



Infrared-System reduces Bonding Time by more than 90% and saves a considerable amount of energy

A medium wave infrared heating system from Noblelight has allowed G Bopp & Co. Ltd. to reduce the curing time of an FDA (Food and Drug Administration) compliant adhesive on woven wire screens from three to four hours to just seven to eight minutes. This has eliminated a previous production bottleneck at the factory in Somercotes, while providing significant energy savings. G Bopp is one of the world's leading producers of woven wire meshes. The high-quality wire cloths are used worldwide as square weave meshes for sieving and sizing, as stainless-steel wire cloth for screen printing, as filter media and laminates, as well as support mesh for a wide range of applications. The fabricated products are utilized throughout industry, in chemicals, pharmaceuticals, glass manufacture, ceramics, plastics, mechanical engineering, paper, environmental technology and even space travel.

At the Somercotes site, the company manufactures a wide range of filters, with a particular specialisation in the food industry. An FDA-compliant adhesive is used to bond the wire mesh to the filter frames. Historically, this adhesive was cured using heating mats, which applied conductive heat to the adhesive. However, curing was taking three to four hours, which created a bottleneck in production. This curing system required a significant amount of energy as the mats had to be switched on throughout the entire working shift. In addition, any change in filter frame size required manual replacement of the mats.

To solve these problems, the company turned to Noblelight. Trials at the application centre in Neston, Wirral, showed that medium wave infrared significantly reduced curing times. Consequently, a medium wave infrared system with PLC control was installed at Somercotes. This utilises custom-designed emitters and four different power settings to cater for the wide range of sizes and shapes of filters manufactured. The new system has reduced curing times down to minutes from hours, which allowed G Bopp to greatly increase its capacity for producing the filters using FDA-compliant resins for the food and beverage sector. Andrew Moss, General Manager at Somercotes, comments: "The fact that the infrared system needs to be switched on only as required and is PLC-controlled also complies with our energy-saving green policy, as the IR emitters are powered by solar panels, as is the rest of our factory. In fact, such is the reduced total energy consumption that we now sell surplus electricity to the grid."



Features

- Fast, medium wave infrared emitter
- Reduced curing time to 7-8 minutes
- Optimised energy saving

Technical Data

- 70,2 kW infrared system
- PLC-control
- Four power settings

Excelitas Noblelight

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