



Infrared Booster increases output of filter materials

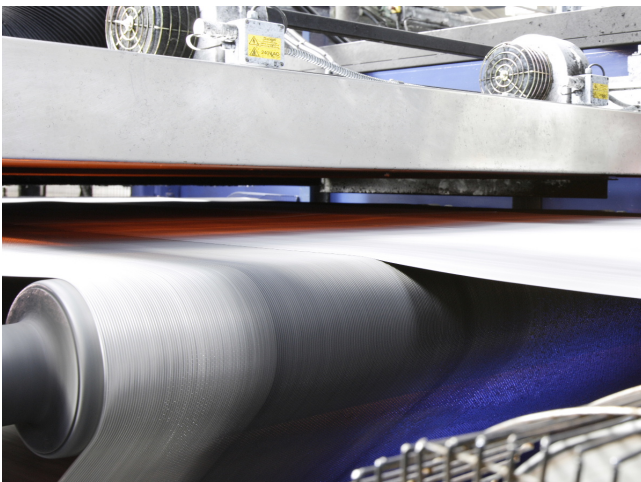
A medium wave infrared module from Heraeus Noblelight has helped Purification Products, of Shipley, to solve a production problem and achieve significant increases in the manufacturing output of the activated carbon filtration materials it supplies for a wide range of industrial applications.

Purification Products uses patented processes to produce filtration materials and fabrics by incorporating active powders into textile, board and foam substrates. These materials are then used in filter units to remove contaminants from air, gas and liquid streams in both dynamic and static situations. Typical applications include removal of odors and smoke from air conditioning systems, odor removal in HEPA filters and the removal of color and odor from chemicals, cooking oils and water.

The manufacture of some of the company's products relies on the use of an air-laid, cellulose wood pulp web, which is much less dense than a conventional wet pulp web. As a result it has a great ability to absorb powders to the extent that the activated carbon powder which is applied to the web can account for up to 60% of the weight of the finished product. In the manufacturing process, the air-laid web is laid on a viscous backing in a continuous process and the carbon powder is applied. A latex mixture is then introduced to this assembly to bind it together and the completed web is then dried before being rolled up for dispatch or cut to length.

The drying is an important stage in the process, as any wet, and active, latex carried over to the following machine rollers can be detrimental, while inadequate fixing is obviously to be avoided for quality reasons. The company already had an infrared drying system in place and this had performed satisfactorily for some years. However, the need to increase production output to meet rising customer demand required the company to reassess its drying facilities. Consequently, Heraeus, who had supplied the infrared emitters for the original system, carried out trials at its Neston applications center and established that the production rate could be increased if a medium wave infrared booster module were fitted in front of the existing system.

Based on the results of these successful trials, a medium wave module, containing six, 4.5kW emitters was retrofitted with little disruption to production schedules at the Shipley plant.



Features

- Coating of cellulose wood pulp web
- Drying of latex for filter materials with activated carbon powder
- Increase of production rate by retrofit of an infrared booster

Technical Data

- Medium wave infrared emitters
- Six emitters of 4.5kW power each

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