

Heating Polyester Film with Model 4554 High Density Pyropanels

Application

A manufacturer of specialty polyester film heating the film to 210°F (99°C).

Problem

Insufficient Heat Source - The existing medium density heaters were rated at 40 watts per square inch (6 watts per square cm).

Line Speed - A line speed of 130 feet (40 meters) was required and the existing heat source could only accommodate line speeds of 100 feet (31 meters) per minute.

Uneven Heating - The 47 inch (1194 mm) wide polyester film was reaching the required temperature in the center of the web but remaining several degrees cooler on the edges.

Limited Space - Space was limited both above and below the film line and the only available location to place heaters was a point on the web where the film travel was vertical.

Solution

Heat - Five Model 4554 High Density Pyropanels (four Model 4554-A-05-12 and one Model 4554-A-05-06) were mounted side-by-side to provide 54 inches (1372 mm) of high density infrared heat.

Heat Zones - The High Density Pyropanels were configured with center and end heating zones.

Vertical Installation - The High Density Pyropanels were installed vertically in the line.

Benefits

Sufficient Heat Source - The Model 4554 High Density Pyropanels provided 100 watts of infrared heat per square inch (16 watts per square cm).

Line Speed - Required line speed of 130 feet (40 meters) per minute was achieved with the capability to increase line speed to 160 feet (49 meters) per minute.

Even Heating - The center and end heat zones compensated for heat loss at the edges of the polyester film.

Well-Utilized Space - By installing the High Density Pyropanels vertically on the line, the manufacturer was able to achieve the desired results in the space available.