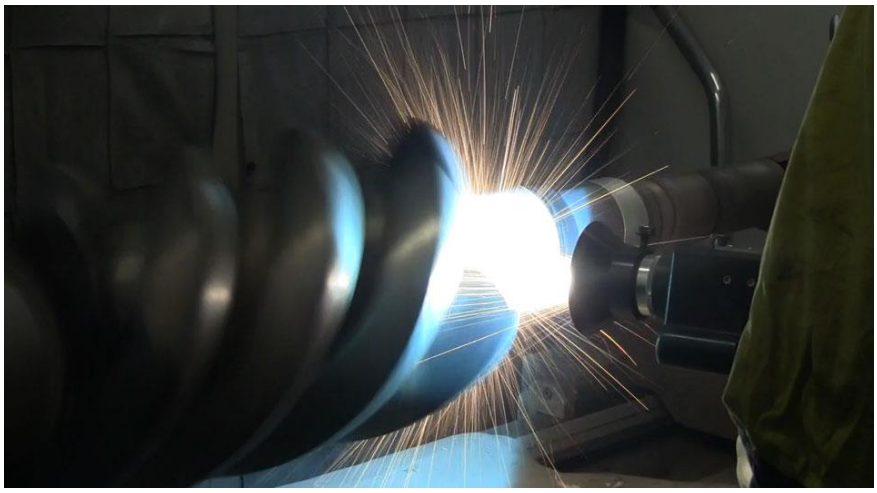
MSSA

METAL SPRAY SUPPLIES AUSTRALIA

Engineered Surfaces for Exceptional Performance

# NewsWire Issue 10 - Engineering Production



## In this Issue:

# Engineering Industry Coating Solutions

The Metal Spray process can provide engineering coatings including **anti-spark, chrome replacement, non-stick, reclamation, grip, thermal barrier and wear resistance coatings**. Each type of coating adds an Engineered Surface which in turn provides Exceptional Performance.

**Anti-spark coatings** are used where there is a **high risk of fire or explosion** due to spark hazard. Hard coatings produced by High Velocity Oxygen Fuel (HVOF), High Velocity Air Fuel (HVAF) and Laser Systems**,** can provide technically and **commercially viable alternatives to the hard chrome plating process**. Non-stick coatings are commonly used on kitchen utensils and industrial applications have also found the need for a **non-stick surface** in particular scenarios. Engineering **reclamation coatings** enable the operator to **restore dimensional accuracy** to worn components. A grip coating (anti-slip) can be applied with a rough texture and has excellent non-slip properties, while being extremely hard and resistant to wear.

**Thermal Barrier Coatings** (TBCs) consist of **ceramic** materials which are widely used on vehicle exhausts, turbocharger casings, heat shields and other vehicle components to **reduce heat transfer** and **improve vehicle performance**. TBCs are also used to protect Aerospace metallic components from **hydrocarbon combustion**. High performance coatings can be used to protect against **wear and high temperature corrosion**. This is particularly ever present in the Automotive industry; examples are listed below.

## Examples include, but are not limited to:

- Piston Rings and Crowns.
- Synchromesh Gears.
- Gear Shift Forks.
- Multi Void Tubing.
- Oxygen Sensors.
- Cylinder Bores.
- Valve Stems.

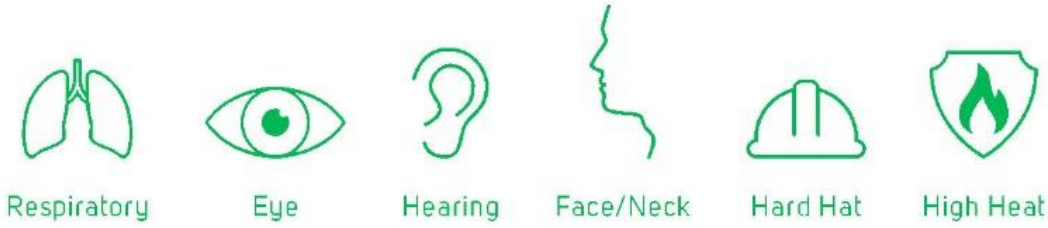
Engineering coatings provide a means of making components **lighter in weight**, **more efficient** and **longer lasting**, as well as **protecting them from harsh environments**.

