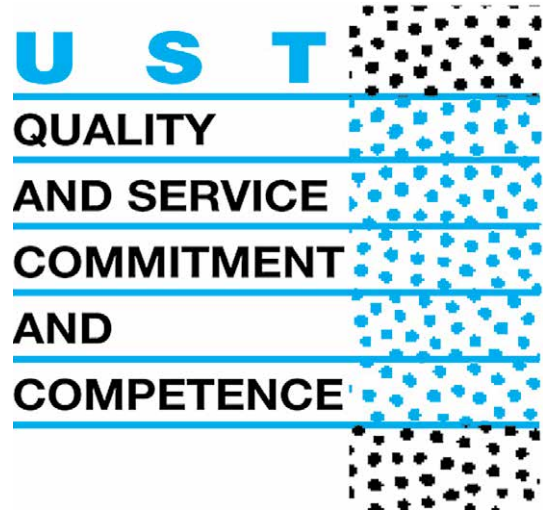


United Surface Technologies



Engineered
Coating
Solutions



Established 1986

www.ust.com.au

Introduction

United Surface Technologies (UST) Pty Ltd is an ISO 9001:2008 certified surface engineering company that provides industry with an advanced thermal spray coating and weld hardfacing service.

UST can produce a wide variety of ferrous, non-ferrous, ceramic, polymer and composite coatings with exceptional wear and corrosion resistance, electrical and/or thermal insulation, low or high coefficient of friction and release (non-stick) properties, making it possible to provide solutions for the most demanding industrial applications.

Our ability to develop engineered coating solutions is supported by our machine shop, in-house metallurgical laboratory and our close collaboration with numerous R&D partners.

Process Technologies

Thermal spray coating

- > High velocity oxy fuel (HVOF)
- > Plasma
- > Combustion powder and wire
- > Arc-spray
- > Spray and fuse
- > Spray welding

Plasma transferred arc (PTA) overlay & hardfacing

Conventional (MIG/MAG/TIG) weld overlay & hardfacing

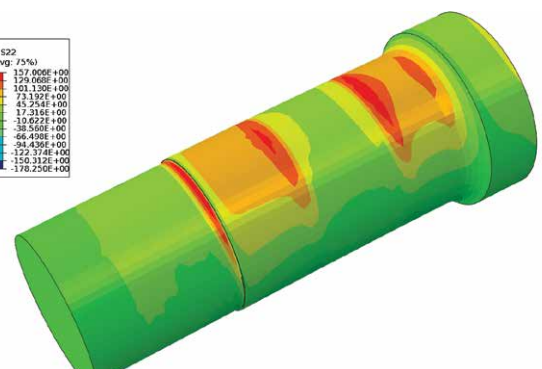
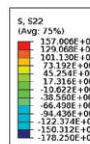
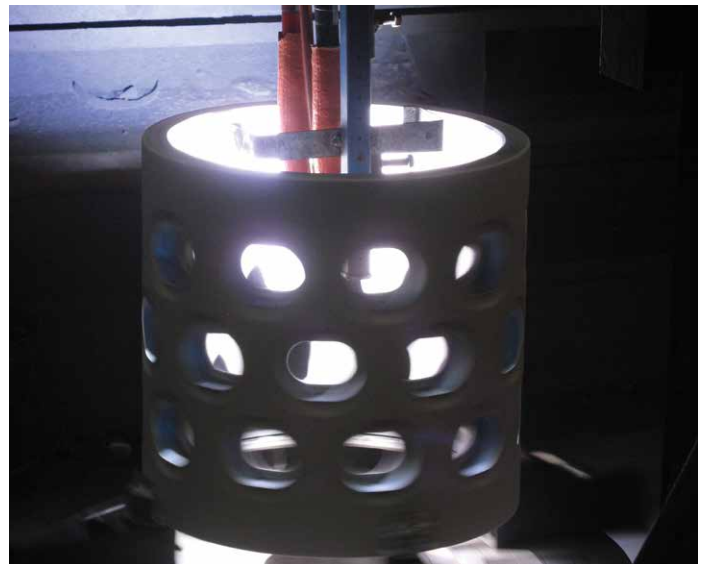
Polymer and polymer composite coatings

