



Infrared Heaters Speed up Coating of Signs

A medium wave infrared oven from Heraeus Noblelight is helping Hawes Signs to achieve significant increases in production line speed in the powder coating of aluminium and steel panels.

Hawes Signs offers a comprehensive range of external and internal signs for customers ranging from high street banks to car dealerships and supermarket chains. The company's advanced manufacturing facilities include the latest in digital printing, vinyl cutting and flexible machine tool technology, so that it is ideally suited to handle large volume roll-out programmes as well having the capability to meet lower volume customised requirements. Naturally, finishing operations are vital to the production of high quality signage and environmentally-friendly powder coating is used to provide a sign surface which offers high gloss-retention and is highly resistant to chipping, scratching, fading and weatherability. The powder-coating facility uses epoxy/polyester/pigment powders which are sprayed directly onto predominantly steel and aluminium panels, of various sizes. This powder must then be brought to a temperature which allows it to flow and fuse before being cured for a given time. Previously, the sprayed-on powder had been pre-heated by a gas-fired infrared system before entering a warm air convection oven for final curing. However, this oven was starting to cause maintenance problems and to eliminate unwanted line stoppages while, at the same time increasing line speeds, it was decided to investigate alternative powder pre-heating methods.

Tests showed that the powder coatings could be quickly and reliably heated to the required temperatures by medium wave, electric infrared. As a result, a purpose-built medium wave, infrared oven was conveniently retrofitted into the existing powder coating and curing line, between the coating cabin and the warm air oven. This consists of two parallel zones, one for the coated side of the panels and one for the uncoated side of the panels to accelerate the heating effect. Since installation, the oven has helped to speed up the powder coating process as it heats the powder faster than the old system and it has also reduced the cure dwell time in the convection oven. In addition, quality has improved, as the medium wave heaters provide a uniform flow and fusion of the powders.



Features

- Powder coating of metal panels
- Increase of production speed
- Retrofitting of infrared oven

Technical Data

- Medium wave Infrared heaters
- two parallel zones, 50kW heat the coated side and 35 kW heat the rear, uncoated side
- Each of the zones can be switched between two power outputs to accommodate two sizes of panel

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