

# COMPARISON OF METAL SPRAYING WITH PAINTING

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Painting is a widely used method of protecting steelwork (and other materials) from corrosion. Most paints are organic (polymer) bases with added metal particles, corrosion inhibiting compounds or inert filler materials. They may be applied by dipping, brushing or spraying to suitably prepared (grit blasted) surfaces. Protective paint systems are multi-layer comprising a priming coat, two or three primary protective coats and a decorative top coat. Extensive practical long term evaluation has shown that paint systems have shorter effective lives than sprayed zinc or aluminium coatings.

## Metal Spraying Offers the Following Advantages Over Painting

- Materials are of consistent quality and purity. No mixing is required before application.
- Materials have an infinite shelf life if properly stored.
- Fewer process steps are required. This allows simpler quality control and fewer opportunities for error.
- Sprayed articles require no protracted curing or drying times giving superior utilisation to floor space.
- Metals may be sprayed in a wider range of climatic conditions (temperature and humidity) than paints.
- Sprayed zinc and aluminium give effective corrosion protection immediately.
- No VOC's with Metal Spraying.
- Sprayed metals are more robust than paints and can withstand rougher usage.
- Even if the sprayed layer is damaged the sacrificial action, particularly of zinc, prevents corrosion from edges and discontinuities.
- Sprayed metal coatings maintain the efficiency of friction grip areas throughout the life of the structure.
- Adhesion to steelwork is better. Sprayed zinc or aluminium are often specified as base layers for paint systems for this reason. However, experience shows that properly sprayed metal coatings are adequate if sealed and that the paint overlay offers no further advantage.