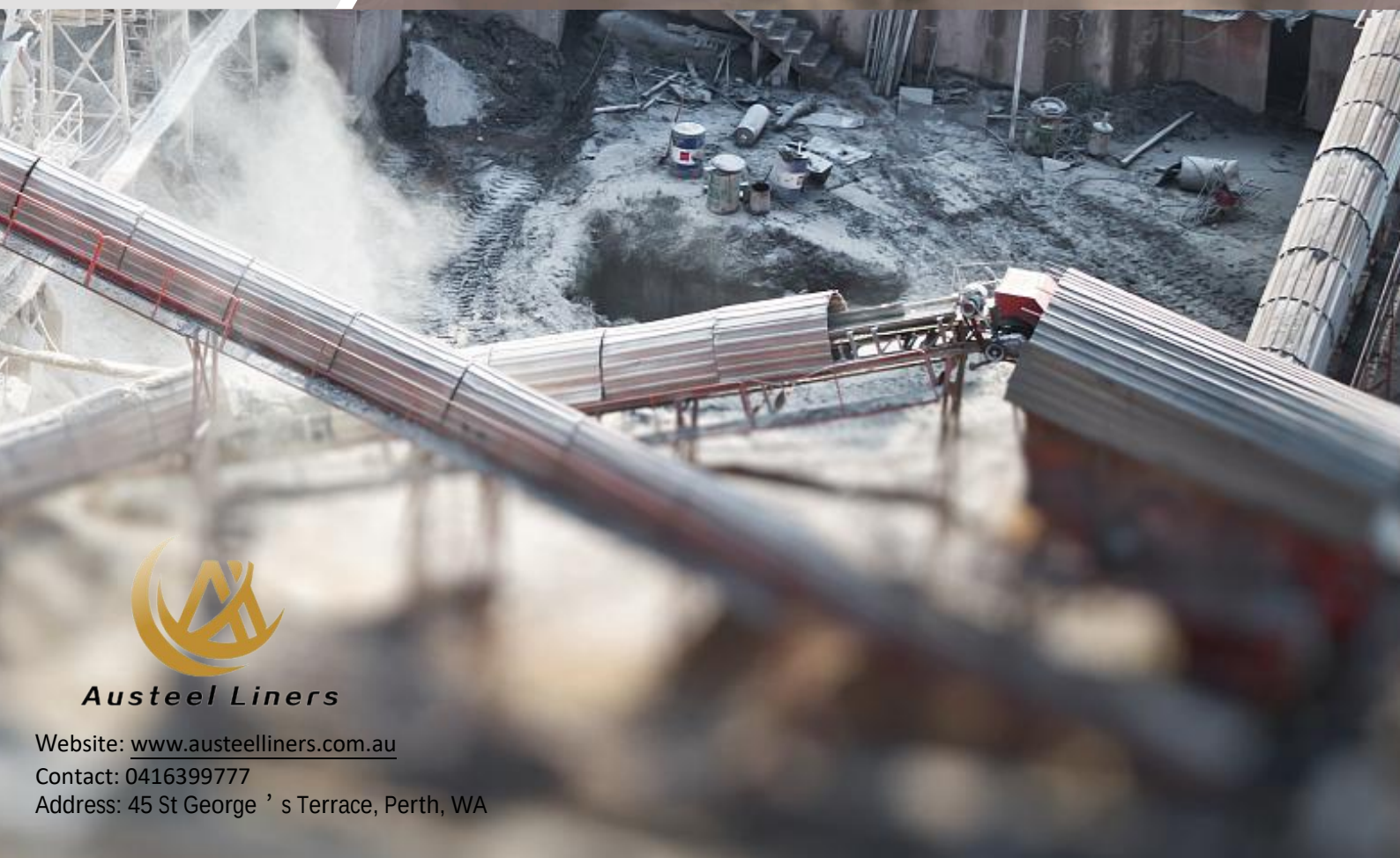
DURPIPE®

PRODUCT BROCHURE



Austeel Liners

Website: www.austeelliners.com.au
Contact: 0416399777
Address: 45 St George ’s Terrace, Perth, WA

DURPIPE®

Our company's DURPIPE® are manufactured using advanced production technology—Self-propagating High-temperature Synthesis (SHS) method.

