Oven Keeps Thrills On Track

Burn-off oven gives roller coaster wheels the treatment

The roller coaster climbs the first hill. Hearts are pounding, suspense is building, and everyone knows what comes next: That stomach-dropping, breath-taking, raise-your-arms-and-scream drop that means the real ride has just begun.

The all-metal tracks that provide these top thrills at top speeds require polyurethane coaster ride wheels. Refurbishing these wheels, along with the lift truck wheels, is the job of Industrial Wheels, Inc. in Willoughby, OH. As President Barney Klevay explains, "As roller coasters got faster and faster, the industry moved away from rubber and began to use polyurethane ride wheels. These wheels need refurbishing on a regular basis. It's our job to remove and burn off the old urethane, and then clean up and remold new urethane onto the hub."

Industrial Wheels, Inc., burns the old urethane off coaster ride wheels in a natural gas burn-out oven.

Burn-off oven does the job

Before Industrial Wheels purchased a burn-off oven in 1998, they were removing the polyurethane from the wheels by machining. "We found the machining provided too much of a chance of damaging the wheel hub," says Klevay. "These hubs are expensive, and often irreplaceable. We knew we had to move to a different way of cleaning that wouldn't cause these problems."

The like-new oven with afterburner that Industrial Wheels purchased has done that job for them. The natural gas oven, manufactured by Ace Equipment Co., has a four-by-four-by-four-foot interior, and a rollout cart for loading. An afterburner, standard on these ovens, burns all the smoke, breaking down hydrocarbons and eliminating any harmful pollutants. Interior temperature of the oven can range from 600° to 900°F., and afterburner temperature is 1500°F.

"This oven is very popular in a number of different industries," says Scott Heran, Vice President at Ace Equipment, Cleveland, OH. "It can burn off paint, grease, oil, or any other combustible material. Because it has such a precise heat range and heat controls, it can do a wide range of sensitive parts."

Cost-effective and efficient

The natural gas-fueled oven is also a very cost-effective way for Industrial Wheels to refurbish wheels. "We have to take the temperature up to 750° to get the urethane to burn away from the hubs," adds Kelvay. "We run the oven about three or four times a week with about 50 pounds of product per load. It would cost much more to do this with an electric oven."

The oven's afterburner insures that particulate emissions are controlled. "The second incineration chamber in this type of oven burns up any smoke and soot," notes Tim Roshetko, Dominion East Ohio Account Manager. "It provides excellent control over emissions."

"This oven is very efficient and cost-effective," concludes Klevay. "It does the job for us—and does it well."

> The oven provides excellent control over emissions

To find out more about burn-off ovens and their applications, contact Doug Rider, Environmental & Chemical Markets Manager, at (216) 736-6073, or Doug_Rider@dom.com.