Controlled Air Design
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Ceramic- Technical Information For High Abrasion Resistance

Ceramic lined bends are the same wide sweep pneumatic tube or pipe bends you have used in pneumatic conveying systems for years except that a uniform coating of a specially formulated ceramic material is added to the inside diameter of the bend to give it a very hard, very slippery, glass like surface.

This ceramic coating resists abrasion because of a combination of its hardness and its smoothness.

The ceramic coating can be applied to any of the carbon steel (but not aluminum) bends you would normally purchase. The ceramic is applied as a uniform coating of fine powder to the inside of the bend which is then fired in a furnace at 1500 degrees Fahrenheit. The ceramic is fused to the steel and, at the same time, produces the smooth, hard interior surface. ***The double coating thickness is .008" to .014".

This ceramic coating can take a fair amount of rough handling without chipping. Generally speaking, you would have to dent the metal before the interior coating would crack.

The hardness of the ceramic coating is between 5 and 6 on the Mohs scale---as hard as glass, and just as smooth.

The exterior of the bend has the appearance of annealed steel and is suitable for use with Morris couplings on the tangent ends. The exterior can be easily painted.

With abrasive material, such as mineral products or fiber filled plastic pellets, ceramic coated steel bends offer far greater bend life than you get with stainless steel bends---and generally at a lower cost.

Ceramic lined tees, wyes and laterals, as well as 10-foot lengths of straight pipe are also available.

We use a double-dipped product as standard.