

# CASE STUDY

## KODIAK K300+ CONE CRUSHER LINER SUCCESS

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

Hanson Kulnura is an aggregate quarry located in the Central Coast region of New South Wales, Australia. Kulnura had historically experienced crusher liner life of 6-8 weeks in their Kodiak K300+ tertiary crusher, but this had recently dropped to as low as 3-4 weeks, resulting in poor crushing performance, utilization, and ‘tramping’ towards the end of liner life. H-E Parts approached the team at Kulnura and offered to provide a trial of a customized crusher liner to suit their specific application.

To facilitate a customized liner design, a H-E Parts engineer traveled to Kulnura to conduct 3D laser scanning of OEM supplied new and worn crusher liners. These scans were then used in conjunction with H-E Parts proprietary ChamberVision™ and CrusherVision™ software, allowing H-E Parts dedicated engineering specialists to offer a solution to extend liner life and reduce total cost of ownership. Following an analysis of the OEM supplied liner profiles, a new set of liner profiles were offered to the customer that:

- Increased liner life by better utilizing the adjustment parameters of the crusher and ensuring optimum material utilization
- Improved inter-particle crushing and promote liner ‘work hardening’ by reducing nip angles throughout the active crushing zone of the chamber, which allows for increased surface pressure and reduced material slippage and gouging
- Prevented the formation of ‘hooking’ at discharge ends by adjusting bowl and liner discharge profiles to better maintain alignment of the liners as they wear down

The proposed liner profiles were adopted and ran successfully by Kulnura with no issues on the very first set provided. The liners were removed from production at 15 weeks, far surpassing the OEM supplied liners which had a historic average of 5 weeks. In addition, the liners still had 60mm (2.4”) of wear remaining, with H-E Parts engineering team confident that these liners can be run down to 20mm (0.8”), this represents approximately another 5 weeks of available life remaining.

### H-E PARTS LINER PERFORMANCE TABLE

	OEM	H-E PARTS
Liner life (wks)	3-6 (averaged 5)	15
Life Improvement (%)		200%

LOCATION	Hanson Kulnura
MINE TYPE	Basalt Quarry
APPLICATION	Kodiak K300+ Cone Crusher



3D scanned worn OEM liners



Optimized CME™ MnElite liners being installed

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