

The background of the slide is a close-up photograph of a laser cutting process. A brass-colored laser head is positioned above a metal workpiece, with a bright light and a spray of sparks emanating from the point of contact. The image is framed by a red vertical bar on the left and a dark grey rectangular area in the center containing the title and subtitle. The Stellba logo is located in the top right corner.

Stellba

CAPABILITY STATEMENT

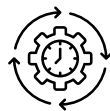
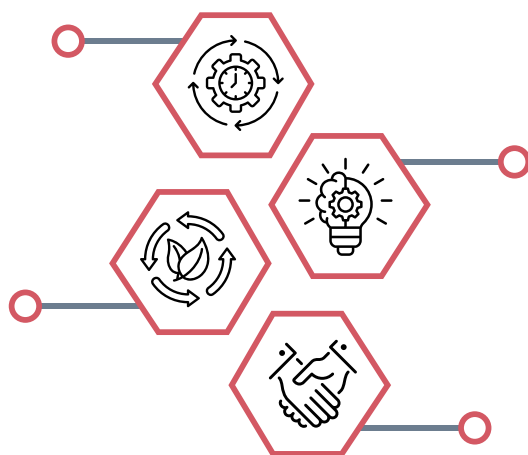
Swiss Precision, Australian Expertise

01 ABOUT US

Company Overview

Stellba Australia Pty Ltd combines over 65 years of Swiss engineering excellence with local Australian expertise in surface treatment, additive manufacturing, and precision machining. Our mission is to extend component life, reduce maintenance costs, and optimise industrial performance through innovative, high-precision repair and coating technologies. Backed by Stellba Surface Technology AG (Switzerland), we provide Swiss-quality solutions with a local presence in Cromer, NSW, serving industries such as power generation, oil and gas, mining, aerospace, and marine across Australia and the Asia-Pacific region.

Our Core Values



SWISS PRECISION

Proven expertise in welding, coating, and machining.



INNOVATION

Advanced laser cladding and additive manufacturing.



SUSTAINABILITY

Repair over replace, minimising environmental impact through innovation.



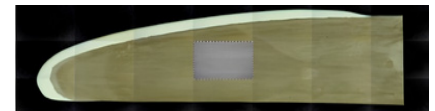
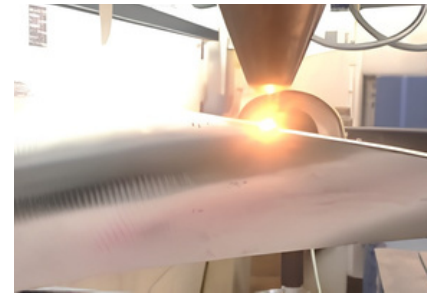
LOCAL COMMITMENT

Combining global expertise with a lasting commitment to Australia's industry.

02 CORE CAPABILITIES

Surface Engineering & Coating

Stellba provides advanced surface engineering and welding solutions that address the root causes of wear, corrosion, and surface-related failures. By combining laser cladding and conventional welding processes, including Tungsten Inert Gas (TIG), Metal Inert Gas (MIG), and Metal Active Gas (MAG), Stellba restores the functional and structural integrity of highly loaded components such as turbine blades, rotors, and couplings. Each repair achieves a metallurgical bond with controlled dilution and optimised heat input, ensuring excellent adhesion, precise restoration of geometry, and reliable mechanical properties under demanding service conditions.



Key Processes



Laser Cladding/Additive Repair of journal surfaces, wear zones, and sealing areas using alloy systems such as white metal, cobalt-based, nickel-based, and iron-based overlays.



TIG & MIG/MAG Weld Build-ups and Structural Repairs for dimensional recovery of shafts, rotors, discs, and couplings under controlled heat-input conditions.



Engineered Overlay and Rebuild Solutions, tailored to service requirements, ranging from hardfacing and corrosion-resistant coatings to high-strength structural restorations.



Metallurgical Inspection & Hardness Verification performed during and after cladding, using in-house and laboratory tools such as Positive Material Identification (PMI), hardness testing, and non-destructive testing (NDT), supported by long-standing partnerships with accredited metallurgical laboratories.

03 MATERIALS

Advanced Powder Solutions

Iron-Based Powder

Iron-based powders offer versatile solutions for restoring and structurally repairing steel components using high-strength and corrosion-resistant alloys. Options include martensitic and austenitic stainless grades, ensuring long-term durability and cost efficiency.

Cobalt-Based Powder

Cobalt-based powders are designed for extreme conditions, offering exceptional wear resistance, corrosion protection, and temperature stability for critical components and protective coatings.

