New electroplating plant at Hansgrohe

Originally founded in 1901 in Schiltach, Germany, by Hans Grohe as a metalworking shop, today’s fittings and shower manufacturer Hansgrohe can look back on numerous inventions such as the first hand shower with different types of jet, the first pull-out kitchen fitting or the first shower rail. For almost 30 years, Hansgrohe has also been manufacturing at the Offenburg-Elgersweier site in Germany, which has become the company’s most important production location. This is also reflected in the high investment volume in recent years alone: In addition to a plastics technology centre in 2016 and a new logistics centre in 2017, a new plastics electroplating plant went into operation in spring 2019. Hansgrohe invested 30 million euros in the new building, including the electroplating plant, on the existing factory premises in Elgersweier. The building was constructed on an area of 10,000 square metres. At the same time, space was reserved in the hall for further investments in future technologies such as chrome VI alternatives. In the logistics area, too, provisions have already been made for future automation using conveyor technology.

Whereas around 18,000 individual parts have been electroplated on the existing plant to date, the new electroplating plant has achieved a capacity increase of 30 percent. And this is only the first of three expansion stages. With the second expansion stage, which is expected to take place in three to four years, output can be increased by 60 percent; with the third stage by 120 percent. This means that in future it will be possible to electroplate over 60,000 parts per day. In addition to the increase in capacity, the focus was on sustainability, resource efficiency and safety in plant design.

Review K 2019 – Focus on functional surfaces

In the new paint shop for General Motors in Changwon, Korea, Dürr’s 13,000th robot (type 3333 exhibitors from 63 nations, fully booked exhibition grounds, more than 224,000 visitors, 73.8 percent of whom came from abroad: the organisers of the world’s largest plastics trade fair K 2019 can be satisfied – and so can the visitors who were interested in innovations in surface technology. One of the focal points was the integration of functions into the surface. In Düsseldorf, Germany, Plasmatreat for example demonstrated “live” how the adhesive and sealing properties of plastic surfaces can be increased by plasma treatment. The application of the nanocoating can be integrated into the injection moulding line and ensures a metal-plastic bond that is as adhesive as it is media-tight. The result: the user can dispense with a primer. Plasmatreat sees typical applications in the manufacture of media-tight connectors and the production of hybrid components such as back-moulded emblems or structural components that have to meet high mechanical requirements.

At the K 2019, Pröll presented an extension of the Noriphan HTR N series. This deformable, directly sprayable, solvent-based, one-component screen printing ink system for film back-injection technology has been tried and tested for years. What is new is an opaque and carbon-free, thus non-conductive black ink for applications in printed electronics. The new screen printing ink was also developed with the IMSE technology of the Finnish manufacturer TactoTek in mind. It creates the prerequisite for integrating electronic components such as touch controls, sensors, lighting and antennas on a 2 to 3 mm thin, three-dimensionally shaped (plastic) surface.
Updated standard “CX extreme corrosion stress”

DIN EN ISO 12944 “Coating materials - Corrosion protection of steel structures by coating systems” standardizes corrosion protection by organic wet coating systems on “black” and also on hot-dip galvanized steel (duplex systems). The standard, which dates mainly from 1998, has been completely updated and supplemented by the new Part 9, which regulates coating systems for offshore structures. This part replaces the withdrawn standard ISO 20340: 2009 and defines performance requirements for coating systems as well as test methods and evaluation criteria for coating systems for offshore and related structures. For the first time, the coating standard DIN EN ISO 12944 takes into account the durability of hot-dip galvanized steel to some extent and enables coatings on hot-dip galvanized steel to be thinned by a third, allowing this to be done even in highly corrosive offshore applications. Table 3 of Part 9 defines the minimum requirements for coating systems and their initial performance. Comparing the requirements for corrosion category CX (Corrosivity: extreme), which includes offshore areas with high salt exposure such as oil platforms and wind farms, but also industrial areas with extreme humidity and aggressive atmosphere, it is evident that coatings on hot-dip galvanized steel can be thinner and can be applied with fewer layers. The minimum number of layers is indicated here as 2 and the minimum nominal layer thickness on the metallic coatings as ≥ 200 µm. //

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Teknos cooperates with Paboco

Coating for recyclable paper bottles

Both the packaging and food industries are undergoing profound changes. Consumers and the packaging industry are looking for more sustainable, recyclable solutions and alternatives to replace or reduce traditional plastic packaging. The Finnish paint manufacturer Teknos is responding to this need by developing barrier coatings for the food packaging industry. As part of the so-called Paboco paper bottle community, which brings together a group of world leading brands and experts in materials, design and technology, Teknos is contributing to the development of a bio-based and recyclable paper bottle.

