

HOT METAL CARRIER SYSTEM

Unique System Proves Best Solution

When Victaulic, a manufacturer of fire protection and HVAC equipment, decided to expand its current facility they needed a way to transport hot metal from furnaces to auto-pouring stations. In order to perform this process, they required a system that would be safe, efficient, and easy to operate. The company they turned to was TC/American Monorail, Inc....a company Victaulic has depended upon in the past for material handling solutions.

Working with the local TC/American dealer Victaulic wanted three, auto-dispatched, hot metal carriers that could carry heavy loads and be equipped with an on-board weighing system. Despite the challenges of size constraints and extremely high temperatures, TC/American's engineers designed a highly functional and dependable material handling system that will serve Victaulic's needs well into the 21st century.

The new system consists of three hot metal carriers: two are in use while a third is used as a back up. The carriers travel on a closed loop monorail system which is routed around the foundry. A glide switch and spur track provide easy access to the maintenance area where the third carrier is stored. Each carrier has a strobe light that flashes when the carrier is energized. It also has a bell that sounds as the carrier travels between stations. An anti-corrosion system is a safety feature that consists of a trolley riding on the monorail connected to the carrier by a jointed arm. When the trolley hits an obstruction the arm collapses and trips a limit switch. The limit switch disables the forward motion control signal and sets the brake until the obstruction is removed or the carrier is backed away.

An infrared transmitter controls each carrier, allowing the operator to be a safe distance from the ladles during filling, traveling, and pouring. A pendant controller is also available for back up. As 2,500 pounds of hot metal is transferred from the furnace to the ladle, an on-board weighing systems sounds a horn when the ladle is nearly full. If the ladle is overfilled, the horn will sound continuously.

This weighing system allows proper amounts of metallurgical additives to be introduced into the molten metal already in the ladle. The result is an accurate and consistent metal chemistry which translates into fewer rejected parts and decreased costs. Once the transfer of hot metal to the ladle is complete, the operator can dispatch the carrier automatically to the pouring stations with the touch of a button. This process is repeated numerous times a day and has proved to be a safe, reliable, and low maintenance material handling solution.

The hot metal carrier system has met all of Victaulic's expectations and once again they are very happy with TC/American Monorail, Inc. This unique material handling system proves again the versatility and practicality of cranes and monorails designed and built by TC/American.

SEE BACKSIDE FOR DRAWING AND SPECIFICATIONS UNIQUE TO THIS SYSTEM.

For more information on how a TC/American material handling system can work for you contact your nearest dealer or TC/American at: Phone 763-497-7000, Fax 763-497-7001, E-mail Sales@tcamerican.com, Website www.tcamerican.com, or 12070 43rd St. NE, St. Michael, MN 55376-8427.

