SLF Smart Surface Solutions

CUSTOMER MAGAZINE

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EDITORIAL

Dear customers, dear readers,

It is done and finished. With this sentence we do not attribute an ending, but on the contrary, a beginning.

After a construction period of about two years we were able to complete the second stage, the office building, and towards the end of last year we could move into our new factory in Emsdetten.

The old premises in Greven-Reckenfeld had seen better days and offered us no future prospective for development, also in the sense of more space. This led us to the decision to build a completely new factory, consisting of a production hall, which is 3,000 m^2 in size, and a three-storey office building functionally connected to it. The plot we bought in Emsdetten's industrial park comprises 20,000 m^2 and provides enough space for future business growth.

"A rolling stone gathers no moss", so the saying goes and true to this motto we are constantly developing our company further. Thus, in the course of last year we redesigned not only our corporate print design, but also our online presentation. On our website we put a spotlight on our new logo. While we stuck to the blue **SLF** colour, we changed the logo's form and with "Smart Surface Solutions" we updated our claim, which reflects our international orientation now.

We want to emphasize – internationality, dynamics, a high recognition value and expertise in finding sophisticated solutions in surface treatment – that is everything about blast cleaning, paint spraying and conveying.

We and all our team members are looking forward to a successful future cooperation with you, our customers, here at our new company headquarters in Emsdetten.

Sincerely,

Fritz Gaidies *Michael Bahlinghorst*

Fritz Gaidies, Michael Bahlinghorst and Christian Gaidies during key delivery

New location – but we are still the same

***SLF's** new head office in Emsdetten*

Just as our customers know from the way we carry out projects, we also counted on openness and transparency when we chose the architectural design of our new building.

Big glass elements, light-flooded rooms and clean lines are predominant in the design of our new factory, which is located only 2 km linear distance from our old factory in Greven-Reckenfeld. The office building's façade made of clinker brick intentionally reflects the closeness to the Westphalian architecture.

"Searching for a new location we didn't only think about our history, but also aimed at keeping the way to work for our employees as short as it has been for most of them.

Apart from that, the existing possibilities for expansion and the good transport connection to the Autobahn A1 played a major role", explains Fritz Gaidies. "This is why we chose the nearby town of Emsdetten", adds Michael Bahlinghorst. Both managing directors agree: "Choosing business-friendly Emsdetten, we have taken the right decision for our new location."

"One of our main targets was to create open rooms, which support team work", emphasises Christian Gaidies, our director of finance. "The different departments have spacious office rooms and there are several points for meetings in small groups".

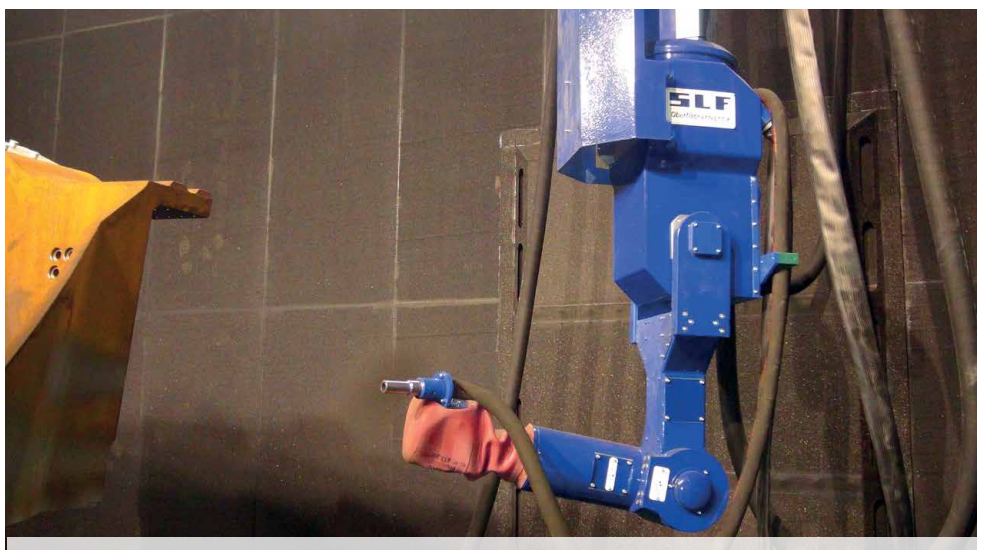
For the reception of customers, internal meetings in bigger groups, training and workshops the well-spaced lobby provides conference rooms, which are technically and functionally equipped according to our demands.

