

**A**pplications

**S**olution

**I**nnovative

# That Dog Can Hunt!

By Harrison Rhodes & Mike Sexton

When I was a kid growing up in Missouri, I would hunt every chance I got. When I hunted with my dad, we would use his English Pointer named Pete who would hunt quail exclusively. Pete was a bit high strung and not really friendly. If I were to go hunting with my friends, we would have to take a different dog, (Bud) who belonged to my pal Danny. Bud was a mix of a couple of different breeds. With a bit of bird dog and some hound thrown in, Bud was easy-going and friendly. He just wanted to be in on the fun. Bud didn't hold on point quite as well as Pete or retrieve as perfectly either. But it didn't matter what the target was - quail, rabbit, dove, squirrels, coon - he was game! What Bud could do is track, round, go anywhere, and last all day long. My dad called Bud an A.P. dog. What does that mean? All Purpose. All I knew was...that dog could hunt!



WC700Plus™

In the fight against wear, **Wear-Con** provides all of the exclusive products. Some are designed for impact, some are for erosion, others for corrosion or abrasion. They're all great products in the right applications, but sometimes you just need a handy solution to your problem that isn't quite as narrow minded. Something that has a wider range of abilities. Something that can handle just about anything that's thrown at it. An All Purpose Dog. A dog that can hunt!



WC700Plus™ Rotary Feeder

In the cement world where the clinker is the most abrasive material, **Wear-Con's WC700Plus™ Chrome Carbide Overlay Wear Plate** has a proven track record as the most cost effective, all-around, wear solution in the industry. In the past, ceramic was widely used to combat wear issues in Raw Mills and Finish Mills, but ceramic falls short when impact and rapid temperature changes occur. Often we see that maintenance technicians have gone in to hunt down and kill severe wear by using hard surfacing welding rods to give equipment an edge against abrasion. **WC700Plus™ Chrome Carbide Overlay Wear Plate** is a mixed breed. Hard surfacing on a sheet of mild steel that allows the plate to be rolled and formed to conform into many

uses. Since chrome by itself is brittle, it is bonded to mild steel which allows for some give and stands up to impact conditions. Now, that dog can hunt!

Many applications of this product are in use including, but not limited to, Rotary Feeders, Hopper Liners, Impact Plates, ID Fan Housing Liners, Chain Wear Bars, and Cement Mill Liners.

In the Quarry, **WC700Plus™ Chrome Carbide** is used in Bucket Liners, the Primary and Secondary Crusher walls and in the impact zones of the Hoppers. It is also used in Hammer Crusher Side Liners. In that same application a comparison study was done where 1" AR500 plate lasted 48 weeks; whereas, the same thickness **WC700Plus™ Chrome Carbide Overlay** lasted 151 weeks.\*

In the Raw Mills and Finish Mills, **WC700Plus™ Chrome Carbide Overlay Wear Plate** can be rolled to conform to the inside of the Grinding Chamber Housing as well as the Distribution Cone and Outlet Chambers at the top. **WC700Plus™ Chrome Carbide Overlay Wear Pipe** can be used as the Primary Charging Inlet and also for the pneumatic material outlet pipe where turbulence causes wear at the top of the mill.

Other uses in the Cement plant are Dust Collection Systems, Pneumatic Piping, Elbows, Transition Chutes, Ball Mill Charge Throats, Ball Mill Discharge Chutes and so on. Chrome Carbide Overlay Plate can be used anywhere that AR Plate is currently being used



WC700Plus™ Pipe

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WC700 Plus™ Wear Panels

with exceptional results. In situational comparison, **WC700 Plus™ Chrome Carbide** has shown the following:

- 1/2" Carbon Steel 8 weeks\*
- 1/2" AR400 Plate 16 weeks\*
- 1/2" AR500 Plate 24 weeks\*
- 1/2" 1/4" x 1/4" CCO 59 weeks\*

This comparison has been proven time and time again; and while **WC700 Plus™ Chrome Carbide Overlay Wear Plate** is generally twice the cost of AR500 plate, once you factor in the cost of downtime, lift equipment, man power, and safety precautions in regards to changing out liners during outages (if timed), the cost is well worth the savings.

In applications where corrosion is an issue, there is also an answer. **WC700XT™ Plate and Pipe** are the same concept as the **WC700 Plus™ Chrome Carbide Overlay Wear Plate and Pipe** but with the base metal being Stainless Steel.

Until now, one of the only limitations of **WC700 Plus™ Chrome Carbide** was the texture of the Overlay. In situations where sticking or plugging is an issue (such as in chutes or transition areas), the ribbed texture of the chrome carbide may be a limiting factor. Wear-Con's **MirAClad™** is the solution for this application. **MirAClad™** is a **WC700 Plus™ Chrome Carbide Overlay Wear Plate** that has had its surface Blanchard Ground to a mirror-like finish. This smooth machining of the chrome carbide prevents the adhering of product so you can get the wear results of Chrome Carbide and the low coefficient of a slick surface.

Where weight is an issue such as Fan Blades, Classifiers, Separator Vanes, Cyclones, and Pump Impellers, Wear-Concept's FeatherClad™ is a unique High Chrome answer to these wears issues. At 65RC, FeatherClad™ is harder than quartz yet is lighter than conventional wear plate and can easily be attached using 7018 Rod. With its ultra thin 3/16" thick profile, it is excellent for tight clearances where other wear products won't fit. FeatherClad™ weighs only 6.5 lbs per square foot and can be rolled and formed even to a 4" diameter Pipe insert.

**WC700 Plus™ Chrome Carbide Overlay Wear Plate** comes in several thicknesses where the overlay is one half the thickness of the carbon steel it has been bonded with. The most common thicknesses are the following:

- 1/4" 1/8" Carbon Steel x 1/8" Overlay
- 3/8" 1/8" Carbon Steel x 1/4" Overlay
- 1/2" 1/4" Carbon Steel x 1/4" Overlay
- 3/4" 3/8" Carbon Steel x 3/8" Overlay
- 1" 1/2" Carbon Steel x 1/2" Overlay



WC700 Plus™ Crusher Side Liner

The number of passes (layers of overlay) can be a definitive factor in the wear-ability of the product. 3/8" plate is generally a single pass where a certain amount of carbon will leach into the chrome carbide during the bonding process. The second pass (optional with the 1/2" thickness plate) is more of a pure chrome carbide and will significantly wear better than 1/2" single pass. This will incur additional expense in the extra process that is performed.

**WC700 Plus™ Chrome Carbide Overlay Wear Plate** can be applied in several ways including: Counter sinking for plow bolts, plug welding, perimeter welding, and welded studs, to name a few. The Mild steel backing allows for the use of Low Hydrogen 7018 welding rod. To protect the weld, use a 60RC Hard Surfacing welding rod on the chrome carbide side.



WC700 Plus™ Flop Gate Housing

So, if you are hunting for all purpose durability, impact resistance, versatility, and cost effectiveness to increase the life of your equipment, look to the **WC700 Plus™ Chrome Carbide Overlay Wear Plate** family of products from **Wear-Concepts** for all of your wear needs. Now that dog can hunt!

\*All comparisons are based on a controlled study. Your situation i.e. Material Type, TPH, Angle of Impact, speed of material, PH of material can have different results.

Innovative  
Solution  
Applications



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