Machining

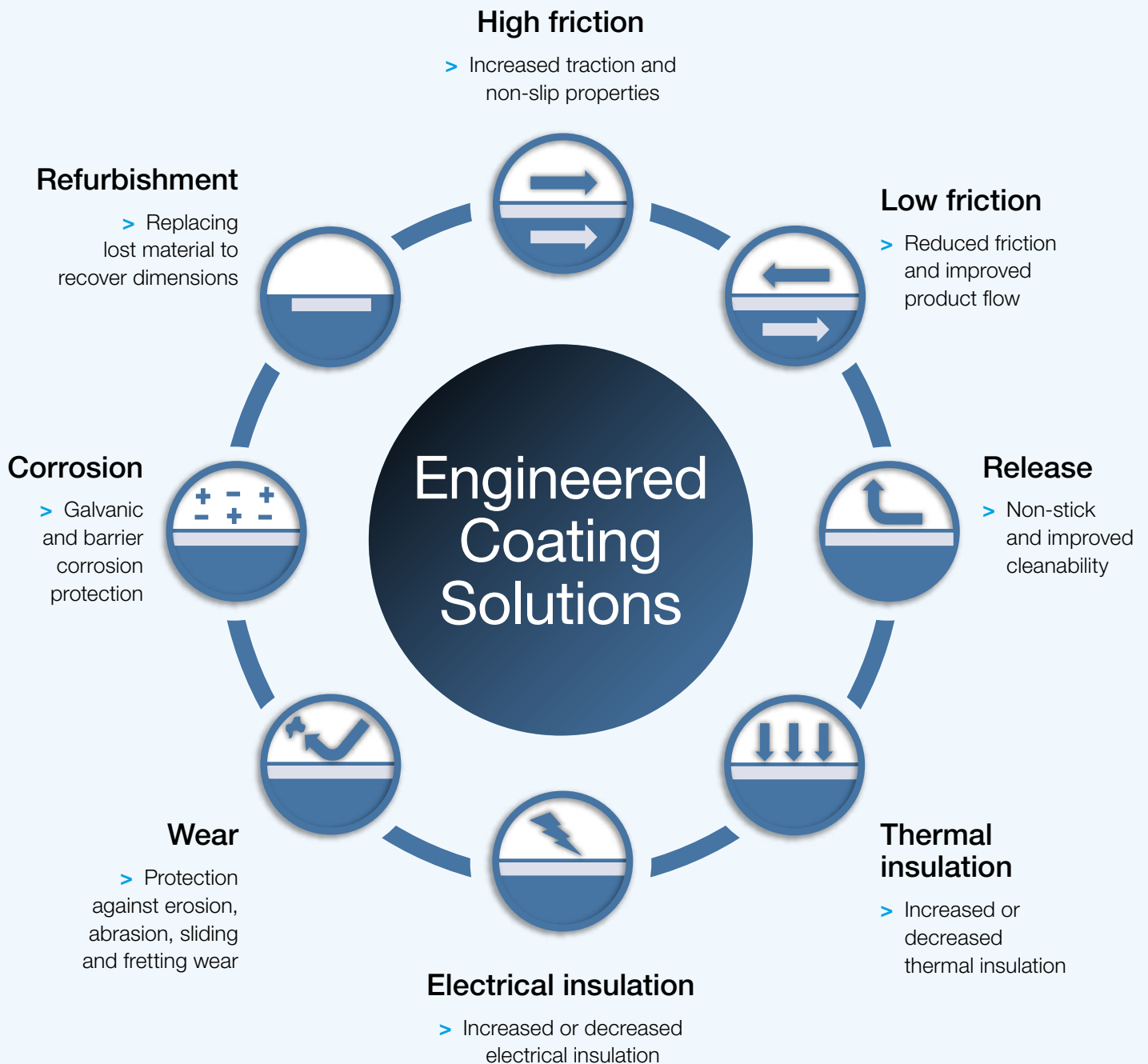
- > CNC turning and milling up to 1,000 mm BC and 800 mm OD
- > Conventional turning up to 8,000 mm BC and 1,600 mm OD (incl. toolpost grinding)
- > Conventional and NC grinding up to 3,800 mm BC and 640 mm OD
- > Horizontal boring up to 4 tonne
- > Finishing and superfinishing

Stress relieving and temper heat treatment ovens

Design, engineering drawings and Finite Elements Analysis (FEA)



UST solving problems of...



