

Press release

Infrared emitters at Techtexil 2011

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Infrared Emitters Optimise Technical Textiles

Infrared Heat for Modern Materials

Technical textiles are used in many exacting applications. Material for functional clothing is water-repellent and breathable at the same time. By means of a silicon-coated nylon fabric, an airbag can unfold in fractions of a second. Geo-textiles are used in the construction of roads to prevent surface sagging.

During their manufacture, technical textiles require various heating processes – and often infrared emitters help these processes to be carried out efficiently.

Heraeus Noblelight is showing infrared emitters for the textiles sector on Stand B43 in Hall 3 at the Techtexil Exhibition, which takes place in Frankfurt from 24 to 26 May.

Infrared radiation is a reliable and established heat source in textiles processing, as infrared generates the heat directly in the material without any intermediate medium. As a result, large amounts of energy can be transferred very quickly and this helps to reduce energy costs, increase production speeds and minimise production costs.

Quartz glass infrared emitters and ceramic and metal emitters often have significant advantages over conventional heating methods such as steam or warm air, as they can be precisely matched to the product and process in terms of wavelength, shape and power.

A custom-built infrared system from Heraeus Noblelight is helping the British company Century Dyeing to carry out a drying process within a very short time window and very tight space constraints.

Century Dyeing, part of the Allied Textiles Group, is one of the UK's leading commission dyeing companies. The company works with high value synthetic fabrics to produce finished products such as parachutes, tents and hot air balloons.

On changing from dark colours to lighter shades, the dyes were not dried sufficiently on the material causing smearing. Fast response, medium wave infrared emitters proved the remedy, as they could dry the water-based dyes much more quickly because of their precisely matched, medium wavelength radiation. At the same time, these emitters react to control within seconds. This enables rapid temperature changes and, in the case of unanticipated line stoppage, the emitters are quickly switched off, minimising any damage to the material.

Infrared emitters also offer significant advantages because of their compact design and construction. Existing drying sections, such as Stenters, can be complemented and throughput increased by infrared emitters.

The demands of processing continue to increase and it is important that heating processes do not limit production. Contact-free infrared systems, with their fast heat transfer, offer especially efficient possibilities for pre-heating, smoothing, laminating, embossing, fixing or drying technical textiles.

Heraeus Noblelight GmbH with its headquarters in Hanau and with subsidiaries in the USA, Great Britain, France, China and Australia, is one of the technology- and market-leaders in the production of specialist light sources. In 2009, Heraeus Noblelight had an annual turnover of 71.6 Million € and employed 707 people worldwide. The organisation develops, manufactures and markets infrared and ultraviolet emitters for applications in industrial manufacture, environmental protection, medicine and cosmetics, research, development and analytical measurement techniques

Heraeus

The precious metals and technology group headquartered in Hanau, Germany, is a global, family company with over 155 years of tradition. Our businesses include precious metals, sensors, dental and medical products, quartz glass, and specialty lighting sources. With product revenues of € 2.6 billion and precious metal trading revenues of € 13.6 billion, as well as over 12,300 employees in more than 110 companies worldwide, Heraeus holds a leading position in its global markets.

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Fast response medium wave infrared emitters dry coatings quickly and safely.

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