

EDITORIAL

Dear readers,
dear customers and employees,

30 years SLF – We celebrate our birthday!

From an initial sales office of the former Schlick Group in the new federal states of Germany, we have developed into a medium-sized, family-run company for the manufacture and application of surface technology machines and systems at two locations.

At our founding location in Mühlau (near Chemnitz), we have been operating a corrosion protection centre since 1993 which is known far beyond the borders of Germany. On a production area of approx. 5,000 m², blasting and coating work is carried out as a service by approx. 30 employees in accordance with current standards and applicable environmental regulations.

The machine and plant construction is located at the new location built four years ago – in Emsdetten, Westphalia. Here, plants for surface treatment in the sense of blasting, painting and conveying are developed and manufactured.

Meanwhile, our machines and plants can be found in many industrial companies worldwide, such as manufacturers of rail vehicles and wind energy plants, in steel, vehicle and engineering companies and manufacturers of bridges and large components as well as in the automotive industry.

Innovations are the cornerstones of our business philosophy. In the spirit of automating production processes, we developed years ago the media blast robot "ReCo-Blaster", which has proven itself in many companies as an alternative to cumbersome manual blasting. In order to also rationalize the painting process and make it more humane, we successfully launched the painting robot "ReCo-Painter".

Above all, our mission is to serve our customers with our equipment and service. Therefore, we would like to thank you for the trust you have been placing in us for over 30 years.

We hope that we and our whole team will be able to convince you, our customers, of our efficiency in the coming decades.

Best regards

Christian Gaidies *Michael Bahlinghorst*

Fritz Gaidies

Our new painting portal "ReCo-Painter®"



"ReCo-Painter" in action

The Schwarzmüller Group is one of the biggest European suppliers of towed commercial vehicles. Here, an automatic wet coating line for walking floor trailers with integrated "ReCo-Painter" make SLF has been erected.

The "ReCo-Painter" is an automatic painting portal, which has especially been designed for the wet coating of **rectangular, large-scale components**. Depending on the equipment, a **surface capacity of 3 to 8 m²/min.** is possible and thanks to

a laser scanning of the work piece surface arranged in front, an even paint application with **constant layer thickness** can be realized. The painting portal is equipped with six movement axes. The two lifting columns can work independently, exempt from the X axis. The "ReCo-Painter" is suitable for the use of water-based or even solvent-based paint.

Schwarzmüller uses the "ReCo-Painter" in order to coat walking floor trailers. The 13 m long and up to 4 m high aluminium

work pieces can now be individually coated with a two- or three-layer paint system in an automated manner **according to customer's requirements**.

Due to an **automatic work piece recognition**, positioning of the prepared trailer in the combined paint spraying and drying booth by means of electrical driven towing units, is very easy. If the painting portal is in the starting position, the operator releases the coating process. The **laser arranged in front** measures the surface online and provides for a constant distance between spray gun and trailer.

A well-conceived control system and pressure-sensitive sensing edges allow **simultaneous manual work during automatic operation**. As soon as the program is completed, the trailer can be moved out and transported to the assembly line.

By the way, the "ReCo-Painter" can also be integrated into existing booths!

Christian Gaidies, managing director:
"With the painting portal we are responding to the current challenges in the coating industry, the striving for automation with high efficiency, constantly improving coating quality and careful use of environmental resources."



Here you can learn more about the "ReCo-Painter":

The media blast robot "ReCo-Blaster®" – a versatile tool for a variety of applications

We already reported in our last customer magazines about satisfied customers who continuously achieve perfect results thanks to our "ReCo-Blaster".

Also in this issue we would like to report not quite without pride about new projects.

Many further developments have optimized our "ReCo-Blaster" for a variety of work processes.

Here we would like to mention that both the vertical axis and the rotary axis for the entire robot have been redesigned to be **much more maintenance-friendly and wear-resistant**. The crane-rail-guided bridge of the "ReCo-Blaster" is now generally driven and positioned safely via gear racks screwed to the rails on both sides.

For less complex components, such as steel towers of wind power plants, our product range also includes "ReCo-Blasters" with a correspondingly reduced number of axes.

