

F123-09 Professional Coatings

Professional Coatings Adds Metal Spraying to Its Coatings Range



Professional Coatings Limited has purchased a Metallisation Arc 140/S350 system to add metal spraying as an option to its vast range of paint and powder coating finishes. Professional Coatings, based in Newbury, Berkshire, offers superior anti corrosion protective pre-treatment with architectural grade polyester and nylon-plastic coating systems to the manufacturing industry throughout the UK.

In a recent project, Professional Coatings was asked to coat a range of balcony parts including the support columns, balcony decks and curved railings. In total 34 parts were sprayed. The columns and railings were metal sprayed and then powder coated and the bases were hot dip galvanised and powder coated. The company opted for this system for the bases, as it was impossible to get line of sight to all areas of the bases.

Professional Coatings opted for its preferred method of metal spraying the railings and supports with zinc, rather than hot dip galvanise before powder coating, as the Metallisation process enables a superior final powder coat finish in comparison to a hot dip galvanised base coat. Metal spraying also means that no fettling is required, it gives Professional Coatings control over the quality of the finish and can be scheduled to suit its own timescales, rather than relying on a third party galvaniser. One of the key advantages of metal spraying over hot dip galvanising is that it is a cold process, which means there is no distortion of the railings or any risk of 'spikes' on the handrails, a basic critical requirement in the painting and coating of handrails and balconies from a safety point of view. This system dramatically reduces the 'Carbon Footprint'.

The specification was to blast the balcony parts with steel grit to SA 2.5. Following the grit blasting, Professional Coatings applied 50 – 70 microns of metal sprayed zinc, which was checked for accuracy using a Positest DFT measuring device. The next stage was to apply a coat of architectural grade polyester powder and green bake it so it was not fully cured, before applying a top coat of the same powder and finish bake both coatings. This achieved a perfect finish without surface blemishes - a standard demanded and expected by Professional Coatings' long-standing and prestigious clients.



The finished thickness of coating is in the region of 250-300 microns. As per the European standard EN ISO 14713, this coating system has an expected life to first maintenance of 20 years plus in many environments. Professional Coatings guarantees that the powder coating will not flake off. Its confidence in this guarantee has been increased by the higher quality of bond achieved with powder coating over metal spray as opposed to conventional hot dip galvanising.

Even as experienced coaters, Professional Coatings had no knowledge or experience of the metal spray process prior to this project. Having discovered the improved, high quality finish after powder coating, combined with the control provided over the standards and coating finish, the decision to opt for metal spraying was made easy.

Professional Coatings' whole experience during the set up and initial stages of metal spraying was very positive. Professional Coatings' operators expected the equipment to be more problematic than it actually was. However, subsequent feedback has been that the Arc Spray system is particularly easy to use and offers the flexibility to spray different shaped structures. It can be a little messy with the dust produced but this has been easily overcome with some minor planning changes. The dust is also easy to clean up as over spray does not stick to the surrounding area. The operators have been surprised by the amount of work achievable and have found that it's not as wasteful of coating material as they previously thought it would be.



Feedback from Professional Coatings' clients has been very positive and has resulted in more regular business, with customers now requesting zinc metal spray as a base coat instead of hot dip galvanising. Since March they have done around 15 - 20 metal spray jobs ranging from balconies to gates and gate posts, fences and various architectural fabrications.

For a number of years Professional Coatings has tested its powder coated systems with test vehicles all over the world in extreme conditions from the Sahara desert to the arctic. Professional Coatings takes great pride in testing its system to a higher degree than the manufacturers and feels that its coating systems and products could be of tremendous value to other areas of industry.

Aston Martin, Managing Director, Professional Coatings, says: "We are very pleased with the new addition of metal spraying to our range of coatings. Metallisation has been professional and supportive throughout this project. It has been a pleasure to work with the team. Our operators have been surprised at how easy the new Metallisation equipment and processes have been integrated into their everyday work. The pre-sales and after sales support provided is unrivalled and the website has been an excellent source of support in promoting the metal spray process to our clients and end users. This overall experience has given us confidence in the quality of company we are dealing with. We have found everyone within Metallisation to be very helpful and honest. They don't hesitate in pointing out potential negatives and offering solutions as well as highlighting the positives of the process. We would not hesitate to recommend Metallisation and the metal spraying process to others."