

# Drying Solvent-Based Adhesive on Nylon with Model 4185 Infrared Strip Heaters

## Application

A manufacturer of fishing line drying solvent-based adhesive around the nylon core of fly-fishing line.

## Problem

**Inconsistent Quality** - Existing long-wave "black body" heaters used to dry the solvent-based adhesive were unresponsive to changes in line speed, resulting in inconsistent quality of the fly-fishing line.

**Slow Speed** - The existing heat source installed in the available space required slow line speeds to provide the necessary heat flux transfer.

**Increasing Production Requirements** - Without claiming additional space for the adhesive drying process, the manufacturer needed to increase production output to satisfy demand for the fishing line.

## Solution

**Heat** - Model 4185-10 Infrared Strip Heaters were used to apply heat to the adhesive after the first and second coatings were applied.

**Power Control** - The Infrared Strip Heaters were controlled with a Model 664F Phase Angle SCR Power Controller.

**Vertical Installation** - Using vertical burn lamps, the Infrared Strip Heaters were installed vertically in the adhesive line.

## Benefits

**Reduced Power Consumption** - Only 1.8 KW of power was required to dry the adhesive, a 72 percent reduction from the previous method.

**Reduced Heated Length** - The Infrared Strip Heaters reduced heated length from over four feet (1.2 meters) to ten inches (254 mm).

**Well-Utilized Space** - The vertical installation of the Infrared Strip Heaters did not use valuable floor space.

**Improved Quality** - Controlled by the SCR Power Controller, the Infrared Strip Heaters responded instantly to changes in line speed and eliminated the quality problems previously encountered.

**Increased Speed** - The heat density provided by the Infrared Strip Heaters enabled the manufacturer to increase line speed to the rate required to meet production output requirements.