

Nordic Galvanizers study trip to Belgium and Netherlands 6-7 October 2016

By cooperation with the Belgian-Dutch galvanizers association Zinkinfo Benelux, NG had the opportunity to visit three very interesting plants in Belgium and Netherlands in the beginning of October.

Verzinkerij Meerveldhoven

We met at a hotel close to Brussels airport for lunch, and took a bus to our first destination Verzinkerij Meerveldhoven in Netherlands, not far from the Belgian border. We were welcomed to this very interesting plant by the third generation owner Roel Sweegers, who started with a short presentation of the plant. "We work with small customers, that is our speciality. We have many different possibilities here, electro plating, spin galvanizing in two different lines, galvanizing in a 7,20 x 1,80 x 3,25 m kettle, spray galvanizing, and both wet and powder painting. Since we can offer all that in the same plant, we can also be a little bit more expensive. It is still more economic for our customers, since they can have several different treatments at the same place and from the same company".

Verzinkerij Meerveldhoven has a large roof over the inner yard of the plant which means that no steel has to be stored outside when it is bad weather. A quite interesting thing was the cameras placed on the kettle cover, which made it possible to follow the galvanizing process on a large screen in an operator room. The reason is to bring the operators away from the area close to the kettle, which sometimes can be dangerous. At the spinning lines Verzinkerij Meerveldhoven work both with high- and low temperature galvanizing, depending on the type of product, and they switch between 450 °C and 550 °C in the same line.

"Meanwhile we are also one of the largest galvanizing plants in the Benelux, and one of the most progressive. So we walk in the forefront when it comes to environmental and advanced techniques, Roel told us, and showed their flux cleaning system. A representative from Indufinish, the company that had delivered the equipment, was present and gave us some information:

"It is well known that removing the iron from the flux contributes significantly to reduction of the ash and dross formation. Although the trick of removing iron from the flux using hydrogen peroxide and ammonia has long been known, system builders did not manage to build reliable systems to remove the iron. Since 2006, though, our Flux cleaner is a highly reliable, compact and chemically resistant system for iron removal. The Flux cleaner features acid stripping dosing as standard, so that flux salts no longer need to be purchased. The Flux cleaner turns your flux into a 'never-dump' system at a constant quality level" Erik van der Staaij from Indufinish told us.

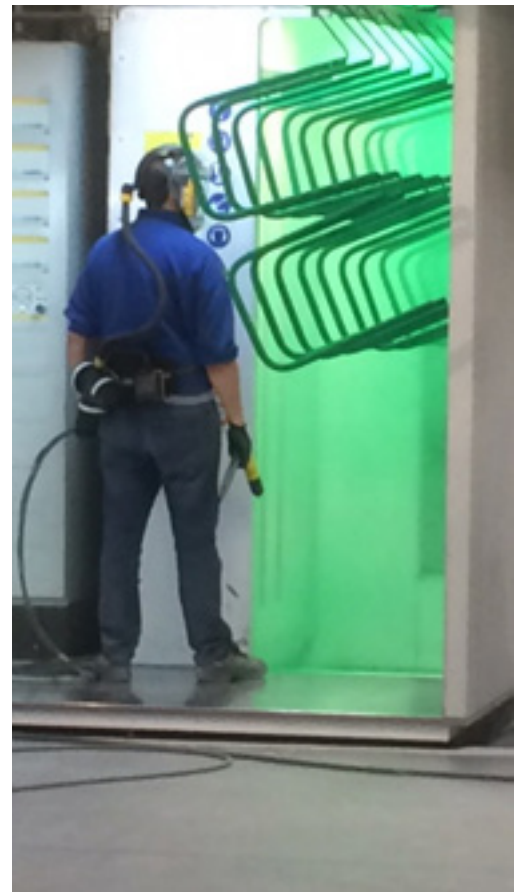


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Galva Power in Antwerp

After the visit at Verzinkerij Meerveldhoven the bus turned back to Brussels and hotel Metropole. After a nice dinner at the neighboring restaurant Belga Queen most of the participants went back to the hotel where infrared heaters made it possible to sit out late into the night. During the dinner Murray Cook and Kimberley Warner from EGGA joined us, and so did Bruno Dursin from the galvanizing association for Belgium and Netherlands, Zink Info Benelux.