Nickel-Based Powder

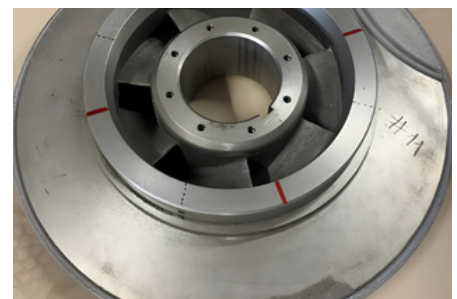
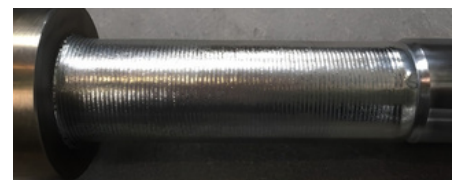
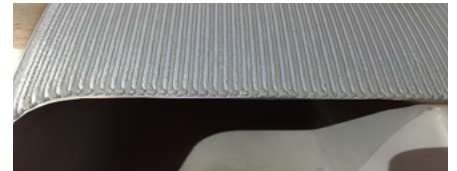
Nickel-based powders are ideal for harsh environments, offering excellent corrosion resistance at high temperatures and consistently high performance, making them a trusted choice in power generation, marine, and aerospace applications.

Light Metal Powder

Light metal powders are lightweight and corrosion-resistant, enabling precise repairs of light components while preserving strength-to-weight ratios for structural parts. Additionally, overlays can be welded to improve conductivity, reduce metal-on-metal abrasion, and provide emergency running properties that protect components under critical conditions.

White Metal Powder

White metal powders are optimised for bearing applications, reducing friction and wear through their self-lubricating properties and ensuring smooth operation and extended service life. Unlike traditional casting, these powders create a metallurgical bond, delivering superior adhesion and durability for high-load environments.



04 WORKSHOP

Precision Machining & Workshop Infrastructure

Stellba's Cromer workshop integrates large-scale machining and high-precision finishing to support both pre-cladding and post-cladding operations. Components up to 6 metres in length, 2 metres in diameter, and 5 tonnes in weight can be machined, ground, and verified within a single controlled workflow. The workshop is also equipped for shaft straightening and run-out measurement, ensuring accurate geometry and proper alignment of critical rotating components.

6 m

Maximum
component length

Ø 2 m

Maximum
component diameter

5 t

Maximum
component weight

5 t

Bridge crane
capacity

Key Equipment

- Heavy-duty turning machines with capacity up to 6 m length / Ø 2 m / 5 t
- Bridge crane (5 t) for heavy-component handling
- Post-cladding machining and grinding facilities
- Burnishing and finishing operations for surface integrity
- Shaft straightening and run-out measurement tooling



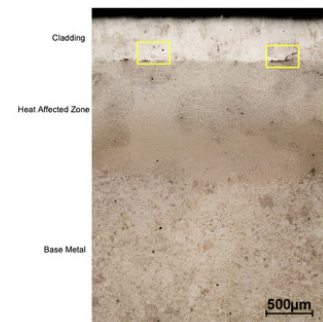
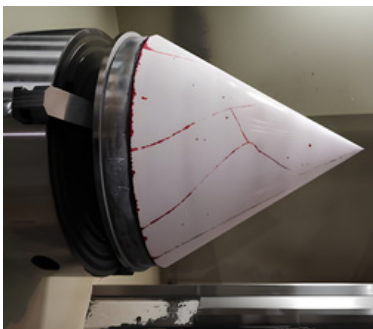
05 CONSULTING

Consulting & Engineering Services

Stellba's welding engineers and materials specialists provide diagnostic and advisory support across the entire repair process. From material identification and failure analysis to procedure qualification and quality control, each step is guided by technical expertise and practical field experience. At Stellba, we continuously invest in new welding and coating technologies and actively collaborate with universities and research institutes. This commitment ensures that our protective layers and repair solutions evolve with the latest material innovations and meet the specific service conditions of each customer.

Key Services

- Root-cause failure analysis combining PMI and hardness testing with supporting metallurgical laboratory investigations
- Material selection and repair strategy definition
- Welding Procedure Specification (WPS), Procedure Qualification Record (PQR), and procedure documentation and compliance
- On-site welding supervision and quality control
- Technical advice for rotating equipment, pressure components, and other critical industrial assets



Stellba

— 06 SAFETY & QUALITY

Work Health & Safety Management

At Stellba, we are committed to leading practice in laser safety and workplace protection. Our people are our most important resource, and their health and safety come first.

Safety is a shared responsibility across our team. We manage laser and workshop risks through documented risk controls, trained personnel, and regular reviews, while ensuring our systems and practices reflect our clients' site-specific requirements.

Our WHS System

- Documented WHS procedures, reviewed and updated regularly
- A management system aligned with ISO 45001 principles
- Trained Laser Safety Officers and laser safety training for all personnel
- Tracking and reporting of safety performance, used to drive improvement
- Ongoing investment in risk controls and protective technologies



Reliability & Assurance Through Effective Quality Management

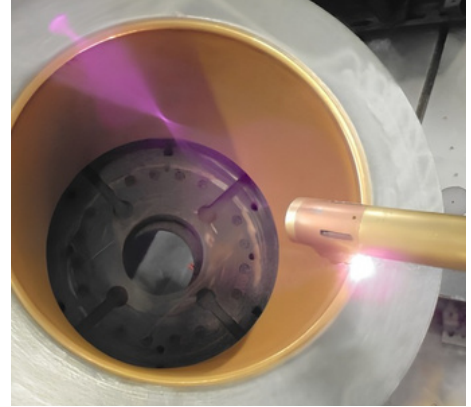
Stellba ensures consistent, sustainable production quality through stringent quality management, advanced radiographic and non-destructive testing, independent inspections, plus precise 2D/3D measurement scanning and modelling. PMI verifies material integrity, while our processes are inspected and certified by prominent OEMs.

