Weartech® SHS™ Wear Plate

Provides 400% + More Wear Life than 500 Brinell Q&T Plate

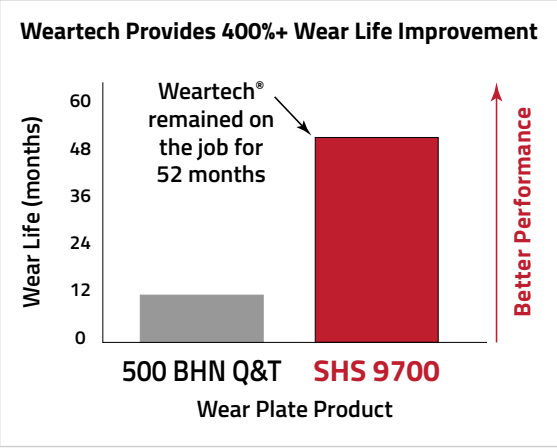
PROBLEM: SEVERE SLIDING ABRASION

At an extreme hard rock mine in the Southwest USA, a fleet of 240-ton haul trucks transport ore from an electric shovel to a primary crusher. During unload, the rear section of the truck bed receives the greatest amount of wear from severe sliding abrasion. A 500 Brinell quench & temper (Q&T) steel wear plate installed to protect the original truck bed only lasts an average of 12 months.

SOLUTION:
WEARTECH SHS OVERLAY WEAR PLATE

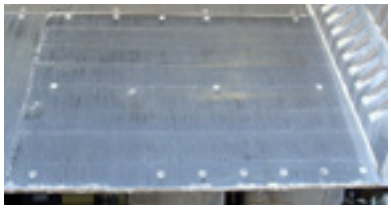
A Weartech® SHS™9700 overlay wear plate was installed in one truck as a side-by-side wear life performance comparison to 500 Brinell Q&T wear plate.

Wear Plate	Type	Thickness	Overlay	Substrate	Hardness	ASTM G65-04, Procedure A
Weartech SHS9700	Overlay	3/4 in (19 mm)	1/4 in (6 mm)	1/2 in (13 mm)	66 - 69 HRc	0.13 g mass loss
500 Brinell	Q&T	3/4 in (19 mm)	—	—	49 - 53 HRc	1.20 g mass loss

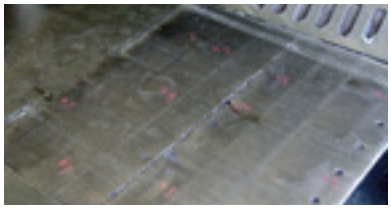


Weartech overlay material is 1/3 the thickness of the Q&T plate

Exposure to extreme wear from sliding abrasion



After hauling 4.3 million tons



After hauling 10 million tons

RESULT:
WEARTECH SHS WEAR PLATE PROVIDES 400%+ LONGER WEAR LIFE

An ultrasonic inspection of the Weartech plate at 48 months showed 40% of the original 1/4 in. (6 mm) overlay thickness remaining. The Weartech SHS overlay wear plate was removed from service after hauling more than 13 million tons in 52 months while 500 Brinell Q&T wear plate was replaced after an average of only 12 months of service. Benefits to the mine include the following:

- Elimination of 3 sets of wear plate and cumulative manpower hours required for each installation
- Truck remains in service longer
- Increases in production and revenue

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