

Activating and Curing Hardening Compound on a Rubber-Based Compound with Model 4554 High Density Pyropanels

Application

A manufacturer of automobile V-belts activating and curing a hardening compound on the rubber-based-compound belts.

Problem

New Process - A Japanese automobile manufacturer required the V-belt manufacturer to cure a hardening compound on the V-belts.

Line Speed - The manufacturer required a line speed of 80 feet (24.4 meters) per minute to meet production output requirements.

Automated System - To meet the required line speed, the manufacturer needed to develop an automated system to apply, activate and cure the hardening compound and cut the V-belts to the appropriate width.

New Compound - The hardening compound was new and had never been applied, activated and cured in an automated production line.

Scrap Rate Requirement - The manufacturer required a scrap rate that did not exceed 1% of production output.

Solution

Heat - Two Model 4554-A-05-12 High Density Pyropanels applied heat to activate the hardening compound and two Model 4554-A-05-06-IW High Density Pyropanels applied heat to cure the hardening compound on the V-belts.

Power Control - A Model 664K Phase Angle SCR Power Controller controlled the power to each set of two High Density Pyropanels.

Instant On/Off - The High Density Pyropanels responded instantly to production line starts and stops.

Automated System - The High Density Pyropanels were incorporated into an automated system developed to apply, activate and cure the hardening compound and cut the V-belts to the appropriate width.

Benefits

Quality Curing - The infrared heat applied by the High Density Pyropanels activated and cured the hardening compound according to the manufacturer's requirements.

Speed - By incorporating the High Density Pyropanels into the automated system, the manufacturer was able to achieve the required line speed of 80 feet (24.4 meters) per minute.

Flexibility - The instant on/off capabilities of the High Density Pyropanels enabled the manufacturer to set the production line for different V-belt runs without a long delay in production.

Limited Scrap - The number of V-belts that had to be scrapped was less than the 1% limit established by the manufacturer.