Blast-cleaned by a robot for a wind turbine tower

Whether in the onshore or offshore sector, the requirements for the surface finish of wind energy systems are of the highest standard. In order to meet these requirements we have supplied a robotic blasting system for Global Castings A/S in Denmark.

Our customer is specialized in the serial production of finished machine housings to incorporate the generator equipment of wind power plants.

To guarantee an always constant and high-quality surface treatment for the cast metal housings, our customer chose to rely on a blast booth including a media blast robot developed by our company.



The "ReCo-Blaster®" in action

Benefits of using our "ReCo-Blaster®":

- blasting process does not involve any physical stress
- program-controlled blasting process brings about advantages especially with serial parts
- you achieve uniform and reproducible roughened surfaces
- up to four times higher surface treatment rate compared to manual blasting
- reduction of manufacturing costs

"Long-lasting paint adhesion is a prerequisite for optimum corrosion protection", explains Stefan Thröner, who has been the designer right from the start of the "ReCo-Blaster®".

The movements of the blasting robot are programmed offline and recorded for every work piece. Compared with online programming, offline programming of the work pieces increases the availability of the blasting system. Thanks to its eight axes and its high mobility the robot can also treat surfaces of components with complex geometry.

Stefan Thröner, designer of the "ReCo-Blaster®"

Naturally, the blast booth is equipped with an automatic full-surface media transport system, a suitable abrasive recovery system and the necessary filter unit.

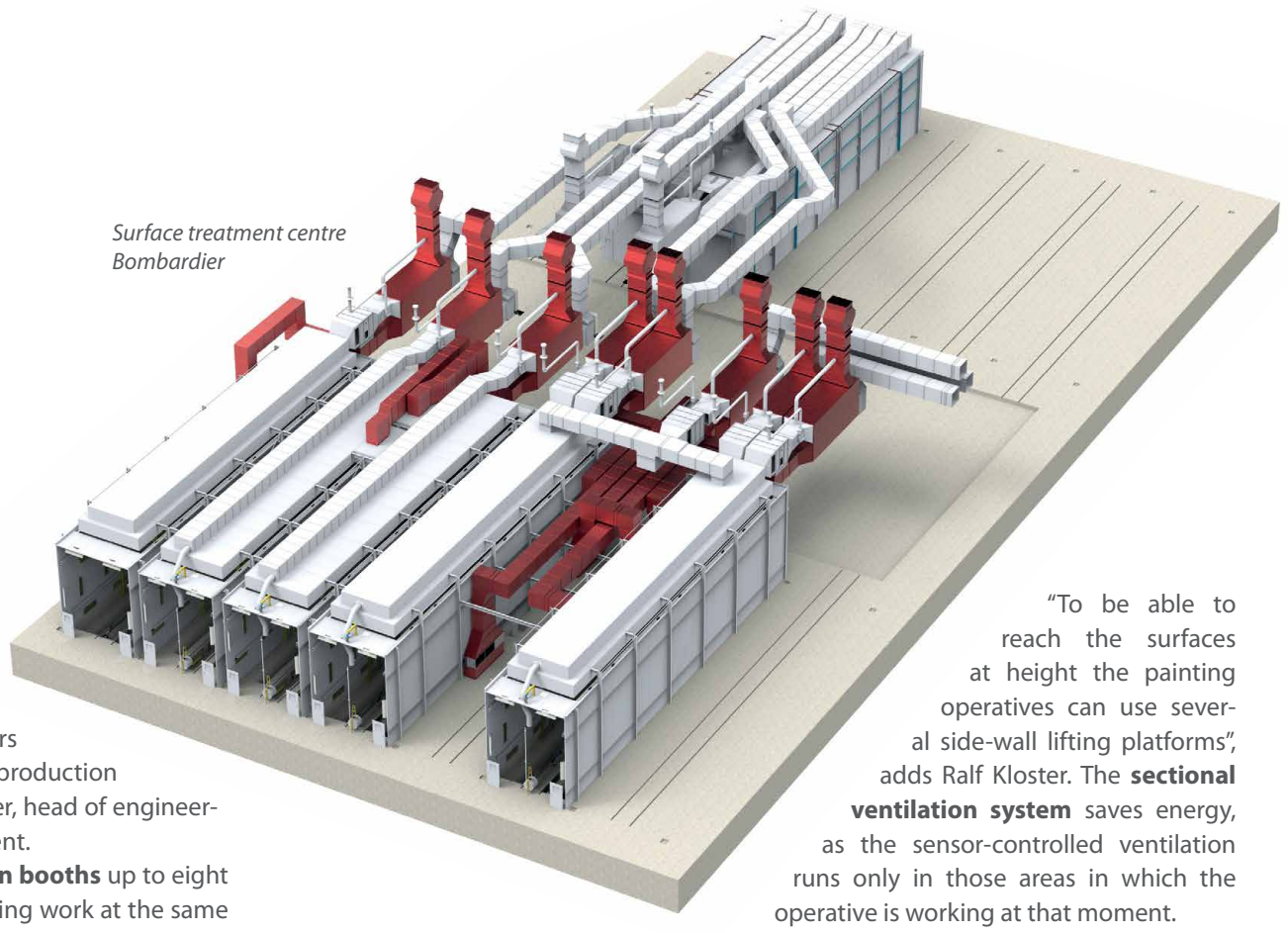
"Ergonomic aspects for the design of the workplace and the related concerns about occupational safety were a central theme in our discussions with the customer", says Arnold Flothmann, head of sales department for blasting systems at SLF.

