



**HOT, COLD, WET OR DRY, GRAPHALLOY®
BEARINGS WORK WHEN OTHERS FAIL.**



GRAPHALLOY® Solves Molten Slag Machinery Design Problem

Successful in this high temperature application

Slag wool is a fiber product made from blast furnace slag. High temperature processing turns this waste product into a highly valuable product: fireproof insulating material that replaces asbestos in ceiling tiles. Sloss Industries, located in Birmingham, Alabama operates the largest slag wool plant in the United States. They have been a major producer of blast furnace coke for over 80 years and began producing slag wool fiber in 1947. Josh Russell, the Continuous Improvement Manager at Sloss, contacted GRAPHALLOY® about difficulties experienced with their slag wool production machinery.

Slag wool is produced under extreme conditions. A mixture of blast furnace slag and other minerals are melted in a high temperature coke-fired cupola. The molten slag is poured through a three-foot trough onto a spinner where the fibers are formed at a temperature of +2400°F. These fibers must hit the spinning target precisely. The device controlling the flow must rotate, move laterally and tilt in order to adjust the trough positioning and guide the molten stream onto the spinner.



Frequent breakdowns were occurring. Due to the complex, precise motions involved and the extreme heat conditions, the trough positioning mechanism was experiencing frequent breakdowns. Alternative solutions allowed for precise positioning but failed under the harsh operating conditions.

Sloss contacted GRAPHALLOY for a solution. Mr. Russell visited the GRAPHALLOY website and learned that he had a potential solution to his problem. Using specifications for existing GRAPHALLOY bushings, cam followers and thrust washers, Russell designed a mounting for the trough that would operate under harsh conditions and would also provide optimized stability.

GRAPHALLOY outperforms other bushings. According to Mr. Russell, "The Maintenance Foreman for the Blast Furnaces notified me that the oil impregnated bronze bushings should never have been used on the trough. He said that the GRAPHALLOY Spacers, Bushings and Cam Followers completely outperformed the oil impregnated bronze spacers & bushings. The GRAPHALLOY components on the trough were critical to the success of the project. Without using the GRAPHALLOY materials, the more efficient trough would not have survived the harsh conditions."

GRAPHALLOY provides cost-effective solutions. The unique properties of GRAPHALLOY are well-suited to handle the high temperature involved in slag wool production.