

Newsletter April 2015



The work with "Approved Galvanizer" is moving forward

As you probably know, Nordic Galvanizers are working with a certification, or approval, for galvanizers, focused on companies that are suppliers to steelwork fabricators that CE mark their products.

To inform about this work and give Nordic Galvanizers board an opportunity to ask questions to our partners Nordcert and MVR (Mekaniska Verkstädernas Riksförbund) a meeting was held in Stockholm on 19 March. The certification Approved Galvanizer has been developed and is managed by a committee, currently consisting of Annikki Hirn, Nordic Galvanizers, Douglas Wallding, Nordcert AB Bjorn Uppfeldt, MVR, Markku Parola, JIWE Varmförzinking AB, Patrik Göransson, Prozink and the customer representative Richard Lundgren. The committee members also attended the meeting.

Why is "Approved Galvanizer" needed?

Some people may ask why Nordic Galvanizers develop an approval system for galvanizing companies?

According to Boverket (the National Board of Housing), SWEDAC and international standardization in the field of CE marking of construction products, it is not possible to EN 1090 certify a sub-process in a production chain. It is the steel work fabricator that shall be EN 1090 certified and who is responsible for the CE marking of the product. To make it easier for the steel work fabricator, as a service and to underline the expertise of the Nordic galvanizing companies, we have decided to create a certification that shows that the galvanizer has full control over those parts in EN 1090 that concerns galvanizing. We develop this certification in collaboration with Nordcert, MVR and a couple of member companies of NG and MVR. Anyone who is a member of Nordic Galvanizers can apply to participate in the committee work for Approved Galvanizer.

Benefits of the approval:

- The galvanizer proves that the process complies with EN ISO 1461 and relevant parts of EN 1090-2
- Creates a famous brand, "Approved Galvanizer"
- Raise the knowledge among our members
- Show the customers that galvanizers in Nordic countries have high competence
- A more satisfied customer and fewer complaints
- Make Nordic galvanizers more attractive as suppliers in the Nordic countries compared with suppliers from low cost countries
- Cooperation with customers, partly by the industry association MVR, create contacts that will benefit the business in the Nordic countries.
- The industry has the possibility to influence on the approval framework itself

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During the process with Approved Galvanizer we have got some questions that we summarize in this newsletter, as we believe that also other members have the same thoughts.

Questions and Answers:

- *But a certification will cost a lot of money?* Yes there is a cost, but it will not be very high, and we focus on keeping it as low as possible.

- *Is it not contradictory when NG, who constantly emphasizes that galvanizers shall not be certified, now will create a certification themselves?* NG maintains that galvanizers can't be certified to EN 1090, but Approved Galvanizer is designed for galvanizers who are suppliers to steel work fabricators. It is NOT an EN 1090 certification. This approval ensures that the galvanizer can deliver the right quality, knows what is required and meets current requirements regarding eg traceability etc for steel that will be CE-marked by the fabricator.

- *Is it not easier if EGGA and NG instead works to support those that want subcontractors to be able to be EN-1090 certified?* The reason that EGGA and NG supports Boverket and the international standardization committees line that it should only be one responsible company (the steelwork fabricator) who can CE-mark the product is that EGGA, who worked on this issue for many years, knows that some steelwork contractors has tried to put the responsibility on the galvanizer when accidents become costly. We also know that the requirements for the galvanizer proposed by for example German certification bodies is incredibly extensive and would mean a lot of extra work, costs and investments. Also the cost of the actual certification will increase significantly if extensive detailed checks are required and certification becomes mandatory. We believe that galvanizers should focus on what they are good at - hot dip galvanizing - and leave the responsibility for manufacturing to the fabricator.

- *Is this really necessary, will not the interest for EN 1090 and CE marking decrease after a while, when it becomes routine?* No, we do not believe that the demand for a relevant approval will expire. We believe that this is a way to show that NG's members are reputable, competent and have customer focus.

- *How does it work in the other EGGA countries?* Similar approval systems are discussed / in progress there too, and EGGA follows our work with large interest.

Pilot approval in April

At the board meeting it was decided that we continue to work with the Approved Galvanizer-concept and perform a pilot certification in April at JIWE Galvanizing AB in Eskilstuna.

