

Hot-dip galvanising plus powder coating primer and powder coat

ALSO HEAVY CORROSION PROTECTION CAN BE AESTHETIC

Under a term "severe corrosion we imagine thick applied and rough surfaces - not just that which pleases an eye. Also heavy a corrosion protection can be aesthetic This makes possible a combination of primer and powder coating, which is applied to hot-dip galvanised surfaces.





"Very few things in life are so durable as Galvaswiss." This slogan embodies the claim of the Swiss surface company, to combine aesthetics and value preservation of steel and metal objects. In four modern galvanizing and painting factories at Galvaswiss, 20 meters long and 3 meters high parts are coated with hot-dip galvanized and coated. This guarantees up to 45 years of maintenance free service life, which can be achieved only with best quality procedures. In addition to the classic hot dip galvanizing we also use the Thermoplex-2 method, explains Martin Matter head of F+E at Galvaswiss surface technology: "The Thermoplex-2 procedure a dip galvanized surface is also covered with a powder coating primer and powder coating. This combination creates a perfect corrosion protection, because from the outside no corrosive influences can interfere with the basic material. On the other hand parts are treated for Thermoplex already in the galvanizing process so it results in a less rough, galvanised surface. Together with the powder coating, this approach guarantees a smooth, aesthetically very attractive surface. We offer our clients an optimum combination of corrosion protection and aesthetics."

Outgassing resistance as a key factor

Galvaswiss prefers in Aarberg factory Thermoplex-2-coating for products of Karl Bubenhofer AG. Specially for an application of hot-dip galvanized surfaces the company developed a primer (POLYFLEX® EP-20 Korroexprimer) that with the powder topcoat (POLYFLEX® PES-125-GU) makes a strong and diverse combination. The powder coating process can cause vapours from the zinc surface. The reason lies in the partially porous zinc layer, in which moisture can be stored. This moisture evaporates after the coating in a curing oven in the form of vapours and creates crater or inclusions on the surface. The system of Karl Bubenhofer AG prevents this unwanted vapours. "During the development of the corrosion protection system with Korroflexprimer and powder coating POLYFLEX® PES-125-GU it was emphasised that the powder coating offers the best protection." The composition has been designed in a such way that the primer seamlessly blends with the zinc surface and it stripes. Thanks to this extreme liability, a primer closes the pores of the zinc surface and prevents the outgassing. At the same time during a development of Korroflexprimers a great value was put on a very good process. The primer leveled the rough zinc surface which suits the surface condition of the topcoat. A smooth curve is always guaranteed", explains Marco Capizzi, application engineer for the Karl Bubenhofer AG. Top priority was to achieve an optimal protection of the object but at the same time to enable a simple and economical processing of the system to the customer. The result of the entire structure convinces with an excellent weather resistance, good chemical resistance (acids/alkalis) and exquisite excess firing stability.



"The GSB certification provides users with increased process safety."

GSB certificate guarantees process security

The Swiss paint manufacturer has received the GSB certification for PES-125-GU Polyflexpulver (GSB No. 906a). "Thanks to the outgassing resistance result very smooth surfaces. GSB has granted the approval the powder coating due to the required properties, which is rare for a powder coating in terms of galvanizing. In this segment, only a limited selection of products is available to the users", says Roger Zeller, Sales and Marketing Director at Karl Bubenhofer AG. This certification helps the businesses, to fulfil the construction products regulation DIN EN 1090 coming in force on 1 July 2013. These demands a document proof of a corrosiveness category, the term of protection for every order and a complete documentation of the manufacturing process of the products. The Thermoplex-2 method is especially suitable for buildings and parts that are exposed to permanent heavy loads. These include, for example, noise barriers on highways and railway lines. Exhaust gases, rocks, deicing salt, chemical substances, but also pressure waves of passing trains or trucks use to strongly 24 hours the components on the day. "With the Thermoplex-2 method, we offer the longest protection. The system is stable against chips due to mechanical factors. In case

of paint damage the underlying zinc surface guarantees corrosion protection, and consequently the substrate steel does not rust", says Martin Matter. Thanks to the availability of the topcoat in all RAL colours including metallics, Galvaswiss meets diverse customer requirements for the colour scheme. Modern noise barriers should not only efficiently absorb a noise, but it should be invisibly integrated into the environment. Galvaswiss is convinced that only a combined layer with primer and top coat on galvanized steel coating provides a high-quality protection. "Simple coatings, so top coat on galvanizing, yield only limited corrosion protection from the point of view of the ISO 12944 standard. Especially near the ground, the surface can not resist increased moisture and increased mechanical stress. It can result in expensive claims. We avoid such cases, we consistently focus on the Thermoplex-2 process", says Matter. For years, Galvaswiss in Aarberg uses the method and is convinced by the results. The gassing stability of the primer guarantees a very high process reliability across the entire processing chain, and the overall package is characterized by high UV resistance. The latter it has been confirmed in various intensive tests. A very good course results in a smooth surface and fulfils the highest aesthetic demands. "It is this combination of a primer and topcoat is predestined for a use in the public sector, road transport and public transport. On the one hand parts are very durable, on the other hand, they need little maintenance and care. The Thermoplex-2 process with the combination of zinc and color is medium- and long-term the most economical and most sustainable solution", sums Matt up.

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GALVASWISS AG
AARBERG

GALVASWISS is the embodiment of aesthetics and value preservation for steel and metal objects: with four modern galvanizing and painting factories, qualified and experienced personnel and innovative techniques and products, which guarantee up to 45 years of maintenance free lifetime.

