

Double metal chromium carbide overlay wear pipes、 elbow

Wear pipes are composed of the wear base material and the wear layer, the wear layer is generally accounts for 1/3 or 2/3 of total thickness;

The wear layer and the base material is combined through metallurgy, so that the wear layer can't fall off, and can bear stronger impact.

The wear pipes are processed and molded by two methods, one is that chromium carbide overlay wear plate is rolled by roller press. the other is that we firsthand weld in the seamless steel pipe.

The performance of wear layer in the pipes is the exactly same with chromium carbide overlay wear plate.

The wear pipes' connection methods are flange connection and welding;

The wear pipes can be processed into elbow、 tee branch、 Square to round Transitions、 frustum、 Square tube, etc.

Abrasion resistant chromium carbide overlay pipes and elbows are designed for use in applications where severe abrasion in combination with moderate impact and heat occurs in the inner diameter of pipes or elbows. WellerCLAD PIPE® is made utilizing an overlay process that involves open arc deposition of chromium carbide in a manganese and steel matrix. One pass on the inner pipe surface yields 60RC while two passes yield a surface hardness of 63RC. The overlay is rated to be stable at 900°F and a special high temperature version, WellerCLAD PIPE HT®, is available for applications up to 1200°F or 1800°F with stainless steel backing pipe. WellerCLAD PIPE® is available down to a 2 inch diameter and is applied spirally to avoid seams that are parallel to the direction of the material flow.

## **CLAD PIPE – CHROMIUM CARBIDE OVERLAY**

- Clad pipe – chromium carbide overlay consists of Q235 steel pipe and chromium carbide wear-resistant layer, which generally accounts for 1/3-2/3 of the total thickness of the pipe.
- Between the wear-resistant layer and the base material is the Metallurgy Union, the wear-resistant layer will not fall off, can withstand the big impact;
- The processing and forming of wear pipe adopts two methods of rolling wear-resistant steel plate or directly surfacing welding in seamless pipe
- The wear-resistant layer formed by surfacing welding inside the tube has the same performance as the wear-resistant steel plate

- The method of surfacing welding wear-resistant pipe is flanged connection and welded connection
- Build-up welding wear-resistant pipe can be processed into elbow, tee, cone, square pipe and so on
- The minimum CRIMP radius is 20 times the thickness of the plate.

## CLAD PIPE CHARACTERISTICS:

1. **WEAR-RESISTANT CHARACTERISTIC:** adopt numerical control equipment, automatic inner wall surfacing welding chromium carbide alloy material, wear-resistant grain wear performance, adopt metallurgical fusion method, wear-resistant layer and base material realize metallurgical bond, namely atomic bond. The thickness of wear-resistant layer is 1 ~ 20mm, and the wear resistance is about 3-5 times of that of ordinary steel pipe.

2. **ANTI-IMPACT CHARACTERISTICS:** The base pipe of the hardfacing wear-resistant pipe is made of low carbon steel pipe with good plasticity, which is metallurgically bonded to the wear-resistant layer and can absorb a large amount of energy during the process of being impacted, with strong impact resistance and crack resistance, it can be applied to vibration, impact of strong working conditions.

3. **Cutting features:** due to the use of soft base pipe, can be plasma, carbon arc and other heat source cutting, can be welded into shape, so that the field welding work becomes time-saving and convenient.

4. **Pressure characteristics:** external use of high-quality steel pipe or steel plate hot pressing system, after good welding, make elbow in 10Kg / CM<sup>2</sup> pressure above, no problem, will not occur because of local leakage, and the phenomenon of material diversion.

## TECHNICAL PARAMETER:

- Pipe diameter: bigger than 100 mm
- Inner Material: Chromium Carbide
- Connection: Flange, Butt Weld
- Inner layer thickness: Over 2mm
- Inner hardness: HRC57-63
- Length of single root: unlimited
- Extreme stress: Class A
- Corrosion resistance: good
- PACKING: Wooden case, bare package
- Working temperature:-60 °C ~ 800 °C
- REPAIRABLE: repairable by welding

- Supply Cycle: 10 days
- Payment: TT, LC, OA available
- CUSTOMIZABLE: Yes
- DRAWING DESIGN: available

## APPLICATIONS:

- Metallurgical and power industry: transport coal powder, Ash, slurry, gypsum slurry and other metal pipes.
- Mining: The pipe used to transport ore fines, the service life of this pipe can be increased about five times, comparing to previous pipes.
- Coal: Coal Preparation and long-distance pipeline transportation are generally wet transportation, which requires both wear-resistant and corrosion-resistant pipeline, which can be used as a long-life pipeline, with considerable economic benefits.

## HOW WE PRODUCE CLAD PIPE?

- The wear pipe is mainly made by hardfacing technology, the mechanical part of the equipment is designed reasonably, the electric part adopts the key surface input data, which can be connected with other equipment and welding machine freely The walking speed can be adjusted at any time according to the need, the welding pass can be arranged automatically, the welding wire can be deposited continuously, the wire feeding is automatic, the swing speed and width of the welding torch can be set by yourself; In the welding process, the height of welding torch is automatically tracked by independent research and Development System to improve the overall efficiency.