Find Out More

# NEW Range of Metal Spray Helmets

Introducing the new range of RPB Metal Spray Helmets. The RPB Z-Link Metal Spray Helmet offers numerous configurations so you can wear it your way. It serves as the most versatile respirator on the planet. Designed with your comfort in mind, the Z-Link ensures you'll always be protected for life's best moments.

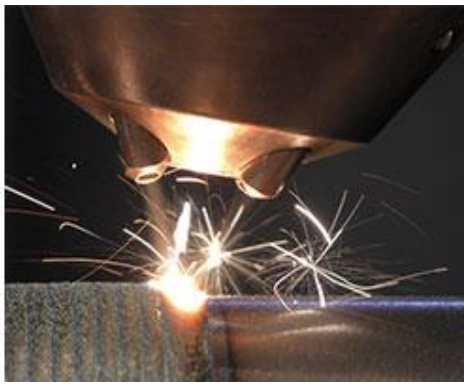
## Offers the user superior protection in all key areas:




- Certified to AS/NZ standards.
- *Supplied Air* or *Powered Air* options available.
- Numerous attachments and accessories available.

**Find Out More**

# Equipment Spotlight - Laser



The MET-CLAD laser cladding system is a stand-alone product that can be used for **Laser Hardening** and to **apply laser clad coatings**. Laser Hardening is a heat treatment process which uses a high-power laser beam to locally harden the surface of steel or cast iron components. The laser cladding process is a method of **applying a fully dense, metallurgically bonded and virtually pure coating** which can be **used to increase the wear resistance, corrosion resistance or impact performance of metallic components**. In some cases, all three of the properties can be improved. The process utilises a **precisely focused high power laser beam to create a weld pool into which a metallic powder is applied**. The **powde**r, which is carried by a stream of inert shielding gas, is **blown coaxially through the laser beam**. The highly accurate nature of the laser beam allows fully dense cladding with minimal dilution (<5%), yet with a **perfect metallurgical bond**. Numerous coatings can be applied, the composition of which can be designed to combat the failure mechanisms associated with each component.

**What is Laser Cladding?**

**What is Laser Hardening?**

# Is Metal Spray a Green Process?

The aim of Green manufacturing is to minimise waste and implement sustainable processes to reduce any impact on the environment. Conserving natural resources is very important because the future of our planet depends on these resources being available.

The Metal Spray process offers many reasons as to why it should be classed as a Green manufacturing process. The Metal Spray process is used as a way to minimise the unnecessary use of natural resources by providing both protective coatings to prevent corrosion of metals associated with everything from Bridges, to Wind Turbines, as well as the ability to restore/remanufacture damaged parts to its original or better condition, thus eliminating the need to replace the components/parts. Since its conception in the early 1900's, the Metal Spray process has helped industries to minimise waste, save energy, reduce pollution and minimise corrosion.

**Find Out More**

# MSSA Team Making a Difference

Metal Spray Supplies Australia (MSSA) are getting sporty to make a difference!
In June, Ross Healey is running his second 42.2km marathon, the Brisbane Marathon, raising funds to support the Leukaemia Foundation of Australia in their efforts to find a cure. Ross ran his first 42.2km marathon in 2011, raising funds for the same cause on the Gold Coast. The event celebrates fun, fitness and the test of ultimate human endurance.

In July, David Andress will undertake a two-day (3 nights) bicycle tour covering over 300km. He will be riding through the beautiful Sunshine Coast Hinterland, covering Montville, Noosa, D'Aguilar National Park, and the Noosa Hinterland. This will be a punishing ride up and down mountains whilst raising money for the Mental Wheels Foundation who funds changing Mental Health Initiatives.



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