“We have many years of experience in the development of functional coatings for various surfaces and materials. This knowledge will also be used in applications other than traditional painting. Paper and cardboard used for food packaging are usually coated with a thin plastic film. However, there is an alternative: water-based dispersions that prevent water or grease from penetrating the paper. They are therefore ideal for food packaging,” explains Tuomas Aspiala, Group Commercial Manager at Teknos.

Today, the first generation paper bottle is made from sustainable paper material in combination with the existing barrier technology. The next step is the transition to a comprehensive bottle solution for recycling, using a bio-based barrier. In the long term, the aim is to have a completely bio-based paper bottle. //

BASF analysis – White remains most popular automotive color

Whether on the highways in the USA, motorways in Europe or the trunk roads in China, vehicles painted white are the predominant color on all roads around the world. This is one of the key findings of the BASF Color Report 2019 for Automotive OEM Coatings. Around 39 % of all new vehicles produced worldwide are painted white. While in Asia Pacific almost every second car is painted white, in North America and EMEA it is only every third vehicle. In the popularity scale, white is followed by other achromatic colors: black, gray and silver. In total, another 39 % of all new vehicles produced in 2019 rolled off the assembly line in one of these three colors. The remaining 22 % of newly produced vehicles were painted in chromatic colors. Approximately 9 % of all new vehicles produced worldwide were painted in blue and 7 % in red. Compact and small vehicles are more often painted in more colorful shades.

With a share of 77 %, achromatic colors continue to dominate the picture on the streets in the EMEA region. White remains the most popular color, although the number of vehicles painted white has declined slightly. The popularity of silver has also been dampened, while gray continues to be successful with a market share of 20 %. The chromatic color segment also experienced a slight increase. Almost every fourth vehicle in Europe was painted in a chromatic color. Beige made its mark for the first time this year with a market share of 2 %.

On North American roads, achromatic colors are clearly in the majority: 77 % of all vehicles are painted white, black, silver or gray. In Asia-Pacific, the majority of vehicles are still painted in achromatic colors, with an unchanged share of 77 %. Almost every second car in the region is white - with a 49 % share in Asia-Pacific, the color is the most popular of all the regions. Pearl white in particular is very popular. With a market share of 39 %, white remains the most popular color among South American car buyers. This trend has now been continuing for years. Other achromatic colors are also very popular with buyers: 23 % choose silver and 14 % grey. With a market share of 11 %, black in South America lags behind the global average of 16 %. //
Dürr Group achieves record levels of incoming orders

The Dürr Group is reporting record levels of incoming orders and sales revenues for 2019 and has exceeded its earnings targets adjusted during the year. According to preliminary figures, order volume grew by 3.7% to Euro 4,076.5 million. Environmental technology and the growing demand for production technology for electric cars were the main contributors to this growth. Compared to 2018, orders for e-mobility production technology rose by 44% to around €390 million. With a sales increase of 1.3% to EUR 3,921.5 million, the operating EBIT margin reached 6.7% and exceeded the July target of 6.0 to 6.5%.

The environmental technology division Clean Technology Systems, which primarily supplies systems for cleaning polluted production exhaust air, achieved a 74.0% increase in orders in 2019. The business with production technology for electric vehicles accounted for 22% of the automotive order intake in 2019. Order intake for plant engineering for the automotive industry grew by 3.1% in 2019. The Paint Robot Division increased its order intake by 1.3% to a record EUR 640.8 million despite the lower automotive production.

The increase in Group sales (+1.3%) was driven by growth in environmental technology and paint shop construction as well as a disproportionately high increase of 7.7% in service. Capital expenditure rose by 37.9% to €102.6 million.

The outlook for 2020 is based on the assumption that the overall economic situation will not deteriorate further. For the first quarter Dürr expects a noticeable burden on earnings due to shifts caused by the corona epidemic. However, the Board of Management currently assumes that the losses can be largely made up in the further course of the year if the situation largely returns to normal in the second quarter. //

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