

Forger Honored for Infrared Heating

A new infrared heating technology is allowing Queen City Forging to produce aluminum forgings with reduced heating times and energy consumption, but with better metallurgical and mechanical properties.

In November, Ohio Gov. Bob Taft presented the state's Emerging Technology Award to Queen City Forging Co., Cincinnati, for its implementation of Rapid Infrared Heating (RI) to increase processing speed and reduce costs while providing improved mechanical properties in forged aluminum components.

Earlier, while working with Oak Ridge National Laboratory, Northeastern University, and the Forging Industry Assn., Queen City Forging received a 2004 *R&D 100 Award* for its use of RI in forging operations. To further the development of RI technology, Queen City received financial assistance from The Edison Materials Technology Center, Dayton, OH, for research into RI for heat treating aluminum forgings.

According to the governor's citation, "Working with EMTEC, Ohio University, ORNL, and FIA, Queen City Forging has demonstrated quality and cost advantages of RI over conventional heat treat processes. Full commercialization of RI technology can offer competitive advantages for many metalworking industries, enhancing thermal processing of aluminum, to reduce energy consumption, and improve product quality."

Queen City was one of ten Ohio companies to win Emerging Technology Awards, which recognize progress, either in the advance of existing technologies, or pursuit of emerging technical developments.

"This year's winners continue to build upon Ohio's legacy as a worldwide leader in innovation," Taft said. "These businesses have demonstrated a strong commitment to product development and job creation in Ohio, paving the way to a stronger, brighter future for Ohioans and the world at large. I commend these companies on their outstanding achievements."

Commenting on the awards winners, Lt. Governor Bruce Johnson said, "In an increasingly competitive and technology-based economy, the success of our award winners proves that Ohio has the right business climate to help companies develop and commercialize new products." Johnson, who also serves as the director of the Ohio



Queen City Forging's Rapid Infrared heating furnace preheating aluminum billets

Department of Development, added, "From world-class research institutes to a highly trained workforce, we continue to demonstrate to observers around the world that Ohio Means Business."

RI for aluminum forgings

The rapid increase in energy prices and the growing need for better energy efficiency led Queen City Forging to investigate ways to improve its energy-dependent operations, especially billet preheating, because it is an area with a potential for significant savings. That led to its involvement in the development of RI.

In conventional aluminum forging, billet preheating typically is achieved using convection gas-fired furnaces.