Infrared heat increases quality of chipboard

Fast response medium wave Infrared emitters for lamination

A fast response, medium wave infrared drying system, from Excelitas, is helping MFI to achieve improved quality control in the manufacture of laminated chip board.

MFI produces laminated chipboard for worktops, kitchen surfaces and wardrobes. The process involves feeding the sheets of chipboard under a glue application roller and then flashing off the water from this water-based adhesive to leave the base catalyst to allow the printed paper to be stuck to the chipboard.

Previously, the heating system to affect the flash-off had used short wave infrared emitters of an old-fashioned design, which had required that a number of different size emitters to provide complete coverage of the product width to be dried. Essentially, 12 emitters had been fitted in three cassettes and this created an overlap, causing hot spots in the chipboard to be processed. As a result, adhesive could be dried off at different rates, leading to unwanted variations in quality and a lack of production control.

MFI installed a new system using fast response medium wave emitters. These are fitted in three stainless steel cassettes, each containing six 8.5kW pre-wired emitters, with mechanical protection provided by a stainless-steel mesh.

Since installation, MFI have found that the new emitters provide a complete span of the drying area, without overlap, so that the previous hot spots have been eliminated, improving quality control. There has also been a reduction in power demand as the medium wavelength of the new long-life emitters is eminently suitable to the removal of water allowing for a much more efficient flash-off operation.

Technical Data
- Fast response medium wave emitters
- 3 modules, each with 6 emitters of 8.5kW

Features
- Medium wave infrared dries much more efficient
- No longer hot-spots
- Efficient process helps to save energy

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