Many years ago one of our cement customers had a bright idea that utilized one of our products, WC700Plus™ Chrome Carbide Overlay Plate. Although we knew he was up to something special, we didn’t get the low-down as to how successful his innovative solution application really turned out until just recently. The following is the report in his own words.

Background
Our Pug Mill is used to process raw materials. This was costly and ineffective. There was a large amount of maintenance on the internals. Pugmill paddles were then replaced with a pug screw. Efficiency increased as raw materials were processed more easily without the maintenance headaches. Therefore, there was a significant reduction in usage of parts and usage in power.

New Process / Idea Explanation
• The Pug Mill was replaced by the WC700Plus™ Pug Screw to process coarse materials. Silicon based materials eroded mill paddles, therefore, requiring frequent replacement and hard facing of paddles.
• WC700Plus™ Pug Screw was an improvement over the Pug Mill paddles because it processed the silicon based coarse materials more efficiently reducing parts consumption by 69.56%.
• There was an annual sav-
ings of 620, 821 kw/hr, resulting in a significant power reduction of 80%.

**Benefits**

- The bottleneck of the Plant is the Raw Feed to the kiln, with the installation of the new **WC700 Plus™** Pug Screw we saw a reduction in downtime in the Raw Mills of 230 hours, eliminating cutting the kiln back 30 tph, giving an economical benefit of $196,650 USD (on a sold out market)
  - The **WC700 Plus™** Pug Screw grinds coarse materials more efficiently.
  - The raw materials have become more coarse as a result of the low alkali mix we now use to make low alkali cements, so this change is yielding ever increasing benefits.
  - In a 15 month period the parts usage was significantly reduced.
  - Breakdown of paddles used.
  - Breakdown of new **WC700 Plus™** Screws used
  - 3/2010-present ($30,371.93)
  - The power consumption was reduced as well by 100 hp giving the plant another $24,832 in annual savings.

**Conclusion**

The implementation of the $40K redesign that eliminated paddles and replaced them with Screw flights made from Wear-Concepts’ **WC700 Plus™** Chrome Carbide Overlay Wear Plate has resulted in the following savings:

- Overall savings of $290,887 per year.
- 98% Reduction in Downtime.
- 80% Reduction in power.
- 69.56% Reduction in parts consumed.

If you would like to see how Wear-Con’s **WC700 Plus™** might be able to work for you in your specialized application, give us a call or email us. One of our Wear Specialist can come out to your operation at your convenience. Once there he will be able to assess your particular wear issue and prescribe a solution.