



Infrared system ensures laminate adhesion and reduces reject rates

By installing an infrared system from Heraeus Noblelight, Carella have ensured consistent quality of the extensive range of worktops and laminated panels manufactured at their Eglinton factory, Londonderry.

Carella manufactures laminated worktops and countertops for a wide range of applications, such as breakfast bars and shower panels. They are available in many finishes and can be tailor-made for installation in shops and leisure, hospitality, healthcare and science sectors

At Carella, cut-to-size panels of chipboard or MDF are manually fed to a PUR hot melt gluing station, where adhesive is evenly applied to the surface. They then pass to a laminating station where a melamine or Formica sheet is firmly and precisely placed over the panel and glued to it. However, Carella found that when the glue was applied to some panels from storage, the adhesion could be compromised, as glue could become “stringy”, leading to rejection of the finished product.

As the MDF, Plywood and chipboard are stored within the factory building, it was first considered to raise the ambient storage area temperature. This was rejected, due to Carella’s investigations which determined that the core of the board needed to be heated to help with securing/ activating a good bond between the PUR glue and the sheet materials. This would not be achieved by increasing the ambient temperature in the storage area. The installation of warm air fans was also precluded because of the associated dust creation problems. Eventually, Carella contacted Heraeus to see if infrared heating could be the answer with providing localised targeted heat to the board just before the bonding process began.

The infrared solution has proved to be simple but effective. As Owen Rosborough, production manager at Carella, explains, “We now have much better control of lamination so that there are no adhesion problems, which means that we have consistent quality and fewer rejects. Furthermore, the infrared system has proved to be energy efficient, as it operates only when we need it.”



Features

- Laminating MDF, plywood and chipboard
- PUR Hotmelt
- Quality improvement
- Reduction of rejects

Technical Data

- medium wave carbon infrared emitters with reaction times in the range of seconds
- 21 kW rated power
- Standby at 20% steps up to full power
- after reaching the target temperature, the system returns to 20% standby

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