It is also possible to **retrofit** a "ReCo-Blaster" into existing blastrooms not supplied by us. Such retrofits were successfully carried out by us in the past already.

The individual blasting programs are programmed offline, only. Programming can be carried out by the customer him-

self or by us. Blasting programs can be viewed and optimized via **remote maintenance**.

At **SKET** in Magdeburg, we integrated a crane-rail-guided "ReCo-Blaster" in connection with **side wall guided lifting platforms** into a blastroom also supplied by us. The media blast robot and the working platforms run on the same mounting rails. This allows a subsequent safe manual blasting treatment of even large-volume components in the same blastroom after the automatic blasting process carried out with the "ReCo-Blaster" has been completed.

SAM in Magdeburg is a manufacturer of components, especially for steel towers of wind power plants. For this customer, we have installed a wall-guided blast manipulator in an existing blastroom for processing the outer surfaces of the tower. Various **safety precautions** allow automatic surface treatment by robot from the outside and parallel manual blasting inside the work piece.

For about two years **General Dynamics** in Switzerland has been using a blastroom designed by us. The blastroom was divided in the middle by an intermediate roll-up door to allow **simultaneous automated and manual processing**. In direct comparison to the previous blastroom, a significant

increase in throughput capacity was noticeable after only a short time due to this flexible system design.



The side wall guided "ReCo-Blaster" in use

Automatic blasting and painting of rail vehicles



The rail vehicle industry for which we supply innovative and operating cost-optimized plant concepts has always been an important sector for us.

We are therefore particularly pleased that we have now been able to add three more booths to the nine ones, previously delivered to our customer Bombardier in 2015. Bombardier is thus setting the course for the future in a highly competitive global market.

Apart from Bombardier, manufacturers such as Deutsche Bahn, Siemens and Stadler also rely on innovative system concepts from SLF. Our portfolio includes solely manually operated plant con-

cepts as well as partially or fully automated systems for blasting and coating.

A fully automatic blastroom equipped with our "ReCo-Blaster" was recently delivered to the new location of Stadler in Switzerland. In this blastroom, rail vehicles made of steel and aluminium, are treated automatically and manually.

In recent years, we have delivered a total of eleven blastrooms – almost identical in construction – for rail vehicles to China and successfully put them into operation.

All these blastrooms are equipped with the proven swivel-type lifting platforms included in our product range.

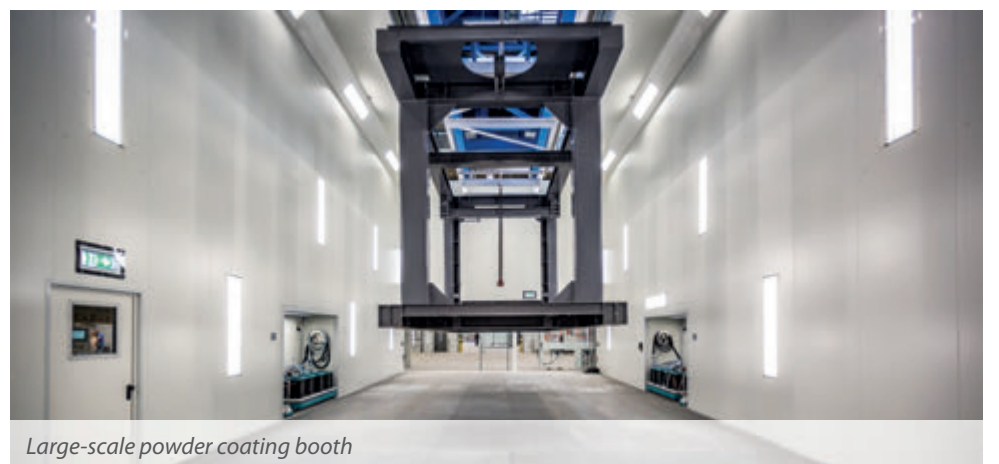
A new surface treatment centre including powder coating system

Company Benninghoven as part of the Wirtgen Group and meanwhile part of the internationally acting John Deere Company, is a manufacturer of asphalt mixing plants. The high stress over decades requires efficient corrosion protection when producing such plants.

