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Heraeus Infra-Red Saves Energy In Coating of Board for Food Packaging

An infra-red system from Heraeus Noblelight has dramatically reduced energy costs in the coating of board for food packaging at the Stroud factory of The Olympic Varnish Company Ltd. By eliminating the use of steam, the new system has also reduced board spoilage caused when there are unanticipated line stoppages.

Olympic Varnish coats a variety of packaging for food products, ranging from sandwiches, cakes and patisserie to fish and pizza. Polymer coatings are applied to act as a double barrier, preventing any seepage or migration of grease or liquid components of the food from inside the packaging or any leeching of materials which might taint the product into the packaging. The company also applies pigment and/or print to the outside of packaging if required.

The coater line at Stroud has three coating stations and these are used to apply the polymer coats, or pigment coats if necessary. It is important that the board is dried after each coating and previously this had been done by means of steam-heated, hot air driers in the coating line. However, this was very energy-intensive, as the driers had to be kept at temperature throughout each working shift. In addition, if there was a line stoppage, they could not be switched off and so continued to heat any boards held within the driers, leading to product damage.

To solve these problems, it was decided to use infra-red for drying and three 7kW carbon medium wave modules were easily retrofitted before each drier. There was no need to remove the driers and today these are merely supplied with ambient, unheated air.

The new IR drying system has been eminently successful, as Bill Petyan, director at the company, confirms, "We now have more flexibility in coating as the IR heaters can be quickly switched on and off, significantly reducing energy costs. We can also tailor the amount of energy we need as the IR modules typically run between 30% and 60% of full load, depending on the type of board and the weight of coating. In addition, we have also installed a system to detect unwanted build-up of boards on the line when this quickly switches off the heaters"

Heraeus specialises in the production and application of high quality energy sources covering the electro-magnetic spectrum from ultraviolet to infra-red. It has over 40 years experience in infra-red technology and offers the expertise, products and systems to provide efficient and effective solutions to drying, heating and curing problems throughout industry.



The Heraeus Infra-Red System at Olympic Varnish

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