



Gas Catalytic IR Technology for Powder Coated Timber Products

The founders of Climate Coating Ltd. (www.climatesurfaces.com) in New Zealand have pioneered innovative methods of creating powder coated surfaces on plywood, MDF and plasterboard. The majority of these products can be fitted without any further finishing requirements and are available pre-cut to size and in a wide range of colours. They include pre-coated plasterboard for walls and ceilings, decorative MDF board for commercial fit-out, moisture resistant exterior grade plywood and pre-primed exterior finishes that do not require finishing for up to 3 months.

The advantages of pre-finished products are self-evident. "By creating pre-finished materials that are commonly found in every type of construction, the reduced need for wet trades (brick laying, plastering and painting) has a significant impact on building lead time and on-site waste. Delays due to weather and material supply are all but eliminated. Furthermore, as the coated boards are pre-cut, the amount of off-cut waste is reduced considerably."

As Climate Coating Ltd pre-finish the board materials in a purpose built factory, the efficiencies of having a precisely controlled process means that waste is virtually eliminated and a consistent level of quality control is achieved which far surpasses that which can be accomplished "on site". This reduces the amount of "snagging" required on a completed job.

One of the primary problems with powder coating a timber substrate is its heat sensitivity. The time required to cure powder in a conventional hot air oven would cause significant damage to the timber. Therefore, one of the vital elements of the production system is the use of gas catalytic IR ovens to efficiently cure the applied powder on the chosen substrate. The IR waves are easily absorbed by the powder which will now cure in 7 – 10 minutes, without overheating the substrate. The system, designed in conjunction with world leaders Heraeus (formerly Vulcan Catalytic Systems) has proven to be a wise choice. The systems have proven to be the most controllable, energy-efficient powder coat curing solutions available today.



Features

- Extremely high level of quality control that is unachievable "on site"
- Sustainable production, no VOCs produced in manufacture
- Space-saving design has small footprint

Technical Data

- IR system consists of 2 gas catalytic ovens (2 section preheat, 5 section main cure)
- Output: 300m²/hour
- Highly controllable (PLC) and adaptable
- Programmable to control the heat output horizontally and vertically through the oven

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