The surface treatment centre erected by us in the new production plant in Wittlich consists of a preparation area, two large-scale powder coating booths, a combined paint spraying and drying booth and two powder enamelling ovens.

Starting on the preparation area, the work pieces are, as the name implies, prepared for the subsequent treatment steps. During the running production process the work pieces are first of all blasted. Afterwards, the work pieces are either transported into the combined paint spraying and drying booth to apply wet paint, or they are moved into one of the two powder coating booths.

Our project manager, Stefanie Stegemann, states: "With a cycle time of max. 50 minutes, work pieces having a length of up to 13 m and a weight of up to 22 t are passed through the whole surface treatment centre. In the paint spraying booth even special parts with a length of 18 m and a weight of 30 t can be coated."

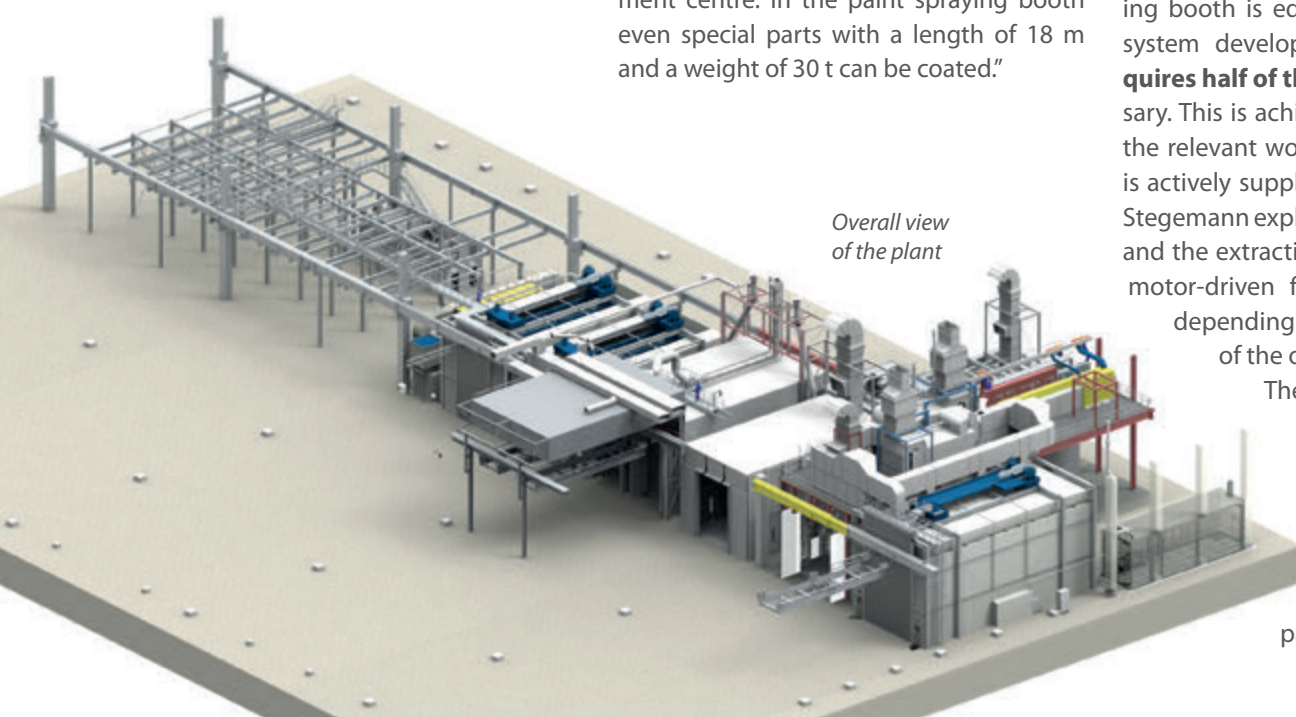


The combined paint spraying and drying booth is equipped with a ventilation system developed by us that only requires half of the energy normally necessary. This is achieved by the fact that only the relevant working area of the operator is actively supplied with fresh air. Stefanie Stegemann explains: "The supply air ceiling and the extraction lines are provided with motor-driven flaps, which are actuated depending on the working position of the operators inside the booth".