It's all about rails

Bombardier Transportation is one of the leading international manufacturers of rail vehicles. As part of Bombardier's investment in a new production hall in Wroclaw, Poland – which opened in 2016, **SLF** delivered a new **surface treatment centre**.

The task was to build **seven treatment booths** according to the latest findings in paint spraying technology on an area of about 12,000 m². For transporting the chassis of the passenger trains to be coated into single treatment booths, Bombardier chose to use a manually and semi-automatically controlled transfer bridge for lateral displacement. This is located in the middle between the booths arranged on both sides.

Head of engineering design department, Ralf Kloster



Surface treatment centre Bombardier

"The whole system fits in the existing sequence of operations and short routes for transporting the rail cars provides for a quick production flow", says Ralf Kloster, head of engineering design department.

In the **preparation booths** up to eight persons carry out filling work at the same time and due to the single folding platforms mounted on the walls, they are always in an ideal working position. During the succeeding grinding work the laminar supply air flow via special nozzle outlets in the booth ceiling ensures a secure work process for the operators at any time, which makes the wearing of breathing masks unnecessary.

After preparation the rail cars are transported into one of the combined **paint spraying and drying booths**, which for ergonomic reasons have a pit under nearly the whole area. This ensures that the lower parts of the rail cars, which are driven into the booth on an elevated track, can easily be reached.

"To be able to reach the surfaces at height the painting operatives can use several side-wall lifting platforms", adds Ralf Kloster. The **sectional ventilation system** saves energy, as the sensor-controlled ventilation runs only in those areas in which the operative is working at that moment.

"A feature of the system is the digitalisation of the work processes", says Andre Felchner, head of sales department for paint spraying systems. "Thanks to the sophisticated visualisation the staff can always monitor the operational procedures already in the control room and react if necessary." This allows for short response time and a smooth work flow at any time.

Well-oiled machines for export

Closed and open spray booth

The equipment manufactured by company "Windmöller & Hölscher", global market leader in the field of flexible packaging (extrusion, printing and conversion), is sold to customers all over the world. Transporting the systems presents an enormous challenge to the surfaces of the machinery.

To ensure corrosion protection, especially in case of overseas transport, the surface is protected by spraying adhesive oil on it. Spraying was carried out in an open area inside a hall, as a result unpleasant odours occurred in the whole area.

"As a responsible employer we want to protect our employees against this odour pollution. That is why we were looking for a solution which will work in this case." This request was brought up to our sales engineer, Norbert Küsters. An effective improvement could only be achieved by erecting a closed booth. Due to the limited space in the hall Norbert Küsters in cooperation with our design engineer Stefanie Stegemann developed a **telescopic spray booth**.

After the booth had been commissioned, Peter Zwifka, dispatch manager at W&H, was very satisfied. A modern extraction system with separation as well as personal protective equipment make sure that the personnel inside the booth are well-protected during the spraying process, while employees working outside the booth are no longer bothered by the odour.

