Drying Manus 11-A Adhesive Between PVC and Aluminum with Model 4185 Infrared Strip Heaters

Application

A truck body manufacturer drying Manus 11-A two-part adhesive between PVC truck body tops and aluminum body wells.

Problem

Limited Production Output - The existing method involved applying the adhesive and letting it dry in ambient air. The drying time ranged from two hours to two days. This limited production output and made it unpredictable.

Poor Quality - Curing the adhesive with ambient air did not produce a good bond between the PVC top and aluminum well, resulting in water leaks in the truck body.

Excessive Rework - An excessive number of truck bodies had to be reworked to eliminate the water leaks.

Solution

Heat - Two Model 4185-25 Infrared Strip Heaters were used to heat the Manus 11-A adhesive to 190°F (88°C) for seven minutes.

Power Control - A Model 664F Phase Angle SCR Power Controller controlled the power to the heaters.

System Integration - The heaters and power controller were mounted on a fixture that was moved down the length of the inside of the truck body to provide heat along the entire length.

Benefits

Increased Production Output - Production output increased significantly with the seven minute drying time provided by the Infrared Strip Heaters.

Improved Quality - Drying the adhesive with the Infrared Strip Heaters created an even bond between the PVC top and aluminum well of the truck body, eliminating most leaks.

Reduced Rework - The even bond significantly reduced the amount of rework required to eliminate water leaks.