The operator's position is transmitted by means of a radio remote control. As soon as the coating work is finished, the operator starts the drying process. For standard parts, two large-scale powder

coating booths are available in which the work pieces are manually coated while they are hanging on a transport system. Also these powder coating booths are equipped with the same system for energy saving. Following the coating process, the powder applied on the work pieces is enamelled in one of the two powder enamelling ovens.

Norbert Küsters, sales engineer of this project, states: "Nowhere else than in the big industry sector of the general machine and plant construction are the requirements on our paint spraying systems that different and special. Here we also benefit from our experiences made in numerous successfully realized projects allowing us to present customers a solution which is adapted to their requirement and then realize it for them.



Painting of "Cobots" for the industry 4.0

Company **TQ Systems** manufactures revolutionary collaborative robots. For this new product **SLF** delivered a paint spraying line optimally integrated into the production process.

The coating process for applying the basecoat and the final coat is realized by the work pieces passing through the system twice. In doing so, the work pieces run through the treatment zones "painting", "flashing off", "drying" and "cooling".

After handing over the robots to the power & free conveying system, it transports the work piece into the **paint spraying booth with glass walls**. "Paint spraying is currently still being effected manually, however, first provisions for a subsequent robotisation have already been considered now", explains our sales engineer Alfons Griessler. The separation of overspray is performed in two stages with an efficiency of 99%.

"The realized overall concept exceeds the normal scope of paint spraying systems and was **highly efficiently** integrated into the production concept of TQ Systems", states Kevin Felchner, our project manager.

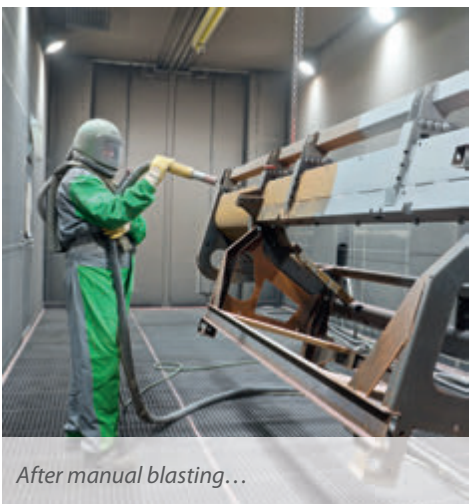


In order to present the production of robots in detail to potential customers, the paint spraying booth as well as the flash off zone were spaciously equipped with glass walls.

Curious to learn more? Find out more here.



Harvesting with perfect surface : Powder coating for the agricultural industry



After manual blasting...



... the paint spraying process immediately follows.

Our customer, company **Carl Geringhoff**, was founded in 1880 and is technological leader in the area of harvesters and harvesting headers and supplies the global market. Reliability, performance and outstanding quality are their standards.

Auger troughs form one part of the cutting units, in which the cut material is collected and transported by means of an integrated screw.

For an ideal surface treatment of these auger troughs with a length of up to 14.5 m, **SLF** has designed a **preservation line** consisting of a blastroom, a paint spraying booth, a chamber dryer as well as a power & free conveying system, which is smoothly integrated in the existing working process.

The power & free conveyor connects all treatment stations with each other and at first transports the auger troughs to be manually blasted into the blastroom. Cartridge filter units permanently ensure **excellent visibility**. The low-maintenance lamella-type conveying floor captures almost all spent corundum blast media over the hole surface and transports it into the cross conveyor. Afterwards, it is conveyed into the bucket elevator and from there into the media reclamation system. "Here,

the blast media is cleaned from coarse and fine particles by means of the vibrating screen and the wind sifting unit and is stored in the media silo", explains Dirk Lanfer, design engineer of the plant.

During the following treatment step, paint is manually applied in the paint spraying booth. The painting operative and the work piece are in this case permanently and efficiently protected against the generated paint overspray as well as solvents.

