





ABOUT

DECO is Australia's surface finishing and protective coating specialist, offering an unrivalled range of finishing processes and surface treatments for defence, aerospace, engineering, food processing and manufacturing applications.

DECO is a rapidly growing, innovative family-owned and operated Australian SME, committed to delivering the highest standards of quality and service to our customers all over Australia.

Since 2004, DECO has revolutionised the Australian building and architectural industries with our innovative sublimation finishing technology for powder coatings. Our ability to transform the appearance of almost any piece of aluminium has provided beautiful and durable building solutions for a range of applications.

In 2018, DECO acquired the operations, experienced employees and assets of Impreglon Australia Pty Ltd at Minto, NSW. This has enabled DECO to now offer a range of industrial finishing solutions, maximising protection and performance for a variety of machine parts, equipment and more. These high-quality solutions include DECO's specialised DecoUltra™ anodising and hard anodising, as well as powder coating, wet and dry blasting, ceramic and Teflon® coatings, coil coating, vibratory tumbling and polishing and custom finishes to meet project requirements. These surface treatments and coatings are processed to the relevant Australian and International Standards and with the high level of quality and service for which DECO is renowned.



Left: The DECO team

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DECO quality and testing laboratory

QUALITY AND TESTING



DECO acetic salt spray and neutral salt spray test cabinets

IN HOUSE TESTING

Anodising	MIL-A-8625F
Anodising spot sealing test	ISO 2143:2010
Aluminium conversion coating	MIL DTL-5541F
Coating thickness	ASTM B137/ ISO 2360
Corrosion: Neutral salt spray test	ASTM B117
Corrosion: Acetic acid salt spray test	ISO 9227
Dry adhesion test	ISO 2409
Gloss measurement	ISO 2813
Cupping test	ISO 1520
Bending test	ISO 1519
Impact test	ISO 6272-2 / ASTM D2794
Taber Abrasion	ASTM D1044
Differential Scanning Calorimeter	

DECO has an unrivalled capability when it comes to quality management and testing for surface treatment and coatings in Australia. With a fully-equipped, accredited in-house testing facility, DECO is able to perform chemical, environmental and physical testing on its products and finishes. DECO is also the only surface finisher in Australia with in-house testing equipment for neutral salt spray, acetic salt spray and differential scanning calorimetry (DSC).

All DECO operations and processes are accredited to ISO 9001:2015 and comply with the relevant Australian and International standards. Anodising and other processes are US Military Specification (MIL SPEC) compliant, with DECO's DecoUltra™ anodising processes controlled according to MIL-A-8625F and aluminium alloy conversion coating according to MIL DTL-5541F.

DECO's powder coating and sublimation processes comply with Australian Standards AS 3715 and AS 4506, together with the international standards for powder coating and sublimation: Qualicoat and Qualideco.





DECO ANODISING ULTRA

DECO offers a range of anodising solutions to meet customer requirements for thickness, sealing, corrosion resistance and more. DECO's exclusive DecoUltra™ AD anodised finishes can be customised to meet customer needs, including micron thickness, a select range of colours and different sealing processes.

DecoUltra™ AD anodising features an electrolytic surface treatment process, which involves racking and submerging aluminium parts in an electrically-charged acid solution. This converts the surface of the metal itself into a tough aluminium oxide coating, which grows into and out of the part. Aluminium oxide is one of the hardest substances in the world and is therefore highly durable, making it an ideal finish for a wide variety of engineering, defence and machinery applications.



BENEFITS

- High degree of wear resistance
- Significantly improves longevity in aggressive environments
- Resistant to high temperatures in short cycles such as in engines
- Suitable for subsequent processing (sealing, dying /colouring, non-stick, paints, powder coating)
- Non-chip: the anodised surface is part of the metal itself and cannot chip or blister
- Interior or exterior applications
- Non-toxic and safe for food contact applications

Left: DecoUltra™ anodising

Right: Aluminium components anodised in black





DECO HARD ANODISING ULTRA ZD

DECO is an expert in 'true', low-temperature hard anodising. DECO's exclusive DecoUltra™ ZD is an exceptionally hardwearing hard anodised series of finishes, utilising special Zero Degree hard anodising technology to produce a superior finish.

Zero Degree hard anodising technology involves lowering the temperature of the acid baths in a controlled manner to create a tougher, thicker coating for enhanced abrasion and wear resistance.

This highly durable coating adds longevity and improved performance to aluminium components and is ideal for hardwearing applications such as aerospace, high-speed machine parts and defence applications.

