

Curing Silicone Tubing with a Model 4069 Parabolic Clamshell Heater

Application

A manufacturer of extruded silicone medical tubing curing a variety of sizes of tubing.

Problem

Poor Line Access - Change over from one size of tubing to another required moving the existing hot wall furnace curing system to gain access to the extruding head

Wasted Time - The existing hot wall furnace had a very slow response time and took a minimum of two hours to heat up and stabilize when changing the temperature for a different product.

Wasted Energy - The long heat up time for the existing heat source used a significant amount of energy without producing any tubing.

Poor Quality - The limitations of the existing heat source did not consistently produce quality tubing.

Limited Space - The manufacturer needed to reclaim some of the floor space used by the 12 foot (3.7 meter) long existing heat source for other processes.

Solution

Heat - A Model 4069-12-38 Parabolic Clamshell Heater provided the precise amount of heat needed to cure the silicone tubing.

Vertical Installation - Using vertical burn lamps, the Parabolic Clamshell Heater was installed vertically.

Power Control - The Parabolic Clamshell Heater was controlled with a Model 664F Phase Angle SCR Power Controller.

Instant On/Off - The Parabolic Clamshell Heater heated up and cooled down instantly based upon signals received from the SCR Power Controller.

Protected Heat Source - An optional quartz tube liner was inserted in the Parabolic Clamshell Heater to keep its reflectors clean and address the manufacturer's concern that a break in the line would cause a fire.

Benefits

Compact Heat Source - The Model 4069 Parabolic Clamshell Heater did not have to be moved when the extruding head needed to be accessed.

Increased Production - The responsiveness of the Parabolic Clamshell Heater allowed the manufacturer to increase production output.

Saved Energy - The instant on/off capabilities of the Parabolic Clamshell Heater did not require significant amounts of energy to be consumed for heat up.

Improved Quality - The uniform heat applied by the Parabolic Clamshell Heater consistently produced quality tubing.

Reclaimed Floor Space - By installing the Parabolic Clamshell Heater vertically on the line, the manufacturer was able to reclaim valuable floor space for other processes.