nordic GALVANIZERS

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New galvanizing member in Nordic Galvanizers!
Normally when NG get new members it is affiliate members, companies that sell chemicals or equipment to the galvanizing industry. But now we have got a new galvanizer as member, Gunnebo Industries, located in Gunnebo in Sweden. Gunnebo Industries produce chains, mainly for marine environment.
”In each step of the manufacturing of the chain, our systematic quality monitoring will ensure the highest safety and the longest life span in the product. Our chain is made from special quenched and tempered alloy steel, a guarantee for very high strength, low weight, high wear resistance and long life.”
Some of the chains are galvanized in their own line, which is a type of continuous process. One of the reasons for Gunnebo Industries to join NG was the possibility to get the quality mark Approved Galvanizer. Gunnebo Industries has passed the AG audit performed by Nordcert, and are the first chain manufacturer with such a certificate.

EGGA Assembly in Prague 2017
This year EGGA Assembly was arranged in Prague in the Czech republic. The conference started with information about the galvanizing business in this country, and after that followed a number of presentations in both market, environmental and technology area. Among many interesting presentations the new system presented by Bruno Dursin, managing director for Zink Info Beneux, the galvanizing association for Holland and Belgium, was something worth considering. Zink Info Benelux has made a customer survey to find out what is the strongest argument for a customer to choose galvanizing. According to the survey, *certainty* is most important for the customers:
- reduction of risks through their choice of reliable suppliers
- the certainty that they can truly count on their supplier

With galvanizing there is no maintenance cost, no after care, no risk....so it is really important to fulfil that expectation. When the end product does not fulfil clients' expectation it is a problem!

Traditionally in the galvanizing business the perception of the galvanizers has been ”one size fits all”, i.e. we deliver one quality, and the customer has to accept it. Rough treatment of goods, which create damages, occasional loss of pieces, ‘uneven’ quality, ‘ugly’ post-treatment of uncoated areas…
Bruno means that galvanizers need to match the expectations of the market with the end product and analyse the specific needs of end clients and tailoring the possibilities and restrictions of the HDG process. Important questions:”Are there any (aesthetic) requirements for significant surfaces? The visible sides are jointly identified before HDG. What is the intended use of the galvanized pieces? What is the composition of the basis metal (material certificate)?”
Zink Info Benelux have created the system Q-ZIB – a classification system for hot-dip galvanizing, with different quality classes depending on the customers requirements.

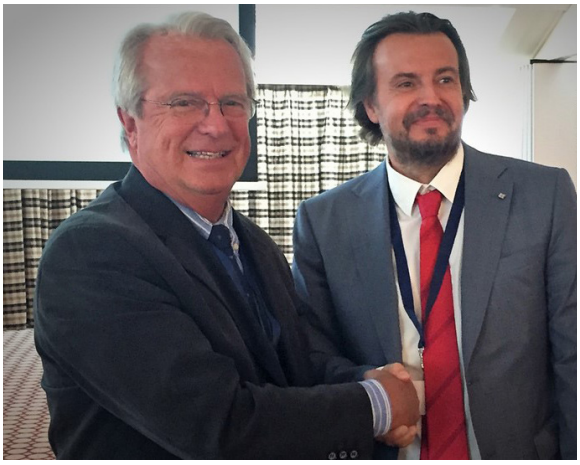
Class A means galvanizing according to EN ISO 1461. This standard describe the functional requirements for the coating. The design requirements are specified in EN 14713-1 and 2. The zinc melt contains not more than 2% other metals, and adhesion tests is only performed if agreed commonly between both parties. EN ISO 1461 does not define aesthetic requirements.

Class B is ”Aesthetic Galvanizing”. The entire HDG article will be checked for and cleaned of sharp points, zinc ashes and unevenesses. The storage is dry, (to avoid white storage stain). If uncoated areas exist, the renovation is performed aesthetically. Visible sides could be post-treated for a smoother surface. A 10-year guarantee are given. Optional: if required by customer, specific packaging to avoid white storage stain during transportation.

Class C - includes extras (in agreement with customer) HDG in accordance with DAST-022, quality control by ZIB, customer-specific guarantees, report on coating thickness, passivation, extra logistic services (storage, labelling, transportation…)

The system is new, but seems promizing. Of course the galvanizer needs to charge a higher prize for class B and C than for class A, but with the system it is more clear to the customer what they get, and they have the possibility to get a higher aesthetic quality, if they are willing to pay for it. Bruno Bursin told us that Zink Info Benelux is willing to share the system with other national associations, and think it should be good if it is spread around Europe.

Martin Kopf leads Europe's general galvanizing industry towards Intergalva 2018
The European General Galvanizers Association has elected Martin Kopf (owner of Zinkpower Group & Chairman, Industrieverband Feuerverzinken, Germany) as its new President.



