

Drying Solvent-Based Adhesives on Metal Skins with a Model 4765 High Density Pyropanel Array

Application

A door manufacturer drying solvent-based adhesives on metal skins.

Problem

Solvent-Based Adhesive - The solvent-based adhesive was applied 6 to 8 mils wet, on .025 inch (.6 mm) thick, 42 inch (1067 mm) wide cold rolled steel skins.

Line Speed - The maximum line speed of 40 feet (12 meters) per minute was not being achieved.

Solution

Heat - Following a 15 second ambient air flash, a Model 4765-38-48 High Density Pyropanel Array was used to heat the metal skins and completely dry the solvent-based adhesive.

Air - Controlled input air and exhaust removed solvents from the coated product to increase the drying rate and maintain a clean, safe atmosphere in the oven cavity (below 25% LEL requirements).

Power Control - The High Density Pyropanel Array was controlled by a Phase Angle SCR Power Control System.

Benefits

Speed - The solvent-based adhesive was dried in less than five seconds and the maximum line speed of 40 feet (12 meters) per minute was achieved using the Model 4765 High Density Pyropanel Array.

System Integration - The SCR Power Control System automatically regulated the Pyropanel Array according to process conditions, keeping energy consumption to the minimum required.