DecoUltra™ ZD finishes can also be sealed for added corrosion resistance and are tested to MIL-A-8625F.

BENEFITS

- High degree of wear resistance
- Significantly improves longevity in aggressive environments
- Resistant to high temperatures in short cycles such as in engines
- Non-chip: the anodised surface is part of the metal itself and cannot chip or blister
- Interior or exterior applications
- Non-toxic and safe for food contact applications



DecoUltra™ ZD hard anodised cubes

Left: DecoUltra™ ZD hard anodising process

Right: DecoUltra™ ZD hard anodised cubes





PRE-TREATMENT AND PASSIVATION

Protective coatings require effective pre-treatment in order to perform to their fullest potential.

Pretreatment is essential for preparing the metal surface of components prior to coating, ensuring they are free from surface contaminants and sharp edges and the surface is prepared for optimal coating adhesion.

DECO can offer numerous different types of passivation and pre-treatment options, ranging from abrasive blasting to non-chrome, trivalent chrome and iron phosphate solutions.

DECO can pre-treat materials including aluminium and galvanised steel and our pre-treatment processes are tested to MIL-5541 and certified to ISO 9001:2015.

BENEFITS

- Remove surface contaminants that can compromise the finished product
- Prepare surfaces for coating
- Cleaning of the surface
- Additional chemical corrosion inhibitors
- Adhesion Promotion
- Tested to MIL-5541



Left: DECO pre-treatment tanks

Right: Pre-treated metal component





SPECIALIST ABRASIVE BLASTING

DECO has unique expertise as a specialist in a range of dry and wet abrasive blasting processes for metallic surfaces.

Wet blasting involves the propelling of abrasive materials mixed with air and water, against metal components at high speed and pressure, allowing a component to be cleaned, degreased, deburred and sharp edges or die marks removed from the metal surface. Wet blasting can create various surface finishes for metal components, such as a glossy or satin peened surface, as the water acts as a lubricating cushion between the abrasive and the metal.

Dry abrasive blasting is an effective pre-treatment prior to adding a protective coating. Abrasive blasting strips the metal of scale, rust and surface contaminants that could cause corrosion or degradation. This process can be done by hand for larger objects or with DECO's automated spindle blaster for smaller components. Dry abrasive blasting creates a clean, rough surface finish for coatings such as powder coating to key into for greater durability.

BENEFITS

- An excellent surface pre-treatment prior to coating
- Wet blasting produces an attractive decorative finish
- Approved for food contact when seasoned with oil
- Shot peening stress relieves products
- Approved for use on medical components

Left: DECO heavy steel blasting

Right: DECO GBB medical grade finishing





CERAMIC COATING (CERAKOTE)

Ceramic coatings offer a tough, thin-coat finish with high wear resistance, offering protection combined with functionality. They can be applied to more substrates than any other finish, including metals, wood, plastics and polymers, and can be used for a range of applications including defence, industrial, sporting, automotive and personal use applications.

DECO is an accredited applicator of Cerakote, the world-class leader in thin-film ceramic coating. Cerakote uses advanced resin technology to create a tougher, thinner coating, making it excellent for aerospace components, industrial equipment, military firearms and more, offering increased protection without compromising on functionality of moving parts.