Metallurgical Laboratory

Metallurgical mounting and polishing

Optical metallography and digital microstructural analysis

Tensile adhesion testing to ASTM C633

Almen residual stress measurement

Vickers microhardness testing to ASTM E384

Rockwell hardness testing

Coatings Materials

Pure metals (aluminium, zinc, molybdenum, silver, etc.)

Metal alloys

- > Ferrous (stainless steel, tool steel, etc.)
- > Non-ferrous (Stellite, Triballoy, Inconel, Hastelloy, etc.)

Ceramics (alumina, chrome oxide, zirconia, titania, etc.)

Ceramic-metal composites (tungsten carbide, chrome carbide, etc.)

Polymers (PTFE, PFA, FEP, epoxies, nylon, rubber, etc.)

Polymer-metal composites

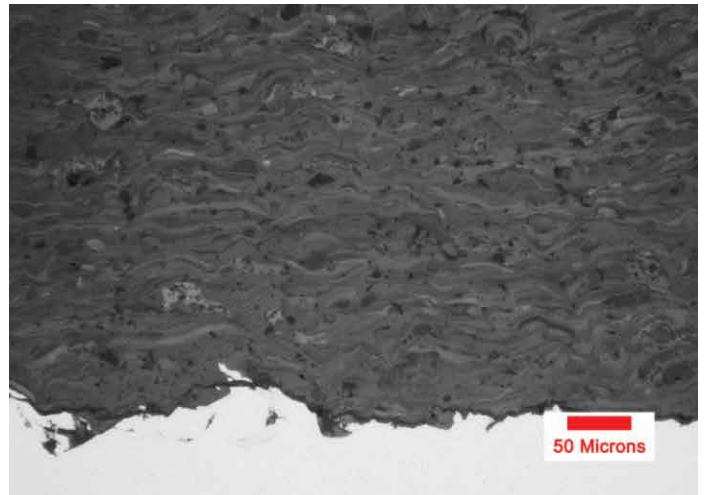
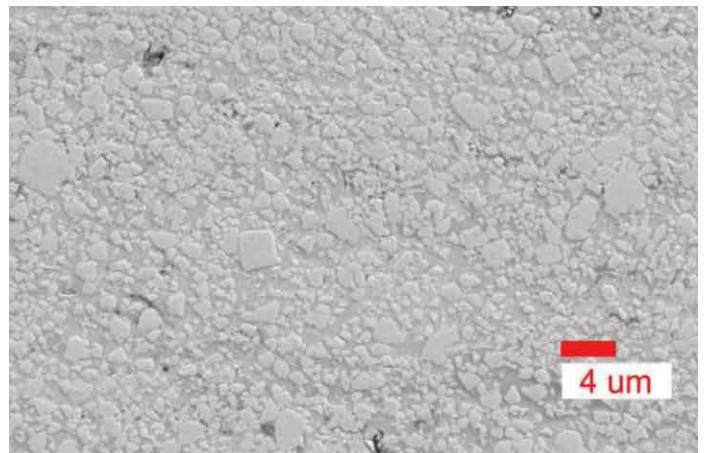
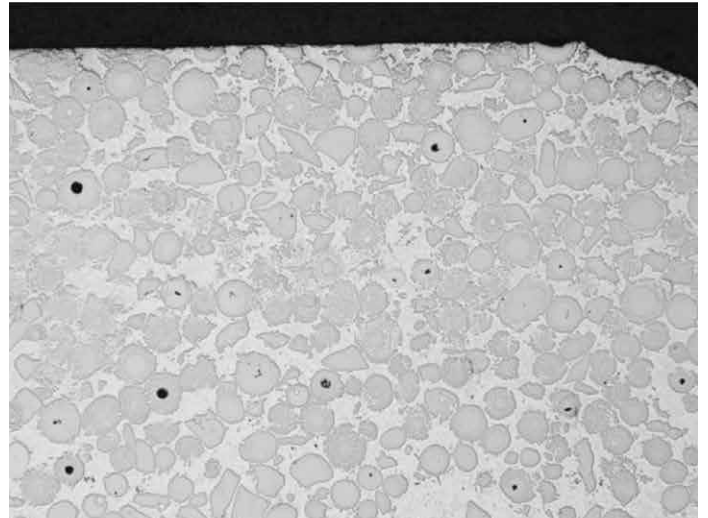


Food Service Approved

Many of our coating systems are US Food and Drug Administration approved for direct food contact services.

