CASE STUDY

IMPROVING CHUTE LINER MATERIAL SELECTION

H-E PARTS INTERNATIONAL (H-E PARTS) SPECIALIZES IN PROVIDING WEAR MANAGEMENT SOLUTIONS. H-E PARTS LINER DEVELOPMENT PROGRAM HAS BEEN DEVELOPED TO OPTIMISE LINER DESIGNS ON A SITE BY SITE BASIS AND INVOLVES THE ONGOING ANALYSIS OF SITE OPERATIONAL REQUIREMENTS, MACHINE OPERATING PARAMETERS AND WORN LINER PROFILES.

At a WA gold mine, the customer had an ongoing issue with high wear rates in their high pressure grinding rolls (HPGR) choke chutes. After careful analysis of the wear situation, H-E Parts resolved the issue by improving material selection; replacing the standard chromium carbide overlay liners with H-E Parts CME™ liners. The result was a dramatic improvement in wear rates.

H-E PARTS CME™ liners exceeded the life of the original plate with little wear and lasted the entire life of the roll, which run for an average of 5000 hours. Since improving the material selection, the following has been achieved:

- Liner life in this chute has increased from 430,000 to more than 15 million tonnes.
- While the original overlay plates were changed approximately every 1300 hours, the CME™ liners completed the full 5000 hours with less than 0.31” (8 mm) wear on a 0.75” (19 mm) liner.
- Relief on maintenance resources; labour hours reduced by 300 hours for the life of the chute.
- Reduced need for high-risk tasks in confined spaces.
- Reduced downtime of machines.

Through a combination of in-service monitoring and post-removal analysis, the next stage of development is to map wear patterns, replacing lower wearing areas only with lower cost materials while continuously improving liner performance

LOCATION	Western Australia
APPLICATION	Gold Mine
PRODUCT	CME™ Wear Plate

CME™ overlay wear liners after 3500 hours and 8.3 million tonnes

Standard overlay plate after 1300 hours.

CME™ LINER PERFORMANCE TABLE

	TARGET	PREVIOUS PLATE	CME™
Annual tonnes	>16 million tonnes	max 3.4 MT	15 MT
Average life	>6,000 hours	1,300 hours	5,700 hours