During operation the booth can be expanded to a length of 7.10 m, whereas in its parking position i. e. when retracted, it is only 2.90 m long. Thanks to the telescopic mechanism the hall crane can position machines weighing several tonnes exactly at the desired place. After that the booth moves from its parking position over the work piece and the spraying process can start.

We have asked our customer.

Peter Zwifka, who has been dispatch manager at W&H for many years now, agreed to answer to our questions. The interview was conducted by one of our commercial apprentices, Gerhard Neufeld.

Mr. Zwifka, what is, from your point of view, special about W&H?

"Although there are about 2,700 staff members working for the company all over the world, there is still an informal and cooperative atmosphere among the colleagues. Our management pays attention to the development of personnel and especially of apprentices and actively pursues the "informal approach", not going through official channels."

Mr. Zwifka, why do you think W&H needed this new system?

"The odour pollution caused by the adhesive oil disturbed people throughout the hall. Even though the odour never did any harm, the situation still was not ideal for the personnel. At W&H we value the active protection of our staff members high, which brought us quickly to the conclusion that action should be taken."

Why did you choose SLF?

"We have known **SLF** Oberflächentechnik for a long time and are associates on former projects, which have been executed very well, with this company. Another important reason was the proximity of both companies."

*Gerhard Neufeld, **SLF** and Peter Zwifka, W&H (from left to right)*

Talking about project execution – what was your personal impression about the cooperation with the SLF team?

"It was very pleasant and professional. Regardless of which department in our company was involved, Mrs. Stegemann and her colleagues always kept track of the project and had everything under control."

What has changed since the booth has been put into operation?

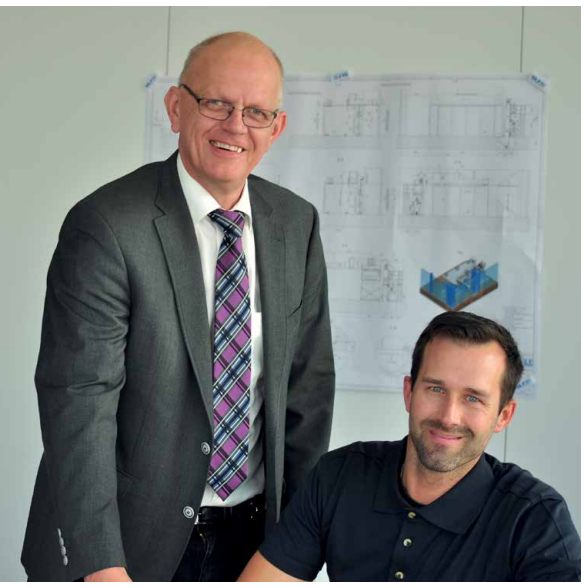
"From the first day onwards there was no longer any odour to be noticed. The staff immediately accepted the new system and are happy about fresh air in the hall."

This interview is part of the final project of our apprentice Gerhard Neufeld for his certification as industrial clerk. We thank you, Mr. Zwifka, very much for taking the time for this interview and wish you all the best.

A neat piece of work

The SMS group GmbH with its headquarters in Düsseldorf, Germany, is a renowned manufacturer of among other items, metallurgical plant for steel rolling mills.

One part of the international company is Duma-Bandzink GmbH, located in Mönchengladbach, Germany, an industry leader in the application of zinc or aluminium coating on sheet steel.



Head of sales Arnold Flothmann (left) and design engineer Thomas Gerdemann

The company needs highly wear-resistant and surface treated steel rollers for the transport and handling of sheet steel, which is normally on coils, during the coating process.

Before the steel rollers are treated, their surface has to be prepared in a blasting process. By blasting, the surface is roughened and thus gets a suitable adhesive base. Our company was entrusted with delivering a blasting system, necessary for this process.

The first blasting system for rollers we delivered to SMS in China convinced the customer from the outset and true to the motto "Never change a winning system" we have supplied the SMS group with three similar designed blasting systems for rollers so far.

The **blast cabinets** are designed for rollers having a length of up to 6.5 m, a diameter of up to 1.6 m and weights up to 6 t. The blasting media used is corundum.

Via a pneumatically controlled ceiling flap, the work pieces are conveyed into the cabinet using a customer-provided crane and placed on a motor-driven rotating device, which is adapted to the particular length of the work piece.

Blasting system for rollers at the factory in Mönchengladbach

During the process the blast nozzles move on a motor-driven linear guide along the rotating roller. Due to the high capacity of the **pressure blast pot** (500 litres) each roller can be treated in one sequence of operation.