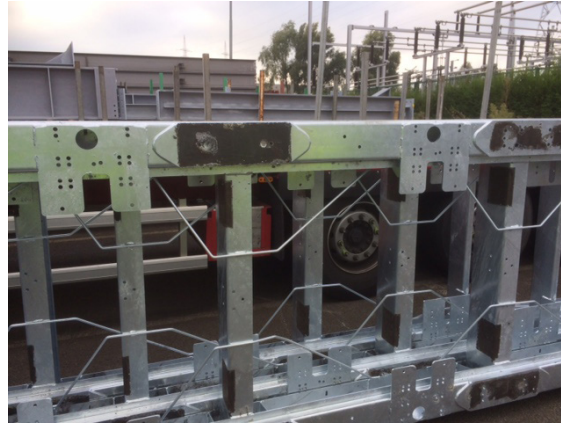
Next morning the bus took us to Galva Power in Antwerp. Also at this plant they were very open and hospitable and gave us a lot of information about their work. Galva Power is a family company with eight divisions in Belgium and Luxembourg. Pioneers in research and development, Galva Power has launched their own brands: duroZINQ®, colorZINQ® and microZINQ® .



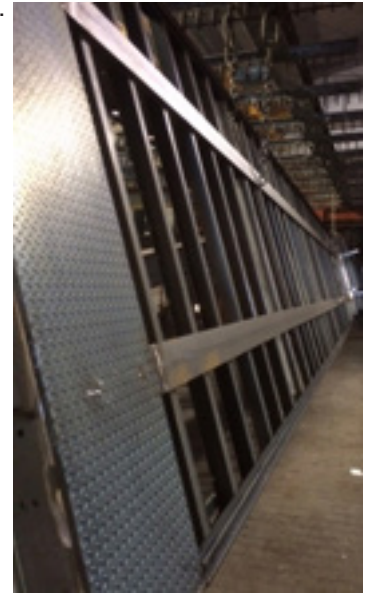
Verzinkerij Meerveldhoven work both with wet and powder coating. They can offer their customers a lot of alternatives which give them an unique situation and because of that possibilities for higher prices.



At this plant they have a large kettle, 19 x 1,9 x 3,3 m, and they mainly galvanize large parts in a zinc bath that have to fulfil the requirements according to DAST guide line, so there was no special alloys used in this case. On some very large constructions they inform us that they have created special construction solutions in cooperation with the customers to avoid welds at critical positions. Another very interesting thing was that Galva Power had developed some type of chemical that prevents galvanizing on surfaces where no coating was desired. That was actually a secret, so we didn't get any information about the content, but it was interesting to see large uncoated areas with very regular shape.



What is the secret that makes it possible to create large uncoated areas with very regular shape?



The kettle was very big at Galva Power in Antwerp, and so was the main part of the constructions.

Coatinc in Ninove

The last plant for this time was Coatinc in Ninove. Except galvanizing, they also had a line for zinc flake coating with a product called GEOMET® 500. In that process there is a dipping in a zinc solution at room temperature, followed by curing at elevated temperature.

GEOMET® 500 is applied to fasteners and many type of metallic parts to protect from corrosion, and it is used in many different applications. Some information about the process:

- Thin dry-film, non-electrolytic, self-lubricated
- Water-based chemistry
- Passivated zinc and aluminium flakes in a binder, patented chemistry
- Chrome free alternative to DACROMET® 500
- Coefficient of friction: $0,15 \pm 0,03$ (ISO 16047)
- No topcoat required
- No hydrogen embrittlement
- Excellent assembly and multi-tightening behaviour
- Resistance to mechanical damage
- Performance maintained at elevated temperatures (up to 300°C)
- Paintable coating
- Electrical conductivity for most application
- Bimetallic compatibility with aluminum



Coated with GEOMET® 500.

Coatinc also had a spinning line with pot dimensions 4 x 1 x 2 m and a large kettle with dimensions 15,7 x 1,5 x 3 for low temperature galvanizing. For the moment the production manager Carlos Callewaert was a bit disappointed with the volume of steel in the yard for the large kettle. The last period has been a little worse than normal.

The Coatinc owned company Coatinc PreGa (Precision Galvanizing) is the only supplier in the market to offer a specially-developed high temperature galvanizing process. The steel components are coated in a ceramic-lined, induction-heated pot at temperatures between 560 and 630 °C. Depending on the customer's specification, very thin coats of zinc ranging from approximately 25 µm up to 80 µm in accordance with EN ISO 1461 may be applied. The protective effect of a high-temperature zinc alloy layer is identical to that obtained in a normal-temperature galvanizing

process. The benefits of this process also include special product properties such as accuracy of fit, coatability and greater surface hardness.



To the bus and the first plant visit!



Information about Galva Power.



Galvanizers in front of Hotel Metropole in central Brussels.



At the yard at Galva Power in Antwerp.