



Infrared Provides Flexibility and Controllability in Flooring Manufacture

Infrared systems from Heraeus Noblelight are being used at various points in a vinyl flooring production line at the Maidstone factory of Tarkett Ltd, allowing the company manufacturing controllability and improving the production flexibility of the line.

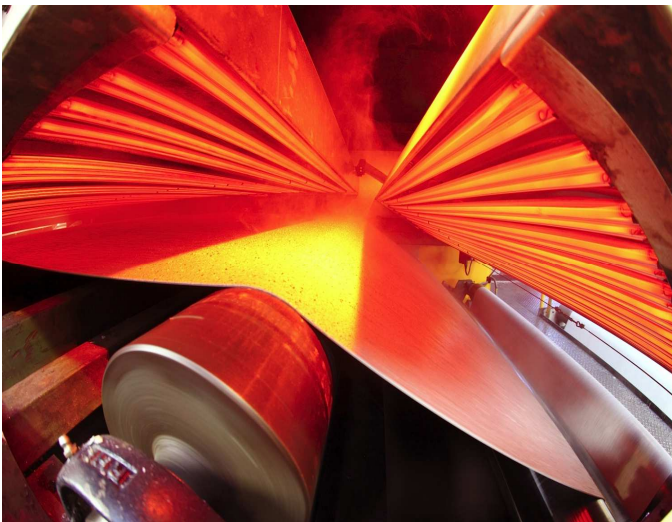
Tarkett Ltd is a world leader in the flooring industry, providing integrated flooring and sports surface solutions to architects, facility professionals, contractors, distributors, installers and end users.

The basic flooring production process consists of building up thicknesses of PVC paste on a PVC backing layer, which features a fiber glass internal matting. The basic flooring is imbued with non-slip properties by introducing silicon carbide and aluminum oxide into the top surface layer and flakes of PVC can also be introduced for aesthetic appeal.

The application of heat is an important part of the process, both to dry the backing layer and to ensure effective curing of the applied PVC pastes. This was formerly achieved by the use of long wave infrared metal foil heaters but these have now been replaced with state-of-the-art carbon infrared (CIR) and medium wave emitters.

In operation, the backing layer is heated as it exits from an accumulator by means of two, CIR edge-heating modules, each containing 24, 1kW emitters, and a 27.5kW module to heat the width of the web. This heating removes the moisture from the carrier material to allow good bonding for the subsequent application of PVC paste and to prevent bubbling.

A bank of IR emitters is then located immediately after the first paste application station and this provides surface drying before volumetric heat is applied by an oil-heated roller. The PVC web then passes to a second paste application station, after which it is heated by a third IR system before passing to a hot air oven and a UV system for final cure. The installation has proved extremely successful, as Terry Guy, production engineer at Tarkett Marley explains, "The new system allows us the flexibility to cater for different product lines, with different thickness of PVC layers and its controllability means that we can adjust heating to suit specific line speeds."



Features

- ensures effective curing of PVC layers
- removing moisture from the carrier material
- Quality improvement
- Improving controllability in flooring manufacture

Technical Data

- two CIR edge-heating modules containing 24, 1kW emitters and a 27.5 kW module
- medium wave emitters

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