The work pieces are automatically purged by air after the blasting process is finished.

"To achieve different degrees of surface roughness on the rollers the blasting cabinet has been designed for use of blasting media with different particle sizes", explains design engineer Thomas Gerdemann.

The media transport system, consisting of two longitudinal and one cross lamella-type conveyors, makes sure that the spent abrasive is collected on the whole area and is then conveyed to the reclamation system for cleaning.

Blast-cleaned chassis ensure a good basis

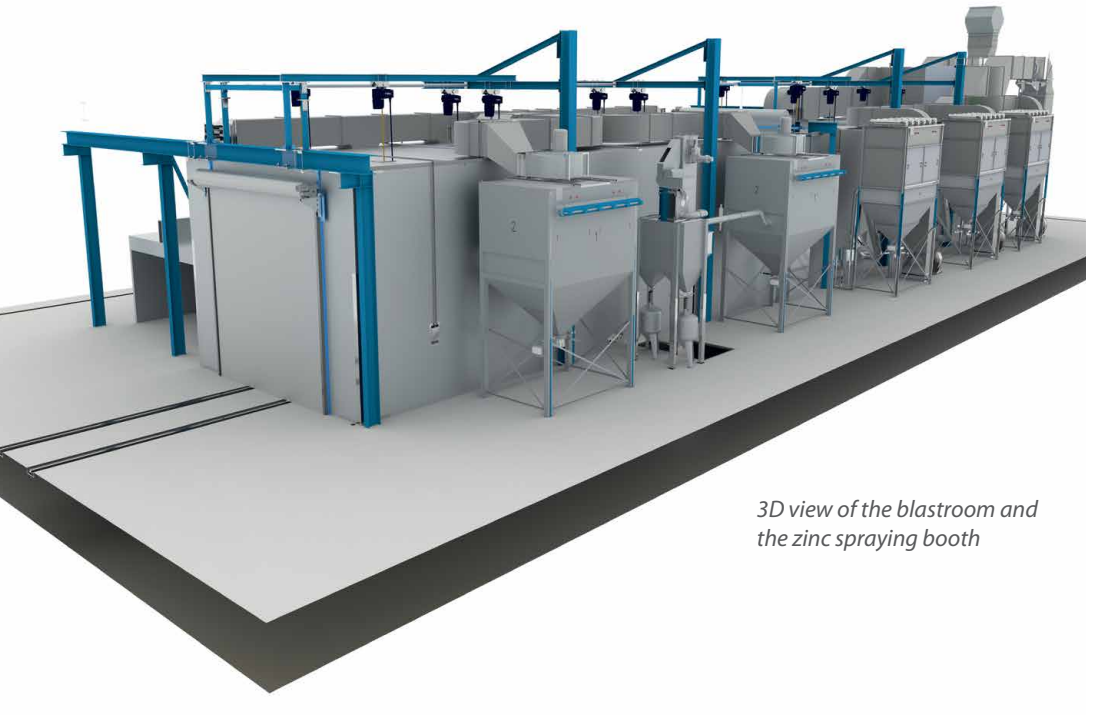
The Austrian company Schwarzmüller is one of Europe`s biggest providers of commercial vehicle trailers. Located in Freinberg, Schwarzmüller entrusted us with the delivery of installations to be used for the surface treatment of their vehicles` trailer chassis.

"To ensure that the surfaces of different chassis can be optimally treated we built a **blastroom** and a booth for the following **zinc spraying** operation. Both rooms are exactly dimensioned for the work pieces which have a size of 14 x 3 x 1.2 m (L x W x H) and weights up to 5 tonnes", explains the project manager Ralf Rademacker.

On a rail-guided trolley the work pieces are moved through a roll-up door, located on the face side, into the blastroom. The lamella-type conveying floor captures the spent abrasive distributed over the whole floor surface, which is then transported by the bucket elevator to the **media reclamation system**. From there it is conveyed via the abrasive silo to the pressure blast pot and then back into the work process. Thanks to the filter unit the ventilation system within the booth provides for clear sight and supports the intended best practice in working environment.

When the blasting process is finished, a trolley moves the work pieces into the adjacent additional booth, where they are manually zinced with a flame spraying device to be protected against corrosion. The zinc dust which occurs in this operation is directed out of the booth through wall-mounted suction baffles and cleaned in a cartridge filter unit. The coated work pieces leave the **zinc spraying booth** through a 15 m wide gate, which is mounted on the long side of the booth, and arrive in the adjacent production hall.