These pipes have excellent wear resistance, high-temperature resistance, and corrosion resistance. They are widely used in industries such as mining, metallurgy, power, and chemical engineering.

DURPIPE® Sintered

(Diameter: 76mm - 426mm)

These pipes are made from **high-temperature, wear-resistant ceramic materials** such as alumina ceramics, silicon carbide ceramics, or silicon nitride ceramics. They have excellent performance characteristics with tensile strength ≥ 35MPa, compressive strength ≥ 120MPa, and flexural strength ≥ 25MPa, capable of withstanding erosion and abrasion from high-speed. fluids and particles.

Straight Pipe

219 Straight Pipe

Tee Pipe

Elbow Pipe0

DURPIPE® Non-Sintered

(Diameter greater than 1200mm)

1200 Straight Pipe

1200 Elbow pipe

These pipes are made from high-quality ceramic materials with tensile strength ≥ 50MPa, compressive strength ≥ 150MPa, and flexural strength ≥ 30MPa. They have excellent chemical stability and corrosion resistance, allowing them to withstand acids, alkalis, salts, and other chemical media. In corrosive environments, the pipes can maintain a long service life.

Patent certificate

DURPIPE®

COMPARISION

Table 1: Wear Resistance of DURPIPE®

Sandblasting Comparison Test (SiS) Sand		30% SiO Slurry Erosion Test	
Material	**Volume Reduction cm^3**	**Material**	**Volume Reduction cm^3**
97% Alumina	0.0025	C45 steel	25
Ceramic-Lined Composite Steel	0.0022	DURPIPE®	3

Table 2: Corrosion Resistance of DURPIPE®

(According to Stainless Steel Testing Standards)

Material	10%HCL(g/m 2 -h)	10%H2SO3 (g/m 2 -h)	10% Acetic Acid (g/m^2 -h)	10% NaOH (g/m^2 -h)
Stainless Steel ICrISNigTi	0.1-1	3.4	0.1	0.1
DURPIPE®	0.08-0.1	0.147	0.028	0

DURPIPE® ADVANTAGE

Excellent Wear Resistance

The ceramic lining has a hardness of HV1300, comparable to tungsten carbide alloy, with wear resistance dozens of times higher than steel, 4-5 times higher than rare earth wear-resistant steel, and 3 times higher than cast stone pipes. The service life of coal powder spray guns can reach 3000-5000 hours.

Corrosion and Scale Resistance

Ceramic-lined composite steel pipes offer superior resistance to acid, alkali, and seawater corrosion, as well as anti-scaling properties. Its acid resistance (96-98%) is comparable to high alumina ceramics, and its corrosion resistance is 10 times higher than stainless steel.

Low Operating Resistance

The resistance coefficient of ceramic-lined composite steel pipes is lower than that of ordinary steel pipes, reducing pipeline operating resistance and operating costs.

Lightweight and Material-Saving

Ceramic-lined composite steel pipes are about 20% lighter than steel pipes with the same wall thickness and 40-50% lighter than cast stone composite pipes of the same inner diameter, reducing support costs and easing the labor intensity and costs during transportation, installation, and maintenance.

Low Cost

The price of ceramic-lined composite steel pipes is comparable to that of wear-resistant alloy cast pipes, but due to their lightweight, the price per unit length is 20-30% lower than that of wear-resistant alloy cast steel. The total project cost is similar to cast stone pipes but lower than wear-resistant alloy cast steel pipes.

Good Temperature Resistance

Ceramic-lined composite steel pipes can be used long-term in temperatures ranging from -50 to 900℃, with a linear expansion coefficient of $6\text{-}8\times10^{-6}$℃.

Easy Installation and Construction

Ceramic-lined composite steel pipes can be connected using welding, flanges, or flexible quick connectors. Their lightweight, impact resistance, and durability make transportation and installation easy.

DURPIPE®

APPLICATIONS

The ceramic-lined composite steel pipe features advanced international technology and is widely used in the following areas:

- Power Stations
- Coal Ash Removal
- Mine Tailing Transportation
- Back filling Pipelines
- Transportation of Corrosive Media in Petrochemical Industries
- Drilling Equipment
- Pipeline Transportation.