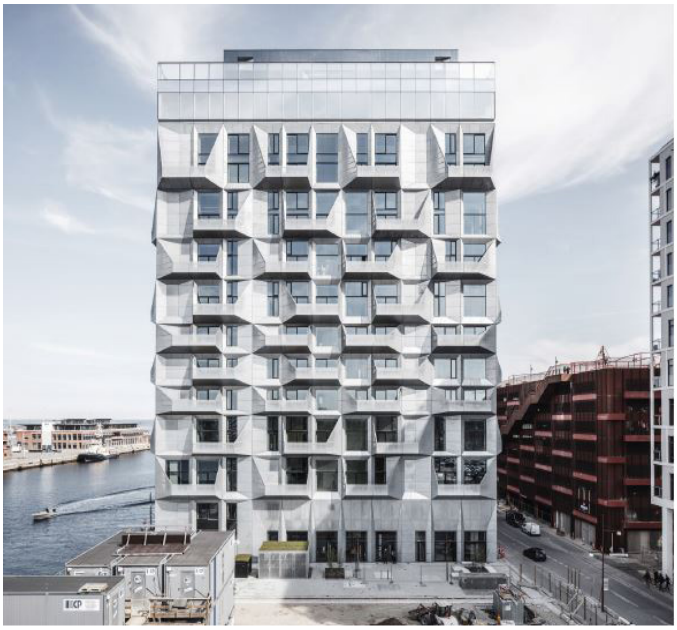
Martin Kopf (right) is congratulated to his election as EGGA President by Jeremy Woolridge (outgoing President)

The Silo - a building in Copenhagen with spectacular galvanized facade!
The Silo is part of the transformation of Copenhagen's Nordhavn (North Harbour) – a vast postindustrial development, currently being transformed into a new city district. Designed by Danish architects COBE with clients Klaus Kastbjerg and NRE Denmark, a 17-storey former grain silo and the largest industrial building in the area has been transformed into "The Silo", housing residential apartments and public functions. In order to bring The Silo's industrial concrete facade up to current standards, the exterior of the existing silo has been reclad, while the interior has been preserved as raw and untouched as possible.

An angular faceted exterior facade made of galvanized steel has been installed to serve as a 2 climate shield. This has allowed the building's characteristic slender tall shape to be maintained. Dan Stubbergaard, Founder and Creative Director of COBE, says: "We wanted to retain the spirit of The Silo as much as possible – both in terms of its monolithic exterior and majestic concrete interior, by simply draping it with a new overcoat.

The work started 2013 and is finished now, 2017. It is interesting to note that a galvanized facade has been chosen, since we know that producers of zinc sheet for construction material feel that it is complicated to offer zinc products to projects in Copenhagen. Because the ground water in Copenhagen is used for drinking water, it is a policy that all types of components that can end up in the ground water should be assessed very carefully.

It is very positive for the galvanizing industry that galvanized steel is used as facade material for such a prestigious building in the center of the new part of the city, but it is a pity that the galvanizing is performed in the Baltic states and not in the Nordic countries.



The former industrial silo was originally used as a storage container for grain. Fifty years later, the 17-storey silo has been converted for new use as a residential apartment building with 38 unique units, ranging from 106 m^2 to 401 m^2 in size, and with public functions such as event and dining facilities on the upper and lower levels.

New EGGA / Nordic Galvanizers Project
The aim of the project is to develop an optimal methodology to repair damage on galvanized steel constructions, and to suggest methodology for how the steel in the hot dip galvanized parts can be reused. Suggested repair methods and recycling will be evaluated from both a technical and economic point of view. The aim is to find an optimal method from a lifecycle perspective. One important question: is it possible to find a quick and environmental friendly method that can be used to extend the life of worn and damaged zinc layers so that the total cost of repair or reconstruction can be minimized?

Today there are alternative methods and products that could mean faster procedures for the repair of galvanized steel. Several of these methods involves lower environmental impact. Within the project, these methods are inventoried and evaluated. The evaluation of the methods will be performed in the field and time of execution as well as the environmental impact will be considered.

Partners included in the project; "Svenska Kraftnät", Nordic Galvanizers / EGGA, Tikkurila and Zinga
Contractor: KIMAB, Sweden

The project is divided into five parts, of which this application relates to points A-C,which will be performed during three years:

A. Inventory of new repair methods for hot dip galvanized steel, and the experiences of these and traditional methods, inventory of the reference object, i.e. objects where similar methods have been used for a number of years

B. Practical repairing of zinc layer according to selected methods, exposure and evaluation

C. Reporting of the above two points

Fire resistance of hot dip galvanized steel members
High costs of passive fire precautions are a huge economic disadvantage of steel and steel concrete composite structures, compared to simple concrete constructions. If hot dip galvanizing except corrosion protection additionally could contribute beneficially to the fire resistance of unprotected steel members, it would be a huge economic advantage. In Germany the galvanizing association has made some studies in this area, and found out that galvanizing has a positive effect on the heat emission, an important parameter when it comes to fire protection.

EGGA has also performed research in that area and received varying results. It has been full-scale fire tests in lab, with an ambitious program – with the aim to receive 30 minutes fire resistance with relatively thick coatings. The main results have been a bit disappointing, but one sample set achieved 30 minutes fire resistance. Thus, most samples achieved 15 minutes fire resistance, which is an improvement in comparison with uncoated steel. The treatment of the metal sections would therefore constitute an alternative solution to the application of fireproof protection materials such as flocking, chamber or intumescent paint, the implementation of which may entail a considerable cost.

Annikki Hirn
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