The Wear Resistant Technologies Solution
Morrow Gravel Company is part of the Jurgensen Companies. They own and operate gravel and asphalt plants in 3 states. They have 20 operations and produce crushed stone sand and gravel. The particular product for the application is #57 Limestone Gravel is angular with 1/2” to 1” in size. The Metso 8’ x 20’ Tripe Deck Screen operates at 300/ton/hour. The top deck screens all of the #57 which all go over the chute. This equates to ~75,000 ton per year. Traditionally, the plant had used 1/4” AR400 which lasted 1 season each year before needing an entire replacement. The ceramic chosen was 1/2” Durafrax® Weld-al ceramic installed with our WP750 RTV Silicon. The 1/2” was installed on the entire bottom of the chute and 1” on the side walls in the top of the chute in the reducing section.

<table>
<thead>
<tr>
<th>#57 Chute</th>
<th>INITIAL COST (US$)</th>
<th>ESTIMATED LIFETIME (YEAR)</th>
<th>COST PER YEAR (US$)</th>
<th>ADDITIONAL COSTS TO INSPECT AND REPAIR OVER LIFETIME</th>
<th>TOTAL SAVINGS OVER LIFETIME (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR Liner</td>
<td>$2,400 + 400</td>
<td>1</td>
<td>$2,800</td>
<td>$0</td>
<td>-</td>
</tr>
<tr>
<td>Durafrax® Solution</td>
<td>$1,200 + 400</td>
<td>15</td>
<td>$107.00</td>
<td>$0</td>
<td>$40,400</td>
</tr>
</tbody>
</table>

Solution Summary
After 1 year of operation, the ceramic looks like the day it went in and is expected to last ~ 15-20 years which would equate to about 1.1-1.5 Million tons of gravel. They plan to line many more chutes in several of their quarries.
Custom Engineered For Easy Installation

Each Wear Resistant Technologies solution is custom-designed, manufactured, and installed to meet the demands of your application and operating environment. In most cases, the solution is a direct replacement of the original design and does not require any further equipment alterations.

Quality and Experience Give You The Competitive Edge

As part of our Engineered Ceramics Division, Wear Resistant Technologies teams from around the globe offer the resources, technology and experience to solve the most complex wear problems.

To learn more about how our wear protection systems can help improve your bottom line, please contact a Saint-Gobain Wear Resistant Technologies location near your site. Or you can visit our web site www.wrt.saint-gobain.com

Providing Global Solutions To Your Wear Problems Solutions

Our companies are solution-oriented. We assess your problem, present realistic options, and engineer wear systems that are appropriate for you operating environment. Our expertise in material science, our computer design technology, our unique shaping capabilities, and our expertise in attachment techniques give us the technical edge when it comes to solving wear problems. No matter where you are in the world, our full line of products and technical support are as close as your nearest Wear Resistant Technologies representative. Our sales offices are located throughout Europe, North and South America, Asia, India and Australia.

Materials

- **ALUMINA**: Durafrax®2000
- **FUSED CAST AZS**: ZAC®, Corguard®
- **NITRIDE-BONDED SILICON CARBIDE**: Cryston®, Cast Refrax®
- **REACTION-BONDED SILICON CARBIDE**: Norfrax RB®, HAMMERfrax®
- **ALPHA SILICON CARBIDE**: Hexoloy®
- **WEAR RESISTANT COMPOUNDS**: Duracoat, Carbofrax®, Alfrax® Zircote, WearPak Adhesives

Applications

- Chutes/Hoppers
- Classifier Cones
- Cyclone Separator
- Elbows
- Fan Housing & Blades
- Lined Piping
- Nozzles
- Wear Panels
- Specialized Material Handling Systems

Markets

- Coal-fired Power Generation
- Mining
- Abrasive Material Handling
- Chemical Processing
- Food Processing
- Iron/Steel Manufacturing
- Powder/Bulk Solids Conveying
- Pulp & Paper Manufacturing
- Pulverizing & Grinding
- Pharmaceutical Industry
- Environmental Industries
- Cement Industry
- Fiberglass Industry
- Foundries
- Textile Manufacturing
- Wire Industry

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