



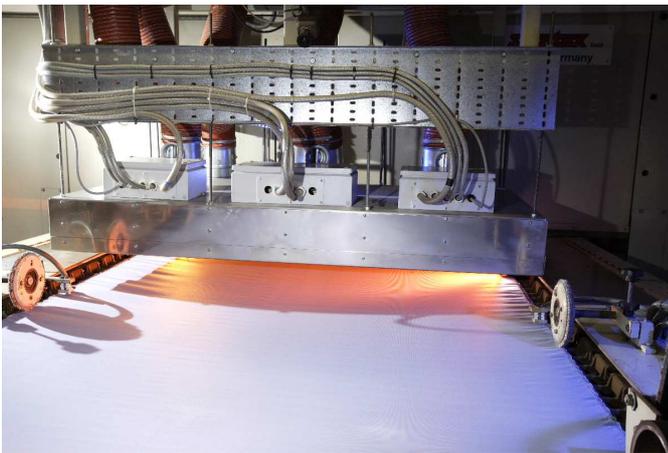
Drying of Water-Repellent coating on fabric

A carbon infrared system is helping to increase production line speeds by providing pre-drying of a water repellent coating applied to a specialised fabric used in the manufacture of outdoor clothing. Moreover, its ease of control is also ensuring that there is no damage to the fabric caused by over-heating.

The best outdoor clothing provides double protection to rain, as a water repellent coating on the clothing fabric removes surface water while the garment itself, with its combination of textile fabric, membrane and lining is water-proof but “breathable”. The application of the water repellent coating is an important part of the production process but it is also important that the chemical coating applied is thoroughly dried before the next manufacturing stage. Conventionally, this is carried out in a Stenter, a very versatile, gas-fired oven used extensively in the textile industry. However, when a well-known manufacturer of top quality outerwear had to deal with meeting a significant rise in market demand for its products, as well as handling a more diverse product range, it soon realised that drying speeds had to be increased to match increased production speeds.

The answer lay in fitting a carbon medium wave infrared system immediately in front of the Stenter to achieve the required degree of pre-drying. A determining factor in the selection of infrared for this application was the fact that it would have been impossible to fit a hot air oven easily in the available space and it would have been necessary to carry out a major and costly re-organisation of the line. The hot air oven alternative would also have involved significant line downtime. The 124kW infrared system was first proven by on-site trials before its easy and compact installation in the roof of the Stenter entry enclosure.

Since installation, the new system has allowed an increase in line speed averaging around 6%, depending on how much the chemical coating is taken up by the textile and the construction of the textile itself. In addition, the carbon emitters have also demonstrated another very important benefit over alternative heating techniques, as their very fast response ensures that the fabric does not become overheated.



Features

- high quality outdoor clothing
- with water-repellent coating
- efficient drying increases production speed
- fast response of heaters ensures that fabric cannot be overheated

Technical Data

- carbon medium wave infrared system
- pre-drying in front of Stenter
- one stainless steel cassette
- containing 27, 4.6kW emitters, arranged in herring-bone fashion for maximum power density
- closed loop control with optical pyrometer

Germany
Heraeus Noblelight GmbH
 Infrared Process Technology
 Reinhard-Heraeus-Ring 7
 63801 Kleinostheim
 Phone +49 6181 35-8545
 Fax +49 6181 35 16-8410
 hng-infrared@heraeus.com
 www.heraeus-noblelight.com/infrared

USA
Heraeus Noblelight America LLC
 1520C Broadmoor Blvd.
 Buford, GA 30518
 Phone +1 678 835-5764
 Fax: +1 678 835-5765
 info.hna.ip@heraeus.com
 www.heraeus-thermal-solutions.com

Great Britain
Heraeus Noblelight Ltd.
 Clayhill Industrial Estate
 Neston, Cheshire
 CH64 3UZ
 Phone +44 151 353-2710
 Fax +44 151 353-2719
 ian.bartley@heraeus.com
 www.heraeus-infraredsolutions.co.uk

China
Heraeus Noblelight (Shenyang) LTD
 2F, 5th Building 5
 No. 406, Guilin Rd, Xuhui District
 200233 Shanghai
 Phone +8621 3357-5555
 Fax +8621 3357-5333
 info.hns@heraeus.com
 www.heraeus-noblelight.cn