

Innovation and opting for quality continues: how to improve the performance of powder coating plants, facilitate application and achieve smoother paint films

by
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1 - View of the powder and liquid coating plant installed at Maxicolor di Oppeano (Vr).

2 - The Atimix unit made by Ate (Cesano Maderno, Mi) connected to both electrostatic coating booths.

Introduction

After just over a year, Maxicolor in Oppeano (Vr), one of the leading powder and liquid coating contractors, is once again featured in the pages of Verniciatura Industriale, due to its decision to continue to innovate with a view to increasing quality.

With its current coating plant, which makes use of all the latest technologies in the application and pretreating fields, the company owns a technological packet designed to work well and offer some of the best finished products on the market.

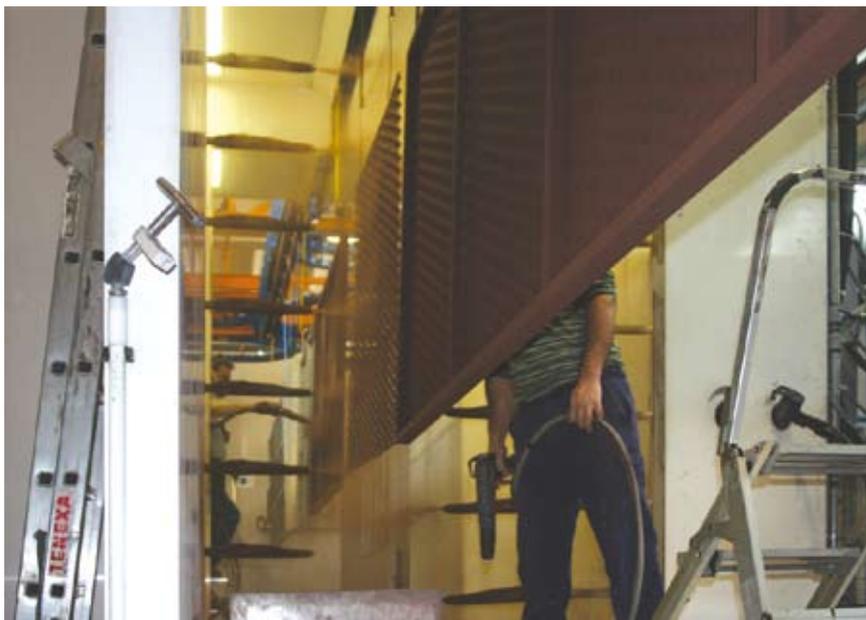
The plant, which we described in detail in issue 480 of Verniciatura Industriale, in April 2008, permits pre-treatment and painting of iron, steel, zinc-coated and aluminium products. One of



the many new features, specially devised for this new kind of plant, is that each single suspended tray is controlled by PC, which monitors and personalises all the processing phases, constantly keeping them under control.

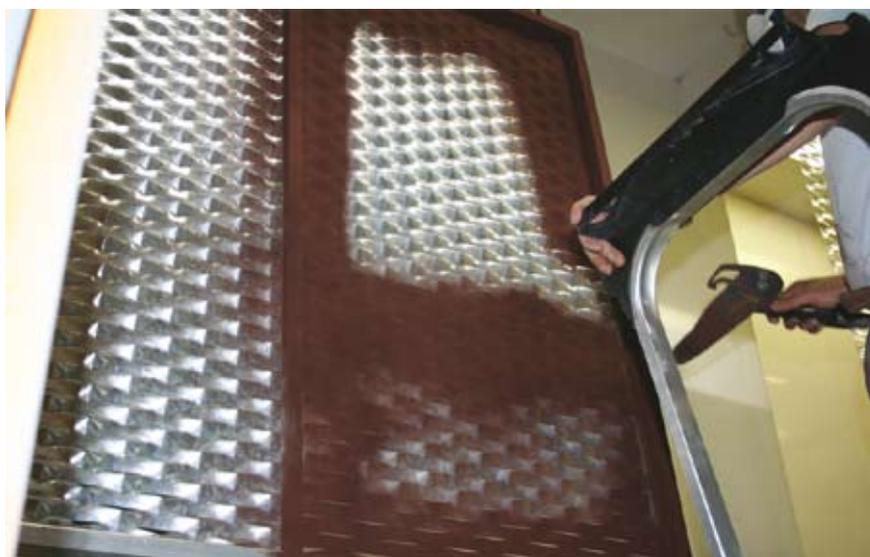
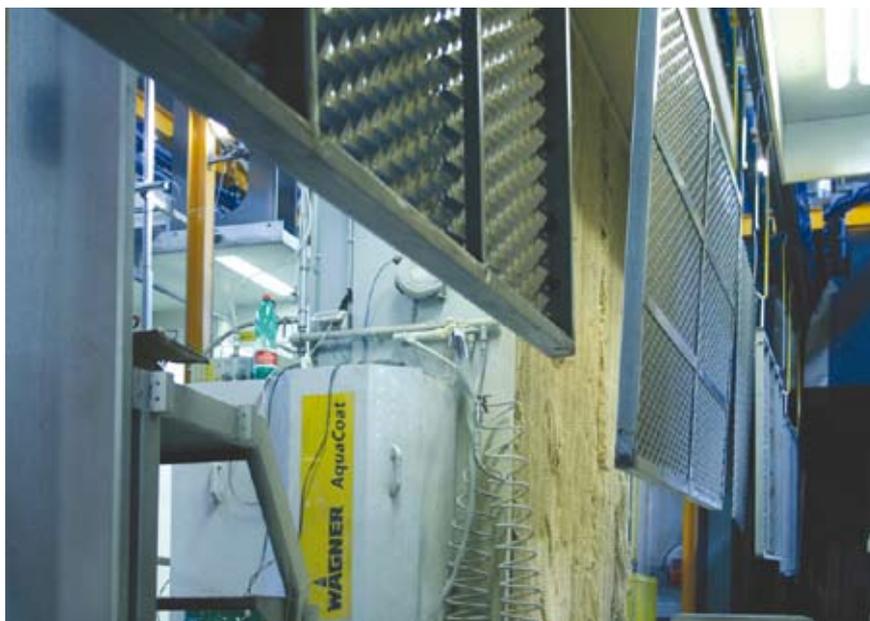
Maxicolor is a contracting company whose business vision differs from that of many of its competitors: even though it has one of the most

