

Targeted heating improves laminate embossing line

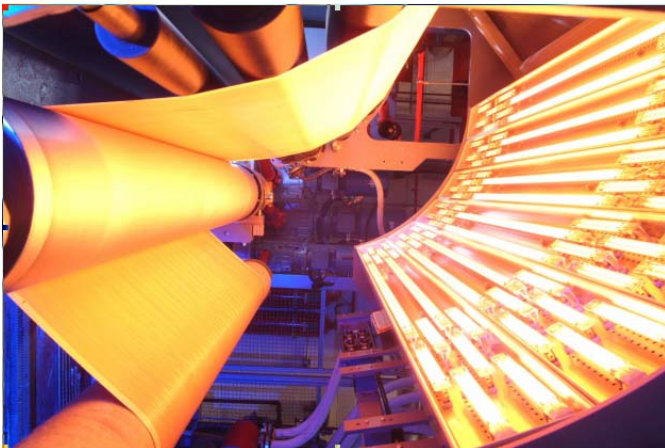
By installing custom-built equipment, incorporating short wave infrared emitters on their embossing line, Cova Products of Cramlington are saving energy and improving throughput because of the application of targeted heat.

Cova Products manufacture wood grain laminates for application to domestic furniture such as speaker cabinets and kitchen cupboards. 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 laminate is fed as a web to the embossing machine and must be pre-heated before embossing to achieve the required degree of surface softness.

Some time ago, Cova up-rated an existing infra-heating system on an existing embossing line by replacing ceramic heaters, at the sides of the line, with Heraeus short wave infrared emitters. However, they have recently installed a new embossing line, supplied by specialist equipment manufacturer Kleinewefer Anlagen (KKA), of Munich, and this incorporates an all-short wave infrared heating section, where the emitter layout is contoured to match the path of the laminate web.

To achieve the required contour geometry, the infrared emitters are fitted in six individual cassettes, each containing two 6.75kW emitters and twelve 125W emitters. The cassettes themselves are so shaped 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 minimises the possibility of damage to the web, as the heaters can be switched off virtually instantaneously in the event of unexpected line stoppage.



Features

- Custom-built equipment to match the shaped path of the laminate web
- Precise targeting of heat,
- waste of energy minimized
- Line speed increased

Technical Data

- six cassettes
- Each containing two 6.75kW emitters and twelve 125W emitter

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