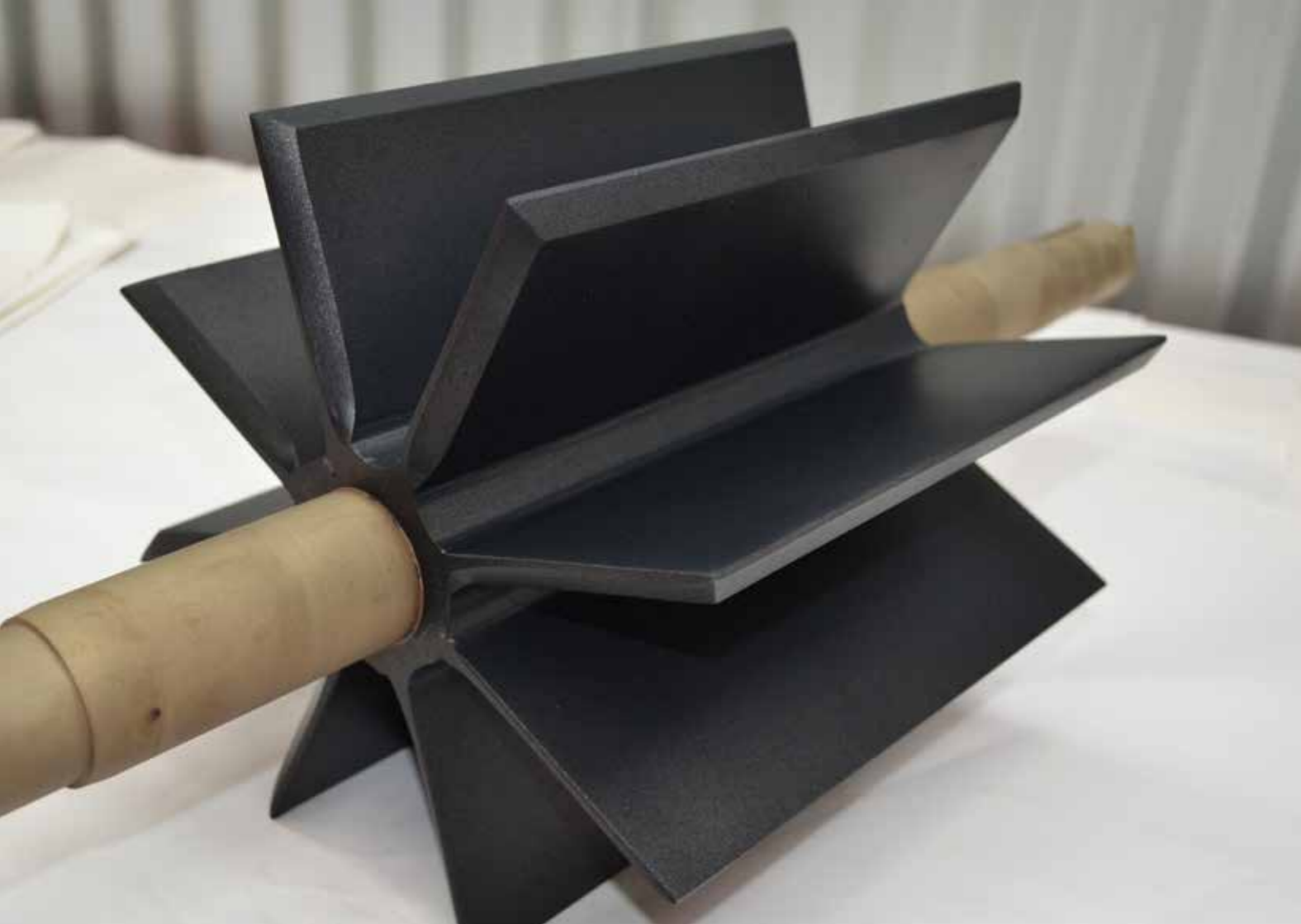
BENEFITS

- Excellent corrosion protection for military weapons exposed to extreme conditions
- Resistant to direct and indirect impacts from external forces
- Attracts less particles of dust than other finishes, keeping products cleaner
- Heat resistant up to 600 degrees Celsius
- Bonds to almost any material
- MIL SPEC colours available
- Resistant to most solvents and chemicals



Left: Cerakote and Teflon controlled cure oven
Right: DECO Cerakote ceramic coating





DECO TEFLON COATING

MAXIMISING PROTECTION & PERFORMANCE

Teflon is a durable, non-stick fluoropolymer coating which protects products by preventing wet or dry, hot and cold materials from adhering to its surface. PTFE (or Teflon) coatings are applied to products using liquid spray or powder application, and are an excellent way to prevent a buildup of lubricants, paint, glue or other substances from adhering to metal components, making them highly effective for reducing friction in machinery parts. Teflon is an excellent coating for a variety of aerospace and industrial applications which include engineering parts, agricultural equipment, fan blades, garden tools, automotive fasteners, fuel injectors, saw blades and more.

DECO offers both wet spray PTFE and two-coat powder PFA Teflon coatings for a variety of applications.

Teflon's non-toxicity, non-stick, heat and water-resistant properties also make it a popular coating choice for commercial and domestic cookware.

BENEFITS

- UV stable
- Heat resistant up to 260 degrees Celsius
- Non-toxic and approved for food contact
- High resistance to the absorption of oil and water; corrosion resistant
- Non-stick qualities make Teflon-coated parts easy to clean
- Good electrical insulation qualities
- Excellent protection against Australian climate; suitable for valves in extreme conditions
- DECO offers both wet spray PTFE and two-coat powder PFA Teflon coatings for a variety of applications.

