

Heat Shrinking Shrink Tubing on Metal with Model 4554 High Density Pyropanels

Application

A manufacturer heat shrinking shrink tubing on metal automobile brake lines.

Problem

Limited Production - The existing method of heat shrinking the shrink tubing in a conveyORIZED hot air oven limited the production rate to 600 brake lines per hour.

Poor Quality - Air was frequently trapped in the shrink tubing as it was heat shrunk and most of the shrink tubing was scarred by the oven's conveyor.

Solution

Heat - Forty-eight Model 4554 High Density Pyropanels (24 Model 4554-A-38-12 and 24 4554-A-38-06) provided the heat to heat shrink the shrink tubing.

Unique Installation - The High Density Pyropanels were installed on a machine consisting of line-supporting drive chains running in a vertical, triangular path with on-loading and off-loading stations at the bottom corners of the triangle. Opposing lines of 24 High Density Pyropanels were installed on the on-loading side of the triangle. The two lines of High Density Pyropanels were inclined about 30 degrees to the horizontal. The brake lines with the shrink tubing installed passed horizontally through the inclined heaters.

Heat Zones - Each line of High Density Pyropanels was divided into three heat zones.

Power Control - A Model 664K Phase Angle SCR Power Controller controlled the power for each heat zone.

Benefits

Improved Quality - The direction the brake lines traveled through the lines of Model 4554 High Density Pyropanels progressively heat shrunk the shrink tubing from one end to the other, forcing the air out of the unshrunk end of the shrink tubing. In addition, the supporting drive chains did not scar the shrink tubing.

Increased Production - Production rates increased to over 1,000 brake lines per hour.