

Newsletter October 2016

Nr 3 2016

Suddenly it happens!

After nearly 15 years of pressure on the Swedish Chemicals Agency (KEMI), they have removed the comment "Dangerous for the environment" after "Zinc and zinc compounds" in the heading in their PRIO database!

This may look as a small insignificant change, but for example Stockholm city refers to the PRIO database to justify their limitations for usage of zinc in the city. This may not change all our problems with the authorities, but it will definitely help us, so it was good news.

Coating thickness on thermal cutted surfaces

Recently there have been questions regarding deviations in coating thickness on thermal cutted edges and how this actually can be acceptable. I have had a lot of discussions with a consultant who has really hard to accept that, so I also sent his questions to Murray Cook at EGGA, to get a second opinion. Murray gave me the following comments:

1. There is no question that the cut edges are excluded from the selection of reference areas for coating thickness checks within EN ISO 1461. This would seem to apply also to the Swedish annex requirements (Nationella Bilagan NA i Sverige). It is important to understand that EN ISO 1461 is a standard for the supply of the coating by the galvanizer. The sentence in Clause 6.2 in EN ISO 1461 is to protect the galvanizer from a situation outside his control. So – strictly speaking, these cut surfaces can have 45-70 microns and still comply with the standard, also when higher coating thicknesses are ordered.

2. The cross reference to EN ISO 14713-2 at the end of that sentence in Clause 6.2 is important. Clause 6.4 of EN ISO 14713-2 states that 'to obtain these coating thicknesses more reliably.....cut surfaces should be ground off by the fabricator'. EN 1090-2 refers to 14713-2 for components to be galvanized. So, this is an expectation on the fabricator when EN 1090-2 has to be followed.

3. I would avoid the suggestion that a ground surface will then be valid for coating thickness measurement. The purpose of grinding is, as said in 14713-2, 'to obtain these coating thicknesses more reliably'. *It is not necessarily aimed at getting the cut surface to be identical to the rest of the component.*

4. One other thing to remember is that Elcometers should not be used near edges (or on curves) unless special probes are used.

The environmental assessment system BASTA

Nordic Galvanizers is member in the BASTA marketing group, a group that working to spread information about the BASTA system and increase the usage of BASTA instead of assessment system like for example "Sunda Hus" who makes subjective, less reliable assessments. BASTA is a data base for anyone who wants to make

good environmental decisions when it comes to construction products – for example building owners, contractors, architects, structural engineers or individuals.

In BASTA the suppliers and manufacturers of building and construction products themselves can register their products and provide the relevant information. By undertaking regular audits of the suppliers in the system the BASTA group assure that the information found in the system is correct. The requirements in the BASTA system is based on regulations according to REACH. There is no limitation for usage of zinc or zinc coated products in the BASTA system, and there are a lot of galvanized products registered.

Construction material for swimming facilities

Nordic Galvanizers participate in a large project for construction of swimming and bathing facilities. The aim of the project is to bring together researchers and public and private sectors in the construction and civil engineering to develop new and attractive total solutions for swimming and bathing facilities. It is a very aggressive environment with high demands on materials, construction techniques, energy efficiency, health and safety.

At the last meeting the construction company NCC had a presentation about how they work in that area "We have a platform for bathhouse construction based on systematic knowledge management from earlier projects. We work with galvanized steel that also is painted. It works! Stainless steel does not solve all the problems in these environments". Good marketing of duplex systems! And I don't have to say it myself! The nice stair below for Ulfborg Svømmehal is renovated by Nordvestjysk Galvanisering A/S.



The following renovation steps were included: Sand blasting of old paint, stripping of old zinc, galvanizing, coating after galvanizing according to EN ISO 12944 - corrosion category C5M high: Grinding / blasting of the zinc surface, painting with SigmaFast 278 - 2x130 microns and SigmaDur 520 - 60 microns Ral 3002. Total dry film thickness: 320 microns.

Surface preparation according to EN ISO 8501

Now and then we have discussions with customers/consultants that want to apply EN ISO 8501-3 for steel that will be galvanized. It is often in projects which shall be performed in accordance with EN 1090-2, where it says in p 10.2 of that standard "All surfaces that shall be painted or treated with similar products shall be pretreated in accordance with EN ISO 8501". For example the Swedish Transport Agency, who is a large buyer of galvanized steel in Sweden, often require surface preparation according to EN ISO 8501-3.

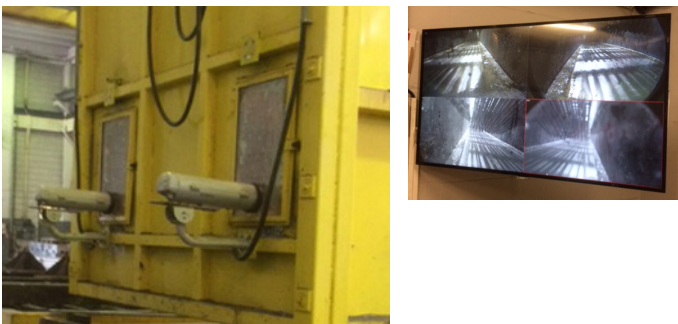
Sometimes the product is already produced, galvanized and installed on the site, when the consultant that make the final inspection observe what he call "deviations from standard" and want actions or price reductions. How is this handled in other countries? Can we argue that galvanizing is not "a similar product" to paint?

According to Murray Cook this is a well-known problem and is caused by an error in the existing EN 1090-2. The CEN TC135 WG2 (The standardization group at EU level responsible for EN 1090) has recognised the problem and EGGA:s amendments to solve the problem have been included in the new draft of EN 1090-2. The root of the problem is that an old British Standard for preparation of steel for painting had the title that included 'paint and related products'. The 'related products' were things like bitumen, varnish, etc. It was never intended to refer to galvanizing. So, if you get questions or requirements based on the standard EN ISO 8501 you now know how to answer!

Nordic Galvanizers study trip to Belgium and Netherlands

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

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, see picture below, 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.



Cameras on the windows in the cover showed the activities inside on a large screen in an adjacent room.

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 de-

velopment, Galva Power has launched their own brands: duroZINQ®, colorZINQ® and microZINQ® brands. Thus, 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 fulfill the requirements according to DAST guide line, so there was no special alloys used here.



Large construction elements that are waiting for galvanizing. The lifting capacity at Galva Power is 12 tonnes.

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. 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. More information from the study trip will come in a separate report.



Galvanizers in front of Hotel Metropole in central Brussels.

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