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Product Solutions
Engineered Surfaces for Exceptional Performance



Welcome to MSSA *NewsWire* Issue 6

Sorry we are late with this latest issue of NewsWire, but we have been very busy! During our period of absence, we have released our new web site that has been very well received with excellent feedback from National and International viewers. The web site has been improved to offer a wider scope of what MSSA can offer combined with easy navigation and lots of application details that we will be adding to over time. Thanks to Jenny and Chris for their devotion and expertise in delivering our new site, we hope you find it informative and useful.

Take a look www.metalspraysupplies.com

MSSA have had two articles printed in Trade Journals in Materials Australia we have had "[High Velocity Air Fuel System](#)" looking at the benefits of HVOF (link) and in Industry Update "[Metalspray Process brings worn components back to spec](#)" (link) Highlighting the advantages of the Metalspray Process and what it offers.

In our previous Newswire we introduced the Kermetico HVOF system and the interest so far has been well received with some potential customers amazed at the benefits the system brings.

In this issue we are looking at the applications in Brick manufacturing as well as looking at how Metalspray can apply a variety of Anticorrosive coatings i.e. not limited to Zinc only.

Interesting Facts

Can Metalspray offer additional anti -corrosive coatings???

A lot of Engineers think that for anti -corrosive coatings they can only galvanise with Zinc. Well guess what! they haven't done their research as Metalspray can offer at least 4 variations of Anti-Corrosion coatings all of which have their own identities.

Zinc 99.99%

- High corrosion resistance in alkali medium at pH7 to pH 12
- Excellent protection against atmospheric corrosion
- Life cycle time proportional to coating thickness- Metalsprayed Zinc can be applied to whatever thickness you want as it isn't a dipping process like galvanising
- Inadequate in the case of higher salt content in air, as in coastal regions
- Corrosion behaviour like that of hot dip galvanising

Zinc Aluminium 85/15 alloy

- High Corrosion resistance also in low acid medium
- Higher corrosion resistance against atmospheric corrosion than Zinc and aluminium
- Higher corrosion resistance against chlorides and especially SO₂ containing atmospheres than zinc
- Inadequate for applying in salt water without organic coating

Aluminium 99.5%

- High corrosion resistance in media from pH 4 to pH9
- Suitable for SO₂ containing industrial atmospheres
- Protects well in marine atmosphere and in seawater
- High heat resistance

- Highly resistant against acidic contamination

Aluminium Magnesium 5%

- Well suited to marine atmosphere and in sea or slightly salty water e.g. river estuaries
- The loss rate in these corrosive media type is significantly lower than for pure Aluminium
- AlMg5 metalsprayed coatings have a higher hardness than Aluminium and is easier to machine and can be polished.

We mentioned 4 variations well actually with the Arcspray process we can mix the wires both in diameter (ability to vary the percentage composition of each alloy) and alloy(this is classed as a pseudo alloy), something that is not offered by any other process but that's a topic for another day!



Feature Article - **Brick Manufacturing** - Metal Spray Solutions

Bricks are manufactured by mixing ground clay with water, forming the clay into the desired shape, and drying and firing.

The brick manufacturing process has six stages:

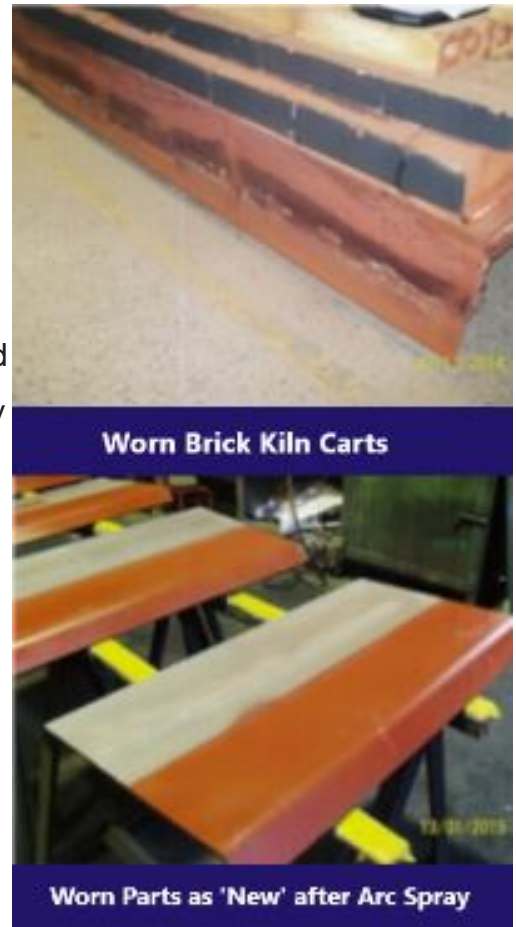
1. Mining and storage of raw materials

2. Preparing raw materials
3. Forming the brick
4. Drying
5. Firing and cooling
6. De-hacking and storing finished products.

Within these stages components in the manufacturing process become subjected to Corrosion, Wear, and Heat all of which can affect downtime and productivity.

The photos show brick kiln carts as nearing their end of life, typical condition after years of operation, then photos of the new plates after arc spray is applied to the flame affected zone. The arc spray provides erosion resistance from the gas burner's flame application inside the kiln.

The wear of Core Brick Bridges is minimised and repaired by using an Oxygen Acetylene Hard Facing powder spray torch to apply Tungsten carbide in a 60 HRc Nickel, Chrome Boron matrix



Follow the link below where we present several examples of coating solutions using Saint Gobain Tuf-Cote in the Brick Manufacturing Industry including "[Clay Extraction and Brick Making](#)", "[Concrete Mixer Blades](#)", "[Centrifugal Fan Blades](#)", and "[Scraper Blades](#)".

Both Metal Spraying, Hardfacing and Brick manufacturing processes have shown their maturity and ability to develop to meet today's expectations of increased efficiency with minimised effect upon the environment.

[Interested in Brick Manufacturing - Click Here for More Information](#)

Product Focus - **Plugs and Caps for Masking**

This edition's product focus is on Silicon Plugs and Caps for Masking. MSSA supplies silicon plugs and caps for masking slotted holes, threaded and unthreaded holes, studs and tube ends. These V shaped tapered plugs provide excellent sealing of holes and withstands continuous operating temperatures of 315° C. MSSA plug and cap consumables do not contain harmful colouring agents. [Follow the link to see our range.](#)



Did you know? - **Metal Spray is used in UK Government Buildings**

Given the BREXIT debacle in the UK and the appointment of a new Prime Minister, most of this activity takes place in the Houses of Parliament.

The cast iron roof and flag mast of the Palace of Westminster London (UK) (including “Big Ben” Clock Tower and Speaker’s House) were coated with Zinc Metalspray during its restoration period of 1981-94.

Do you have an interesting facts that you would like to share with others? Please send details to us at sales@metalspraysupplies.com



Feature Article in next issue of Newswire : **CONCRETE RESTORATION**

Do you know about the different types of Spraying?

[Metal Spraying](#)

[Flame Spraying](#)

[Arc Spraying](#)

[Plasma Spraying](#)

[HVAF Spraying](#)

[HVOF Spraying](#)

[Masking](#)

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