Left: Component with Teflon coating on selected surfaces

Right: DECO Teflon coating application





DECO POWDER COATING



DECO's powder coating process creates a versatile, durable finish for both steel and aluminium. DECO's powder coating process and materials comply with Qualicoat, the international standard for the highest quality of powder coating. DECO is also an accredited applicator for major powder suppliers Dulux and Interpon.

With the flexibility to pre-treat aluminium, steel and galvanised steel, as well as both automated and hanging batch lines, DECO can offer the widest range of powder coating solutions for our customers. DECO can process aluminium extrusions up to 7.2m long, as well as fabricated steel and aluminium components. With the skill and experience to apply a wide range of powders, as well as a wide range of colours and textures, DECO can offer a variety of powder coating solutions and meet project specifications.

DECO powder coating can be used for a broad range of industrial and architectural applications, including engineering and machinery parts, building and infrastructure and more.

BENEFITS

- Durable and aesthetically pleasing appearance
- Huge range of colours and finishes available
- Excellent resistance to corrosion and UV
- Textured, matt, satin and gloss finishes available
- Aluminium pre-treatment and conveyor line maximum length 7200
- Batch oven capacity 2400 wide x 1400 high x 4500 long 800mm



Left: Deco conveyorised powder coating line with on-line pre-treatment

Right: DECO electrostatic powder application





DECO ART SUBLIMATION



Sublimation is the process whereby a substance changes from a solid state directly into a gas without going through a liquid phase. DECO's sublimation technology uses controlled conditions of heat and pressure to transfer a printed image directly into a powder coated or anodised surface. The sublimation inks penetrate the full depth of the powder coating or anodising (instead of simply being 'printed' on the surface's top layer) ensuring a durable, long-lasting image.

DECO's sublimation process has been in use in Australia since 2004 for architectural applications, but it is also a versatile process that can be used for a wide range of metal products across a broad spectrum of applications. These applications include non-combustible compliance and safety signage, signage for public transport, fire engine control panels, engineering and agricultural equipment and directional signage.

INDUSTRIAL APPLICATIONS

- Highly durable Qualicoat Class 2 polyurethane powder coating for signage and other applications
- Unlimited choice of colours and images available
- Anti-graffiti
- Accurate photographic reproduction
- Maximum single sheet size 1500 x 4000
- Large images can be accurately aligned across multiple panels



Left: Sydney Trains Chatswood station seating sublimated signage
Right: DecoArt sublimated fire truck control panel

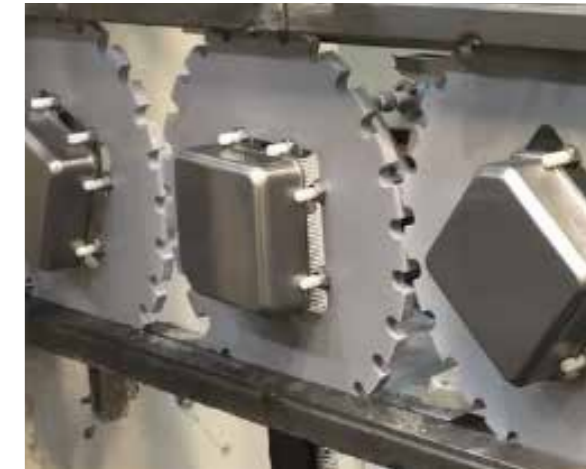




CUSTOM AND DUPLEX FINISHES

An innovative business with a desire to meet customer needs, DECO will work with customers to find a solution to their project specifications. DECO has a unique capability to develop and apply multiple coating systems to create custom finishes, combining the benefits of different finishes to meet the desired project outcome.

An example of this is DECO's Nucotec® Plus process, where DECO developed a unique coating system to be applied to low pressure cast aluminium blocks for the new Tai Kwun Arts Precinct in Hong Kong. DECO built special equipment to produce this custom finish, combining several coatings to achieve the highly durable, metallic finish the architect had specified. DECO has also created custom lines for customers, in order to process their fabricated components in large quantities. An example of this is our custom line for wet bead blasting stainless steel trays, fabricated by an engineering company for the medical sector.



BENEFITS

- Greater flexibility in design specification
- Unique coating systems with multiple properties
- Solutions to meet architectural, industrial and defence project specifications
- Specialty coating systems and processes to meet complex project needs
- Wide variety of applications

Left: Nucotec® Plus facade. Tai Kwun arts precinct-Hong Kong
Right: DECO Automated Line for Custom Components



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