"To ensure that because of the zinc dust, no potentially explosive mixture forms within the booth, a so-called precoating agent is automatically added to the exhaust air", adds sales engineer Alfons Griessler.



3D view of the blastroom and the zinc spraying booth

Steel from Chile meets SLF

Open-space paint spraying system

As one of the biggest companies offering steel construction in Chile, "Petricio Industrial" holds a strong position in the South American market. Requirements concerning the long-lasting corrosion protection of steel components increasingly gain in importance. For this reason Petricio has decided to invest in a surface treatment centre as a comprehensive solution designed by **SLF** – thus getting everything from one single supplier.

The **blasting equipment** our customer ordered consists of two blast booths with a size of 24 x 8 x 7 m and one smaller booth with 12 x 4,5 x 4 m (L x W x H). In the latter, two different types of abrasive can be used.

In the zinc spraying booth, which the customer also bought, it is possible to zinc-coat work pieces for corrosion protection.

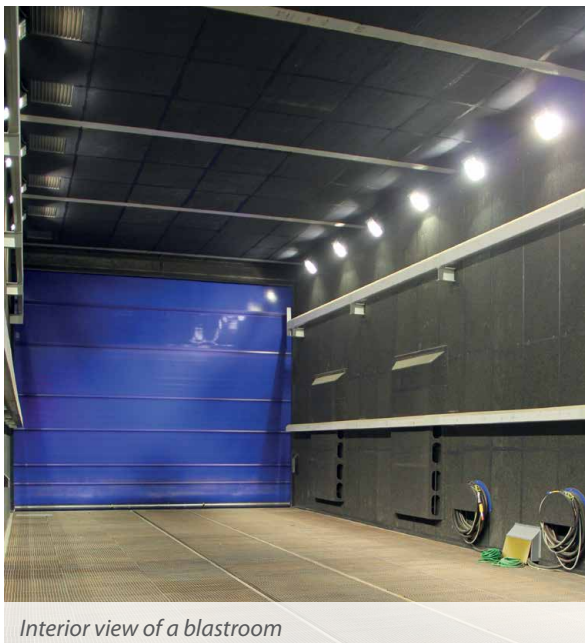
For **wet painting operations** Petricio uses two open-space paint spraying systems occupying an area of 36 x 6 x 8 m. The long-range nozzles mounted in the ceiling area provide for a contaminant capturing and pollution-free work atmosphere. Due to the sectional switching used in the ventilation system, the air supply is concentrated in the personnel working zone, which leads to savings in energy and operating costs. Contaminants are securely discharged via a two-stage separation system located in the extraction channel.

The bigger **open-space paint spraying systems** are equipped with a moveable and telescopic dryer. Due to its three segments, the rail-guided dryer can be moved from 5 up to 12 metres from its parking position over the freshly painted workpieces. Heated air is blown-in through three docking stations.

As opposed to closed paint spraying booths, open-space paint spraying systems, especially in combination with such drying tunnels, provide flexible and quick surface coating possibilities because the workpieces can be directly transported to the paint spraying area using the hall crane.

An **overhead conveying system** including two lifting and lowering stations carries out the workpiece transport in the surface treatment centre.

"A characteristic feature of this project is the close cooperation with the customer. With regard to the local conditions, this project also had some requirements to the equipment which were new for us, as Chile is located in an active seismic zone", recalls Andre Felchner, head of our sales department for paint spraying systems.



Interior view of a blastroom

@ NEWSFLASH

Powder Coating Experts' Meeting in Dresden:

At our own stand as well as during a panel discussion we presented the advantages of our "DARC®" technology to an interested expert audience.
@ www.slf.eu

Symposium on Corrosion Protection

We gladly accepted the invitation to this year's symposium on corrosion protection. This enabled us to provide insight into future- and customer-oriented concepts for paint spraying systems and to show future perspectives.
@ www.slf.eu

EPS – Expert Conference for Powder Coating

At this conference we had our own exhibition stand and informed the audience about the use of our powder coating systems and, of course, about the innovative "DARC®" ovens.
@ www.slf.eu

Visitors from South America

This year a group of about 120 visitors from South America came to visit our headquarters in Emsdetten. They went on a tour to see our office building and the production hall, where at different stations they got information about installations manufactured by our company.
@ www.slf.eu

Let's go to the other side of the world

For the first time our team is going to install equipment in New Zealand. Read more about this in the next issue of our customer magazine.
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From now on you can also find us on Facebook.
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Range of products:

- Blasting and pre-treatment systems
- Paint spraying systems
- Conveyor technique
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Once again convinced by SLF equipment

Company Kleemann GmbH is part of the Wirtgen Group, an internationally operating group of companies in the construction machinery industry, and manufacturer of crushing and screening plants for the quarry and recycling industries.