Carbon Fibre

Many of our coating systems can be applied onto composite materials such as carbon fibre, and we can supply complete carbon fibre rolls.



Industries and Applications

Power & Energy

- > Manufacture and refurbishment of control valve spindle
- > Erosion protection of fans and deflectors

Oil & Gas

- > Refurbishment of reciprocating compressor piston rods
- > Refurbishment of centrifugal compressor seal and bearing journals
- > Manufacture and refurbishment of petrochemical valve components

Mining & Minerals Processing

- > Manufacture and refurbishment of slurry valve components
- > Manufacture of hardfaced slurry pump shaft sleeves
- > Refurbishment of drill components (liner hanger tools)

Paper & Pulp

- > Refurbishment of roll journals and bearing housing
- > Traction and release coating on winder and other process rolls

Printing & Packaging

- > Refurbishment of glue roll seats (applicator and doctor roll)
- > Traction and release coatings on labeller rollers

Plastic & Film

- > Corona treatment rolls

Food & Beverage

- > Manufacture of food processing tools and food grade materials
- > FDA approved non-stick coatings on food processing equipment (dough rollers, pie-moulds)
- > FDA approved ceramic coatings on food processing equipment (sausage casing machinery)

Steel & Metals

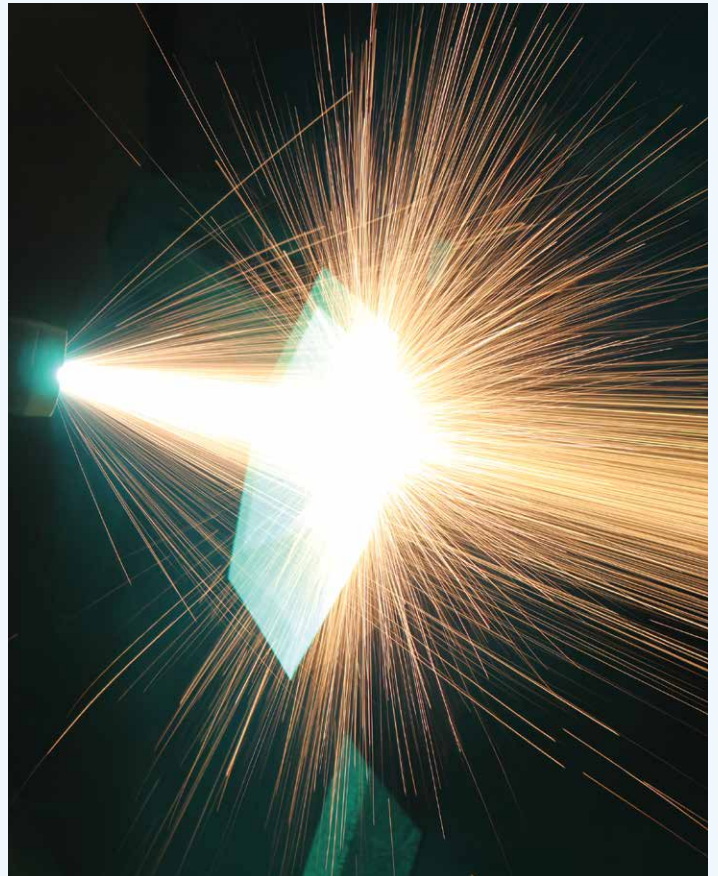
- > Hardfacing of high-temperature process rolls (run-out table rolls)