— 07 CAPABILITIES

Supporting Capabilities

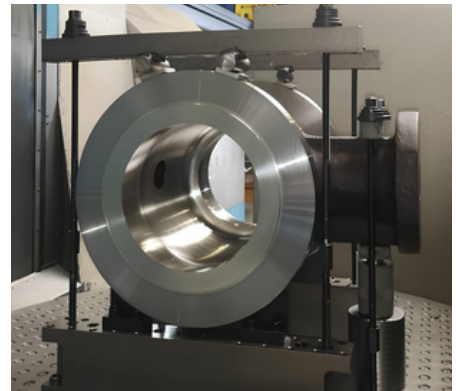
Surface Engineering

Stellba provides coating repair and surface restoration, including hardfacing for wear resistance and corrosion-resistant overlays for protective applications. Structural weld build-ups restore components such as discs and couplings where mechanical strength and metallurgical integrity are critical. Metallurgical bond control and verification ensure consistent adhesion and low dilution, while comprehensive corrosion and erosion protection is tailored to each service environment.



Precision Machining

Stellba provides precision machining services, including large-component turning and milling, grinding, burnishing and polishing, dimensional restoration, and metrology.



Field Execution

Stellba provides field execution services, including on-site welding quality audits, parameter verification and inspection, failure analysis and reporting, plus dye penetrant testing and PMI.



Knowledge & Expertise

- Extensive experience with cast and forged chromium-molybdenum steels, as well as stainless steels, including martensitic, duplex, super duplex, and precipitation-hardened grades
- Proven welding expertise across steam turbines, compressors, and auxiliary components
- Integrated knowledge in materials science, welding technology, and mechanical engineering, ensuring reliable performance and structural integrity in demanding applications

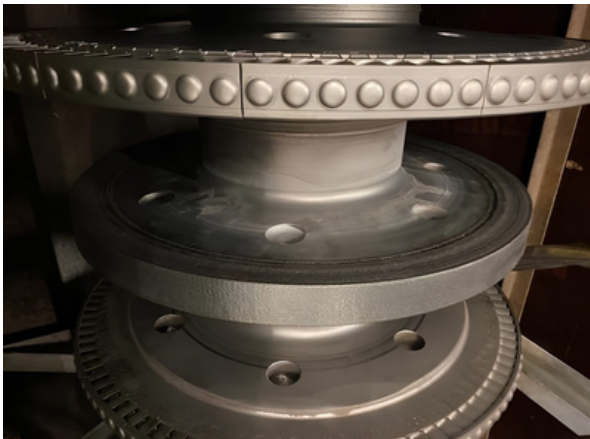
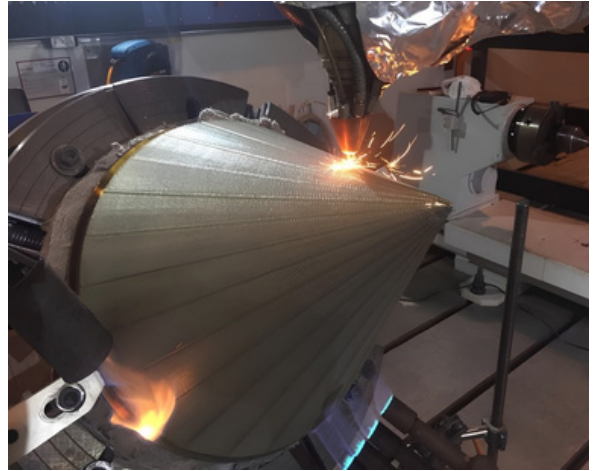


— 08 CASE STUDIES

Engineering Excellence

A Metallurgical Masterpiece

Stellba took on a highly complex challenge, welding a 5 mm Stellite 6 layer onto a large surface with highly variable geometry. By mastering internal stresses through precisely controlled heat distribution and intelligent programming, we dramatically extended the lifecycle of a Pelton turbine needle, setting new standards in durability and performance.



Steam Turbine Disc Blade Restoration

A high-strength forged steel turbine blade section cracked at the T-slot root due to stress concentration. The damaged area was fully removed and inspected using NDT and metallographic analysis. Using a rigorously qualified welding procedure with controlled heat input, the section was rebuilt to original geometry, achieving full metallurgical bonding and mechanical integrity equivalent to the forged base material.

Laser Cladding of White Metals

In collaboration with universities, Stellba pioneered white metal laser cladding for radial and axial bearings. Our process ensures a true metallurgical bond with the base material, maximising performance under extreme conditions while optimising material use and reducing waste, delivering significant economic and ecological benefits.



Stellba

**Thank
you!**



Contact us:

Stellba Australia Pty Ltd

4 Domic Place

Cromer NSW 2099

Australia

Tel: +61 402 771 320

contactus@stellba.com.au

www.stellba.com.au