In its factory in Göppingen, Germany, their painting facilities had to be extended due to an increase in order inflow. An existing hall should be equipped with two further open-space paint spraying systems. In the painting areas, work pieces can be coated in an open area without confining walls, which makes the operation highly flexible for the work piece flow and transport.

Kleemann already know **SLF** because some years ago our company supplied new equipment for the finishing area in Göppingen. Apart from the two open-space paint spraying units a high-pressure cleaning booth with process water treatment system, two combined paint spraying and drying booths, suitable for liquid and powder coating, as well as a paint dryer have been installed.

"The customer was totally satisfied with our equipment and therefore decided to invest again in our products", Stefanie Stegemann, design engineer of this order, is pleased to report. Right from the start, enhancements in the field of painting technology and our customer's experience found their way into the planning. As a result the new open-space paint spraying systems ensure that the impact separators, which in the shape of U-profiles cover the floor channels for the ventilation system, can be cleaned easier and quicker. Cleaning time is considerably reduced, as the impact separators are lifted in combinations consisting of 7 profiles using a magnetic lifting device which is attached to the crane hook.

New finishing hall at Kleemann

The housing of the aggregate area reduces the noise emission to < 75 dB(A).

"We delivered a duplicate of the two open-space paint spraying systems the customer had received years ago, but adapted to the latest level of development at **SLF**", said sales engineer Norbert Küsters when the installation was handed over to the customer.

You can copy products, but not good service

The first machine is sold by the Sales Department, the second will be sold by the **After-Sales Service (ASS)** team", Dieter Pelster, head of Service Department, explains his philosophy. But what is behind all this?

Our After-Sales-Service team

"Our aim is to build up customer relations that do not end with the acceptance of the delivered equipment, but last over its whole service life. We want to reassure you that your decision to buy the equipment was right, increase your satisfaction and by this ensure a **long-term business relationship**", proudly explains Dieter Pelster, looking back at the development of the ASS business.

To achieve this aim, we offer our clients the following services:

- **24-hour customer service hotline**
- **Remote maintenance of the installation**
- **Service visits by skilled personnel**
- **Fast supply of spare parts**
- **System overhaul**

If you conclude a **maintenance contract** with us, you will have the greatest possible security for a technically and economically proper working machine.

We have set ourselves the target to keep the economic feasibility of your investment in our equipment and at the same time to maximise its efficiency.

For this purpose a team of experienced service technicians is at your disposal.

News from our sister company *AGTOS*:

Efficient blast cleaning of mass produced components

The trend towards complex and intricate components continues. Due to savings in material and new production methods the need for gentle processing of such components is constantly increasing. This tendency also affects the required blasting technology. This is why ***AGTOS*** developed a new series of drum blast machines especially for the treatment of mass produced components. Apart from the professional blasting technology involved the machines focus on gentle treatment.

Great variety of parts

Blasting mass produced components may have different aims. The two most common are cleaning and shot peening. It is always important that all work pieces are treated in the same way and intensity. Often this has to be proven by technical data. ***AGTOS*** is experienced in the reproducibility and identical treatment of mass produced components. The work piece size varies from just a few millimetres up to compact parts.

Operation principle

An automatic batch feeder fills in the parts to be cleaned into the drum blast machine. For this purpose the drum is in its loading position. After filling, it swings into the blasting position. An ***AGTOS*** high performance turbine shoots abrasive into the rotating drum.

The good mixing ensures that all work pieces are evenly cleaned. When the blasting process is finished, the drum gently tilts and the work pieces get back into the initial containers or are conveyed further through a channel.

Machine combination is possible

While mass produced components are treated in batches in a drum blast machine, the combination of several machines allows for the organisation of a continuous production. Apart from increasing the capacity by using additional machines in this way non-productive times can be reduced. Moreover, it is possible to compensate for downtimes caused by e.g. maintenance work.

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