

application note



Metal Hardness Testing

ME Elecmetal

Product Hardness Testing: Failure to maintain hardness requirements results in premature wear.

Wear products produced by ME-Elecmetal are used in mining applications where resistance to impact and wear are critical to part performance. Hardness and alloy requirements are specified by a part's use and application. Parts that exceed hardness requirement increase the risk of premature failure. Parts that fall below hardness requirements wear out prematurely and require early replacement.

Application

ME-Elecmetal uses Equotip for testing the hardness of produced castings after heat treatment. Depending on the alloy and hardness specification for individual parts, hardness is measured using HLD (>600 HB) for high hardness or HLG (<550 HB) for lower hardness castings. Hardness measurements are taken on each casting to ensure conformity to customer requirements.

Castings produced range from 200 to 10,000 lbs. in size. The portability of the Equotip units is essential in taking hardness readings at the needed locations to ensure uniformity of wear.

Customer Quote

"We use Equotip D and G impact devices to measure the hardness of castings after heat treatment. The ability to create custom hardness conversions and use on products of different hardness ranges gives flexibility. The unit's portability and ease of use make the job of our inspectors much easier."

*Tom Waring, ME-Elecmetal
– Proceq customer since 1996*

Profile

Customer

ME-Elecmetal produces wear-resistant castings for the mining industry. Castings produced at two North American facilities are shipped around the world.

Employees

Over 300 at three locations

Requirements

- Accurate hardness readings on castings at multiple locations on each casting
- Ability to measure hardness exceeding 600HB
- Portability and ability to measure large castings up to 10,000 lbs

Proceq Product

Equotip 3 with impact devices D and G

Benefits to the Customer

- Versatility to measure large castings
- Accurate measurement of hardness for sets of produced castings
- Ability to measure castings with high hardness with different impact devices