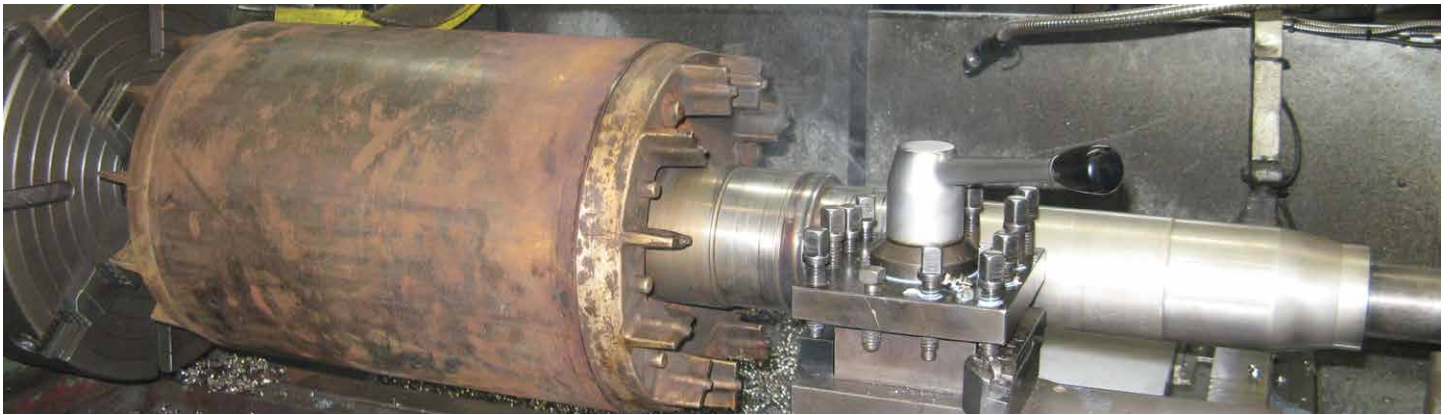
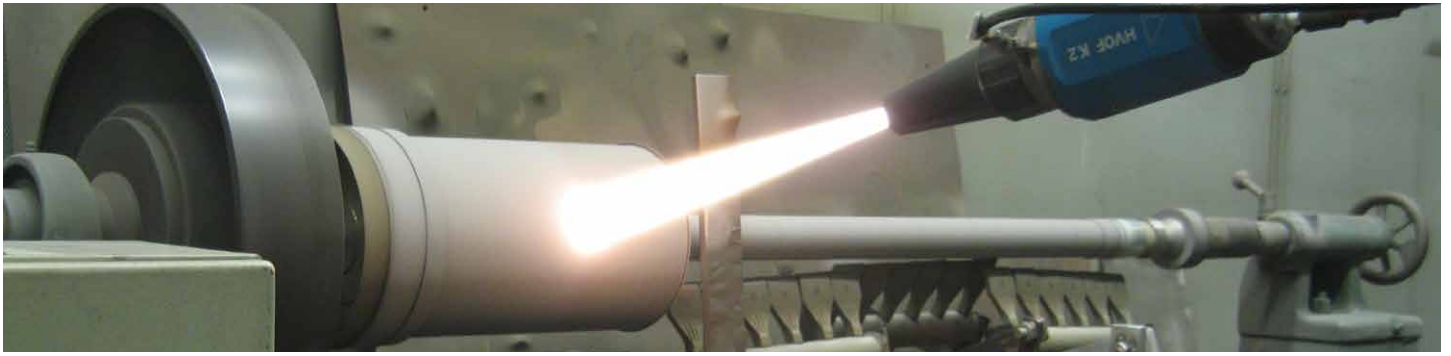
Rail

- > Refurbishment of rail axle bearing and wheel journals
- > Refurbishment of gearbox housing

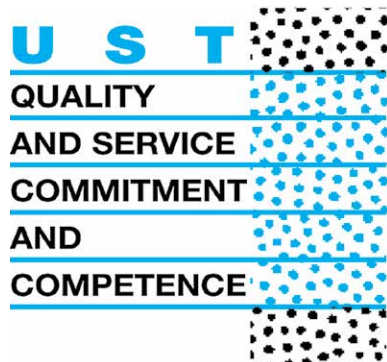
Marine

- > Protective coatings for severe service hydraulic cylinder
- > Corrosion protection of steel structures





UST is a licensee of the PCI range of traction and release coatings developed by Plasma Coatings international (see www.plasmacoatings.com).



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