Ceramic grinding media reduces vertical mill component wear and maintenance costs for mining company

CARBOGRIND high performance ceramic media significantly improves grinding efficiency, lowers mechanical equipment wear and reduces media replacement costs

Southwestern Spain

The challenge

A large mining company in southwestern Spain required an optimal grinding media for vertical mills processing lead, copper and zinc. As well as generating the desired grind, the media needed to reduce wear on milling equipment.

The solution

CARBO recommended CARBOGRIND high performance ceramic media due to its proven performance in vertical milling applications.

Inert and containing no quartz silica, CARBOGRIND ceramic media products are engineered to provide superior strength, hardness and uniform shape: guaranteeing a high resistance to particle attrition and compressive breakdown. CARBOGRIND ceramic media products have been used in both vertically and horizontally configured wet mills.

The sintering process used to create CARBOGRIND product yields a Mohs hardness approaching that of a diamond. Importantly, the uniform size, and spherical shape would also reduce wear on the mining company's milling equipment.

As soon as the client utilized CARBOGRIND ceramic media product in their vertical mills, it realized immediate grinding performance improvements over silica sand and other specialty media products. Grinding efficiency was optimized and input energy was reduced, while less wear on the mechanical parts of its milling equipment meant lower maintenance requirements and costs.

The results

Finally, the hardness and durability of CARBOGRIND ceramic media product reduced final product contamination and lowered process costs. It also meant that the large Spanish mining company could use the ceramic grinding media for longer in its mills, reducing the usual costs associated with replacing, transporting and disposing of grinding media.

Project Details

Client: Large mining company

Location: Southwestern Spain

Type: Milling lead, copper and zinc

Grinding media: CARBOGRIND



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