

FEROBIDE PROTECTS IRON ORE SPOON CHUTE FROM SEVERE ABRASIVE WEAR

Customer: Major Canadian Mining Company

Application: Iron Ore Spoon Chute

Location: Canada

Incumbent Material: White Cast Iron

CHALLENGE

In iron ore handling operations, spoon chutes are exposed to constant abrasion from large volumes of processed ore. The existing white cast iron wear plates installed in the highest wear area of the chute experienced rapid deterioration, resulting in frequent maintenance interventions and replacement costs.

The customer required a wear solution capable of significantly extending service life over intervals of 3 months, while processing 5 million tons of material.

SOLUTION

Tenmat Wear supplied FEROBIDE® plates for installation in the highest wear area of the iron ore spoon chute. FEROBIDE is a weldable tungsten carbide composite that combines the wear resistance of tungsten carbide with the practical advantages of a steel-based material, allowing simple installation using standard welding methods.

Applications

- Apron Feeders
- Chutes
- Hoppers
- Bins
- Decanter centrifuge flight tiles
- Feed and discharge port liners
- Wear strips for bowls

Customer Benefits

- Extended wear life
- Reduced maintenance requirements
- Lower replacement frequency
- Improved operational reliability
- Reduced total cost of ownership for wear protection in critical chute areas





FEROBIDE

RESULTS

Following the processing of 5 million tonnes of iron ore, the performance difference between FEROBIDE and the incumbent white cast iron solution was clearly demonstrated:

Cast White Iron

- Bars had completely worn away.
- Significant material loss was evident in the highest wear zones.
- Replacement would have been required.

Ferobide

- Plates remained intact and continued to provide effective wear protection.
- Minimal wear was observed despite exposure to the same operating conditions.
- Continued service life beyond the evaluation period was achieved.

CUSTOMER OUTCOME

By replacing conventional white cast iron wear components with FEROBIDE, the customer achieved:

- Extended wear life
- Reduced maintenance requirements
- Lower replacement frequency
- Improved operational reliability
- Reduced total cost of ownership for wear protection in critical chute areas

APPLICATION HIGHLIGHT

After processing 5 million tonnes of iron ore, the cast white iron wear plates had completely worn away, while the FEROBIDE® plates in the highest wear area remained intact and continued to perform effectively.