

# Mining company reduces media consumption 50% by switching to CARBOGRIND ceramic grinding media

Durability of CARBOGRIND high performance ceramic media significantly improves grinding efficiency, reduces media replacement costs and decreases mechanical equipment wear.

## Southwestern Mexico

### The challenge

A mining company brought a dormant mine back online. After startup, the company sought to optimize production processes at the Metso stirred media detritors (SMDs) 355 operation, especially the reduction of high levels of grinding media consumption, in order to bring the mine up to its projected throughput of 2,500 metric tons per day.

### The solution

CARBOGRIND® high performance ceramic grinding media was recommended due to its proven performance in both vertically and horizontally configured mill applications. CARBOGRIND products are engineered to provide superior strength and hardness. The sintering process yields a Mohs hardness approaching that of a diamond, providing high resistance to particle attrition and compressive breakdown. The consistent size and uniform shape have also been proven to reduce wear on milling equipment.

Notably, CARBOGRIND media provides value superior to steel balls and inferior alumina-based substitutes, with significant performance improvements over other specialty media products.

### The results

The mining company tested CARBOGRIND 260-030 in place of the ceramic media previously used. The superior durability of CARBOGRIND meant the company was able to use the ceramic media through significantly more grinding cycles. The result was an immediate 50% reduction in total media consumption with a corresponding decrease in overall media replacement costs. This also resulted in a reduction of associated transportation and disposal costs. In addition, optimized grinding efficiency resulted in lower input energy costs and reduced maintenance and repair expenses on mill equipment.

### Project Details

**Client:** Large mining company

**Location:** Guerrero, Mexico

**Type:** Gold, silver and base metal mining

**Media:** CARBOGRIND 260-030 (3 mm)

### Benefits achieved

- 50% reduction in media consumption
- Reduced transportation, disposal and replacement costs
- Greater grinding efficiency
- Reduced mill maintenance and repair expenses

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