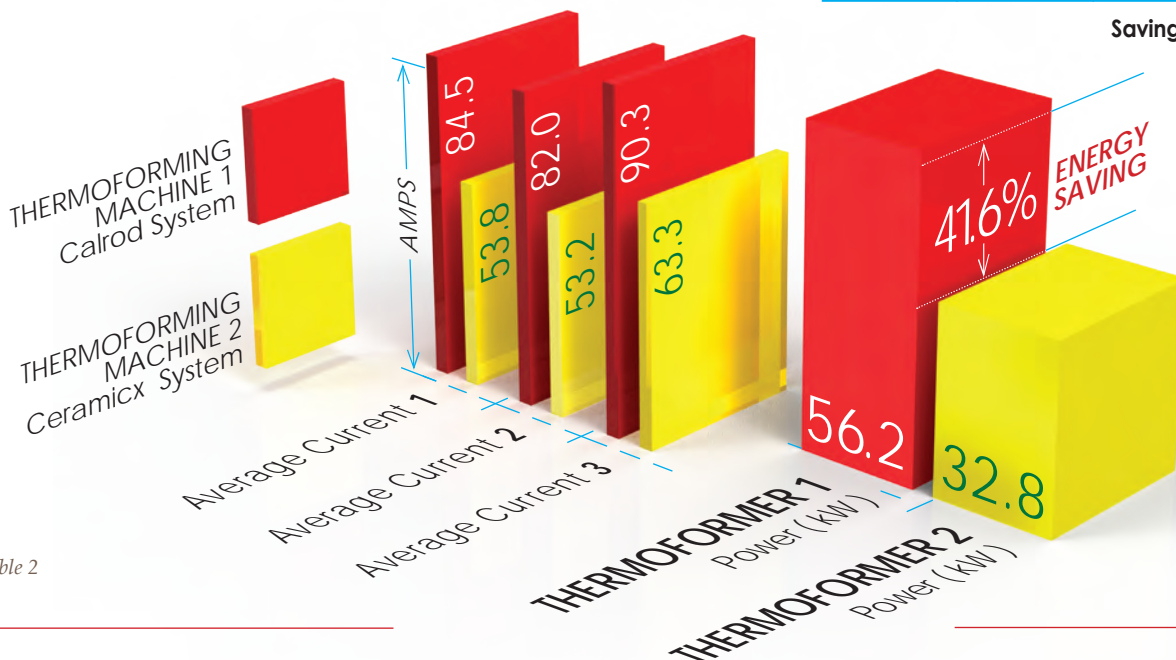
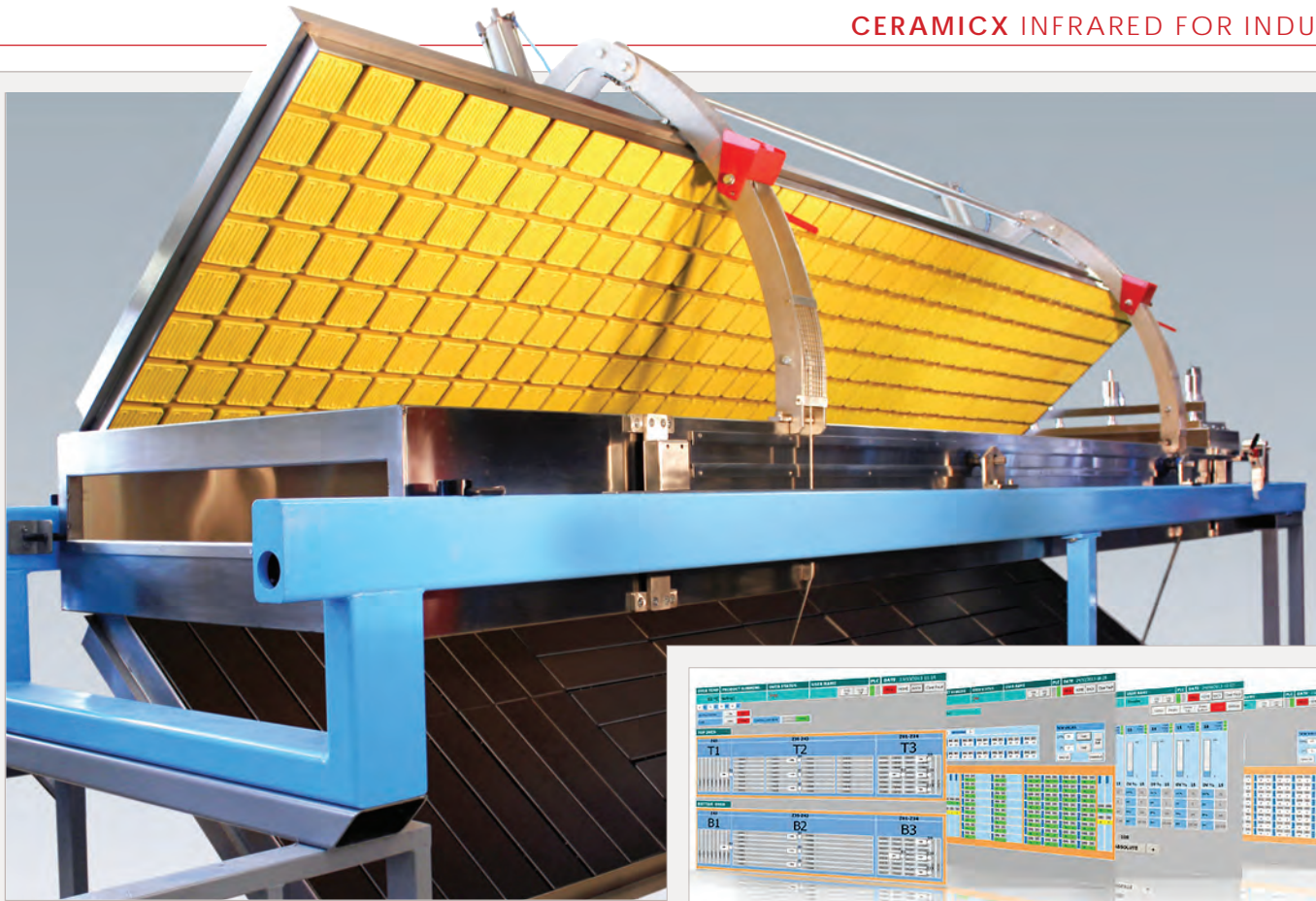