Education for ABB staff in Ludvika

On 3 March Nordic Galvanizers held an education for staff at ABB in Ludvika. ABB works with electric power and automation technologies, and uses a lot of hot dipped galvanized steel in their products. Galvanizing is purchased both in Nordic countries and elsewhere in Europe. The initiative for this education came from our member DalaZink AB in Smedjebacken, one of the suppliers to ABB. One of the issues discussed at the education was how a correctly executed layer thickness measurement should be done. It may seem trivial for those who work daily with hot-dip galvanizing, but for the customers, it is not always known how the measurement should be performed according to standard EN ISO 1461. A common misconception is to measure single randomly selected points, instead of, as the standard prescribes, perform at least 5 measurements within an area of 10 cm², and take the average of these measurements. Such an average value represents one measurement value of the product, and it is accepted as long as it is equal to or higher than the local thickness value of the standard. Single points with lower layer thickness than the minimum value is not a reason for complaint.

It is always inspiring to be out and meet clients and users in their own environment, and it's great to see that there are profitable Swedish-based companies (ABB is now owned by a Swiss multinational engineering group) with products that are exported worldwide.

The sun energy solar park

A project where ABB has been involved in is a large solar park for production of electricity. The park has a capacity of 1 million watts and is located along the motorway E18 between Västerås and Enköping. The Solar park is a collaboration between the companies Mälarenergi and Kraftpojkarna AB. The park contains 91 solar trackers, each 72 square meters. Each trackers contained 36 solar panels. The sun followers are mounted on dual axis which makes them flexible. Because of that they follow the sun and utilizes maximum insolation. The park covers a site area of approximately 40,000 square meters and the solar cells in the park is expected to produce approximately 1.2 million kilowatt hours (kWh) per year. The sun followers are mounted on robust frames of galvanized steel. Solar energy is an area where galvanizing has taken a large market share in southern Europe. For obvious reasons, this energy has not had the same impact in the Nordic countries, but the above mentioned project is also included in a study in which various types of solar collectors are evaluated. Perhaps this type of energy could be profitable also in our climate.



Repair or not repair smaller defects in the zinc layer?

In Sweden there is a major player in the power supply industry. One of the company's main tasks is to transport electricity on the so-called national grid for electri-

city - electricity highways. The electricity is transported from the major power stations to regional electricity grids. At present there is an expansion and renovation of the main networks, and large quantities of hot dip galvanized structures are installed around the country. In some cases the power lines goes across borders of neighboring countries, for example into Norway. A large part of the construction segments that are procured are manufactured and galvanized in so-called low-cost countries such as Turkey, but there are also examples of installations where Swedish and Finnish companies have been delivering.

Independent of supplier, Nordic Galvanizers relative often is contacted by the network owner, or the consulting firm that performs inspections of galvanized steel delivered to the network owner. We have also had training for the network owner in cooperation with the Research Institute Swerea KIMAB.

A common problem is that the zinc layer crack and in some cases flakes off around the bolt heads on the bolted joints. The reasons for the problem is several; high layer thickness of the zinc coating, chamfered hole edges that reduce the contact area and thus provides higher pressure on the surface area that absorbs the force, lack of washer under the bolt head, and in some cases too high load during assembling. We have informed the network owner that they must provide a narrower range of steel silicon content in their procurement documentation, and that the structures to be galvanized shall be prepared for surface treatment according to standard EN ISO 1461, and not according to EN ISO 8501. The latter provides chamfered edges on all surfaces, even in the mounting holes, which is not needed for steel to be hot-dip galvanized and rather creates problems, since the contact surface of the screw connection becomes smaller. One question that has been discussed recently is what type of damage in the zinc layer that needs repair, and which can be left unattended. In some cases, there is only a small crack in the layer, while the layer in other cases is flaked around the skull, leaving about 20-30 microns of zinc coating remaining on the steel surface. In the latter case, a reparation with zinc-rich paint is recommended, while reparation in the first case can increase rather than reduce the risk of future corrosion. However, it is not always the network owner and the consultant agreed with the contractor about this, and sometimes extensive, costly and time-consuming repair actions are performed, which are unlikely to contribute significantly much when it comes to raising the life time of the structure.



A defect that needs repair.



A small defect like this need no action.



On the nut side, where a washer is used, there are no cracks.

Annual Meeting and Conference

At 7-8 May it is time for Nordic Galvanizers annual meeting and conference at Clarion Hotel Sign in Stockholm city center. We hope that as many of our members as possible will take this opportunity to meet!