3 - The automatic powder coating booth, with manual retouching.



4 - The automatic water-based liquid coating booth

5 - Detail of powder application on a grille with a complex pattern.

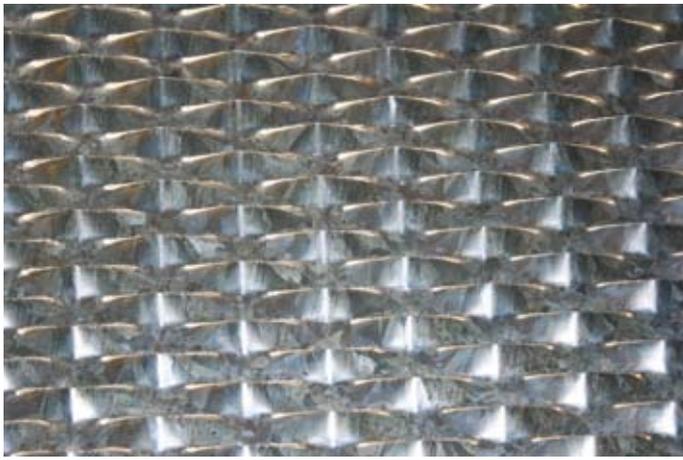


technological and advanced plants of the moment (fig. 1), it has not stopped investing, but has continued its pursuit of the best possible quality, with the aim of certifying products and guaranteeing constant quality.

This is why it has recently installed Atimix System equipment (fig. 2) to optimise both liquid and powder electrostatic coating (fig. 3 and 4). The aim: to achieve the best finish not only with regard to technical and performance aspects, above all from the point of view of smoothness and uniformity of the film applied, but also with regard to aesthetics.

“Installation of the Atimix unit,” explains Giuseppe Di Maria, one of the owners, “has made a huge improvement in the smoothness of the film, that is the visible part that provides the perception of the quality of the product. The system gives the right balance, in particular to powder, which penetrates and flows better, simplifying its application. Although raising the aesthetic quality level was our main objective,” Di Maria goes on, “I have to say that a “collateral” effect of Atimix is lower consumption of paint: there is less waste because the powder adheres better on the workpiece, it goes where it is needed, without dispersion, because the system eliminates disturbance caused by static electricity”.

“The company uses less powder,” explains Simone Barbieri, Ate’s sales manager, “because the spray guns have been reprogrammed to spray with less air, therefore less violently, because the system improves transfer and distribution of the powder (fig. 5). It follows that the guns work with improved parameters and the company obtains direct economic benefits as well as achieving higher quality.”



6a and 6b - An embossed grille before and after powder coating. Note the perfect coverage of the surfaces, even in the dips between the embossed parts, reached thanks to Atimix.

"The savings in paint depend on the type of workpiece; on average it can be 10% with peaks of 12% or more on railings and grilles (where the Faraday cage effect poses greater problems in terms of penetration). We have improved a qual-

ity result that was in itself already excellent," concludes Di Maria, "the Ate unit helps to complete the total performance of the plant, raising the quality and facilitating application." (fig. 6a and 6b).

ATIMIX SYSTEM (PAT.)

IMPROVING USE OF ELECTROSTATIC CURRENT!

(Many problems or limits of painting are due to the physical characteristics of static charges).

- **SAVINGS OF UP TO 20% ON PAINT**
- **PERFECT QUALITY:**
 - a more uniform and even application (reduction of orange-peel effect)
 - improved penetration (reduction of Faraday cage)
- **LESS PAINT DISPERSION (over-spray)**
- **LESS EXHAUSTED POWDERS TO BE DISPOSED OF**
- **LESS SMUDGE AND SLUDGE**
- **LESS TIME NEEDED TO CLEAN THE BOOTH**
- **LESS SOLVENT**
- **LESS POLLUTION**

THE ATIMIX SYSTEM reduces the defects produced by the electrostatic current during painting (uneven thickness, edge build-up and running, Faraday cage, orange-peel) improving transfer and deposit of the paint onto products. It can be applied to any ELECTROSTATIC SPRAY GUN and used with all powder and liquid paints.



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