

# ANTI-CORROSION METAL SPRAYING

Metal or thermal spraying is a technology which protects and greatly extends the life of a products in corrosive environments. Metal spraying is carried out in a wide range of anti-corrosion and engineering markets. Single metalized coating protects steel for 30 to 50 years depending upon the application, coating thickness and sealing while painted coatings usually last up to 10 years.

## COLD PROCESS

Metallizing process imparts very little heat to the substrate (typically considerably less than 100°C) so heat distortion is not experienced. This is one of major advantages over hot-dipped galvanising with working temperature of 450°C.

Thermal spraying is transportable process so structural steelwork can be sprayed on-site or repaired where on-site welding has removed the galvanising. Other common anti-corrosion application areas are off-shore oil platforms, ships, fences, underground pipes, electric rolled welded tube manufacture, LPG cylinders, water / fuel tanks, external and internal steelwork and playground furniture.

## EQUIPMENT

In the wire flame process, a wire is fed through an oxy-propane flame where it is melted while in the Arcspray process, two electrically charged wires are driven so that they converge at a point and form an arc. An air nozzle atomises the molten metal produced and projects it towards the work piece. Wire diameters range from 1.6mm to 4.76mm and are dispensed from MIG reels, coils or drums.

## FLAME OR ARC PROCESS?

In some instances, the coating properties achievable does provide a simple answer. For example, arc sprayed aluminium has a bond strength that is approximately 2.5x higher than flame sprayed aluminium. Other factors include deposit efficiency, ease of operation, safety/spray environment, changeover time, maintenance time and costs, coating finish and ease of automation. In other instances, a clear and precise answer is not easily available.



IN ADDITION TO WIRES, VORAX OFFERS INDUSTRIAL, HIGHLY RELIABLE EQUIPMENT FOR METAL SPRAYING

## EFFECTIVENESS

Thermal spraying has proved itself to be extremely effective being the only system recommended by International and EU standards EN ISO 14713 as giving greater than 20 years to first maintenance in very aggressive environments.

## MATERIAL SELECTION

Commonly used materials for corrosion protection are aluminium and zinc and their mixture. The choice of material to be used is a vast topic with many factors to be taken into consideration such as environment, local authority specifications, life expectancy, adhesion requirements etc. In general terms, zinc is used in less corrosive environments comparing to aluminium which, in addition can be used in high temperature applications.

## WHAT WE OFFER?

- ✓ Wide experience and knowledge
- ✓ Full spectre of Zn, Al and Zn-Al wires on coils or drums
- ✓ Highest quality industrial equipment for metal spraying

For more on advanced materials and technologies contact

# VORAX

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