Table 2



A 160kW retrofit oven designed and manufactured by Ceramicx



Software / Control interface designed and built by Ceramicx.

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

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

.....thermoformers can make immediate savings on energy and energy cost

inline process energy control. Ceramicx founder and Managing Director Frank Wilson says, "We are very pleased indeed to confirm through a program of 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."

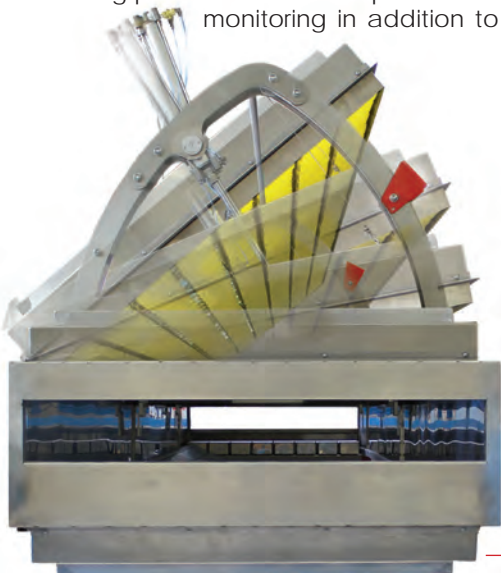
Brett Wehner, CEO of Ceramicx's USA distributor, Weco International, says, "What's exciting about this work is that it shows how fast-cycling thermoformers can make immediate savings on

energy and energy cost in addition to the quality components produced. Not only that, their packaging can legitimately claim to be 40% greener."

Read more about it here - www.ceramicx.com/blog/2015/12/seasonal-greetings/



Linpac Packaging, St Helens was a winner in the UK's Best Factory Awards and the company has gone on to win further accolades. To read their account of how they improved the environmental performance of its products and services go to www.linpacpackaging.com/en/news/201512/linpac-slashes-carbon-footprint-even-further-eps-packs



Distributor: **Weco International, Inc.**
 Address: 901 Tacoma Ct. Clio, MI 48420
 Tel: 810 - 686 - 7221, Toll Free:1-855-IR-2-HEAT
 Email: weco@wecointernational.com
www.wecointernational.com

Distributor: **Southern Heat Corporation.**
 Division of Thermal Technology Solutions Inc.
 Address: 645 Henderson Drive, Suite 8,
 PO Box 938, Cartersville, GA 30120
www.southernheatcorp.com