## TRANSPORT AND INSTALLATION

- Hardfacing wear-resisting pipe can be installed directly by welding. Because of the high resistance of the wear-resisting layer, it is very convenient to knock, cut, replace, repair and install the pipe at will when local scaling and blocking occurs in the pipe guide.

### wear pipe

Caster wear pipe is a bimetal pipe made of seamless steel base pipe onto which chromium carbide overlay is welded with an open arc process. We use an oscillating table with one welding head to arc weld the chromium carbide to the internal of the pipe. We can handle diameters from 6" up to 24" after which we fabricate the pipe from our Chromium Carbide Overlay Plate. The overlay is deposited perpendicular to the flow of material through the pipe resulting in a longer wear life.

## Quality:

If the quality didn't match your expectation, you can ask us for refund or you can ask us to send replacements to you.

You're welcome to visit us for inspection purpose. Every customer is too valuable for us to lose. Being honest is the best way to keep our business humming.

**wear elbow:** Our Chromium Carbide Overlay Elbows are welded with the same material. Overlay is deposited in either a single pass application which is 1/8" to 3/16" thickness or a double pass application which is 1/4" to 3/8" in thickness. Wear life of our Overlay Pipe can be up to 15 to 1 over standard wear pipe. The longer wear life of our products reduce maintenance hassles, costly down time, and material loss.

### Wear Pipe types

1. Steel pipe with regular base material + overlay, pipes are welded using oscillating table with one welding head to arc weld the chromium carbide to the base material.

2. Bending the wear plate into round pipe.

3. Assembling the wear plate into square pipe.

automatic welding, metallurgical bonding, available to weld the minimum pipe diameter of 80mm and maximum pipe length of 3000mm.

### Wear Elbow types

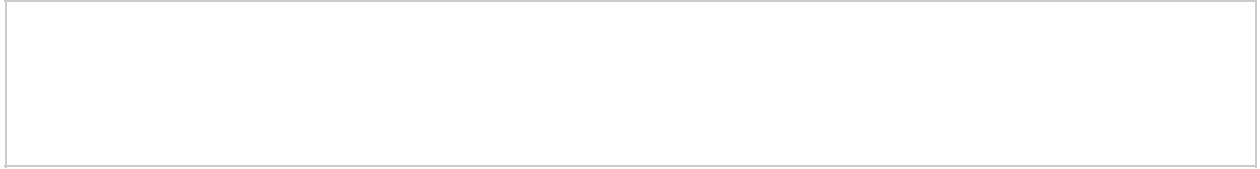
1. Weld directly on the elbow wall

2. wear plate used to make joint form

### Square to Round Transition

Wear plate used to make tube with round top and square bottom.

Product Name	chromium carbide overlay alloyed anti wear tube
Brand	caster
Base Plate	Q235/Q345
Hardfacing layer	High chromium high carbide overlay (Hard layer face out or face in)
Chemical Composition	C(%): 3.0-5.0, Cr(%): 25-40, Mn(%): 2.0-3.0, B(%): 0.7-1.0
Hardness	HRC58-62
Surface Treatment	Hardfacing, cladding, coated
Technique	Hardfacing, open arc welding, submerged arc welding
Minimum Inner Diameter	80mm
Wear Resistance	High wear resistance
Thickness	3+3,4+4,5+5,6+4,6+5,6+6,8+4, etc. Customized
Place of Origin	China
Application	Mining, Steel, Cement, Power, Port, etc.



- [Pipe Dream](#)
- [Pipe Pictorial](#)
- [WC700P\*Plus\*<sup>TM</sup> Flyer](#)

## Features & Benefits

Wear-Con WC700P*Plus*<sup>TM</sup> Chrome Carbide Overlay Wear Pipe provides excellent resistance to severe abrasion erosion and impact. Lasting up to 12 times longer than mild steel pipe WC700P*Plus*<sup>TM</sup> can be hardened on either the interior or the exterior making it great for use in wide variety of applications. WC700P*Plus*<sup>TM</sup> is easy to install offers lower life cycle costs and can be custom-fabricated to aid pipe design or replacement.

## Installation

Wear-Con WC700P*Plus*<sup>TM</sup> Pipe can be easily installed by flanging coupling or welding.

## Technical Specifications

With higher chromium carbide content Wear-Con WC700PPlus™ Pipe provides extreme abrasion resistance with hardness from 60 to 64 HRc along with the ability to withstand temperatures up to 1000°F.

## Sizes

Wear-Con WC700PPlus™ is available in an array of sizes and thicknesses to fit your wear needs.

## Options

Wear-Con also offers a WC700XTP™ Chrome Carbide Wear Pipe with a unique chromium carbide overlay on a stainless steel base plate is designed for areas with severe impact abrasion, sliding abrasion, and corrosion resistance. WC700XTP™ can be cut to your specific needs.

## Standard Sizes

Thickness	Diameter	Length
5/16"	6" (ID)	up to 118"
3/8"	8" (ID) 10" (ID) 12" (ID) 14" (OD) 16" (OD)	up to 118"