Infrared system saves energy and allows faster production for laminate embossing

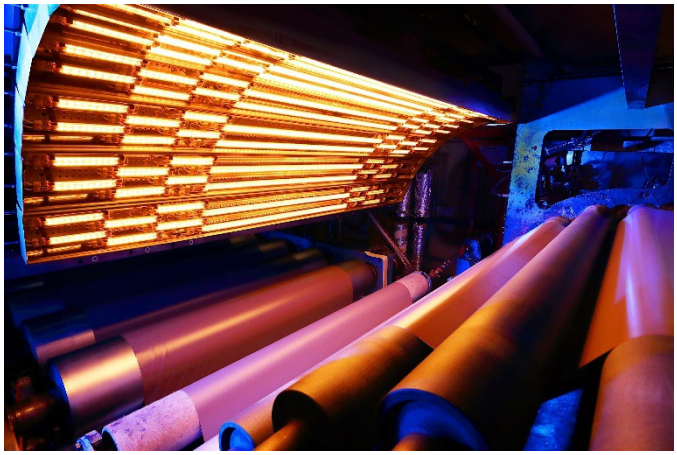
A custom-built, short-wave infrared system from Excelitas is helping to save energy and allow faster production line speeds at the Cramlington manufacturing site of RENOLIT.

RENOLIT is an international leader in the manufacture of high-quality plastic films and related products for technical applications. These range from adding the finishing touches to furniture products, construction elements and hi-fi products to sealing off landfill sites and roof structures and lining swimming pools. The Groups Cramlington site manufactures laminates for kitchen, bedroom and bathroom furniture and foils for lamination onto exterior window profiles and doors. Many of these PVC-based laminates are embossed with a wood grain finish and the embossing line is an important part of the production process.

The company has recently upgraded an existing embossing machine with a new short-wave infrared system following experience gained on a similar Excelitas system supplied in 2003. The system is used to heat PVC laminate to a required temperature to achieve the softness necessary for embossing after which it is dispatched to RENOLIT customers for further processing.

The machine's original ceramic heater system has now been replaced with short-wave, infrared emitters in six individual cassettes providing heating control zones. The cassettes themselves are arranged so that when the six modules are fitted together, the complete assembly assumes a curve which follows the web path.

This custom-built assembly allows precise targeting of the heating, so that very little energy is wasted. The exact power concentration also ensures that the web is heated to the specified temperature quickly and efficiently, permitting faster line speeds to be achieved. Furthermore, the extremely fast response of the short-wave emitters minimizes the possibility of damage to the web, as the heaters can be switched off virtually instantaneously in the event of unexpected line stoppage.



Features

- Update of existing embossing line with short wave IR system
- Energy savings and faster production line speeds
- Heaters can be switched off in the event of unexpected line stoppage

Technical Data

- Short-wave IR system
- Six individual cassettes providing heating control zones
- Assembly assumes a curves which follows web path
- Allows a precise targeting of the heating

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