This is realized by the **person detection system** developed by us, which controls the air flow sectionally. The control unit automatically detects the position of the operator and supplies fresh air through the supply air ceiling and sectionally discharges the exhaust air through the impact separators and filters.

After completed paint spraying process, the work piece is then transported into the chamber dryer. With the following drying process of the work pieces at a temperature of 60°C, surface treatment is finished.

The family business **Köckerling** has specialized in the industrial production of tillage machines. Moreover, it has specialized in the development and fabrication of machines for the no-till cultivation during the past years. "Our customer required a suitable system in order to apply paint on various welded components. The old dip coating system should be exchanged by a modern, **environmentally sound and energy-efficient system**", reports Norbert Küsters, sales engineer at **SLF**.

After pre-treatment by blasting the **components having a weight of up to 2 t** shall be transported through the individual coating stations by means of a manual overhead conveying system with transfer bridge. Lifting and lowering stations facilitate the work piece handling.

Components with temperature-sensitive attachment parts are manually coated with wet paint in a combined paint spraying and drying booth where they are dried on the same place. Any other work piece is treated in the powder coating booth with the dimensions of 9 x 4.5 x 4.5 m (LxWxH).

Thanks to our filter technique, a volume flow of 44,000 m³/h is reached. "Special attention has been paid to practicable handling when designing the **powder coating process**", tells the project manager, Dirk Lanfer. Thus, during the powder coating process the work pieces can be lifted and lowered into a pit by using a lowering station. Coating of each point of the work piece can easily be realized in an ergonomically ideal height.

After coating, the enamelling process is carried out in one of the **double powder enamelling ovens**, thus allowing simultaneous enamelling of several work pieces in two separate chambers. Dirk Lanfer adds: "Particularly in this case we have considered the operating costs and equipped the system with an innovative heat recovery system, which reduces the heat of the exhaust air necessary for the operation with an efficiency of more than 70%". After the enamelling process, the components that have been coated, are moved to a big buffer zone for cooling and intermediate storage.



Easy access to all booths due to optimized conveying technique

Curious to learn more? Find out more here.



@ NEWSFLASH

30th Symposium for powder coating

For the big birthday of the symposium for powder coating in Dresden, we have come up with something special. Together with our customer **Benninghoven** we presented the extensive plant to the interested audience.
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Successful project work

The ten-week project phase is firmly established in the curriculum for further training to become a state-certified technician at the Berufskolleg Tecklenburger Land in Ibbenbüren. The project team at **SLF** developed a test stand for planet carrier covers in ten weeks. The presentation was a complete success. We are proud of the work of our trainees and congratulate them warmly!
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IPS 2019

The IPS was also a complete success for us in 2019. We informed about our media blast robot "ReCo-Blaster" and entire painting lines. Our automated and networked systems are enjoying great popularity and high demand. The highlight was the reference visit at our customer **JÖST**. Here, we presented to potential customers not only the effectiveness but also the durability of our systems.
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Our range of products:

- Blasting and pre-treatment systems
- Paint spraying systems
- Conveying technique
- Service and spare parts

For more information please visit our website www.slf.eu.

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SLF all around the world

In recent years, the distances to our customers have become longer. They led us to company Indelat in **Peru**, to Ind. Correagua in **Panama**, to EDEHSA in **Ecuador** and also to the end of the world in **New Zealand** to Calder Stewart.

Our customer, the company **Indelat** located in Lima, for example, is well-known for high-quality machine parts and relies on the combined paint spraying and drying booth supplied by us, in order to coat these parts.

When Claudio Benites, owner of the Indelat company, is asked why he has just made his decision in favour of **SLF**, he an-

Also in **Ecuador**, at our customer **EDEHSA**, the produced steel construction components are now coated and dried in a **combined paint spraying and drying booth** built by us. The booth thus complements the blastroom already delivered by us in 2016, so that the complete surface technology process is in our hands, now.

"A trip to **Panama**", what could be more beautiful! But here too, hard work is being done. To be more precise, Industrias Correagua produces heavy steel structures for export to North and South America. These have recently been coated and efficiently dried in the **open-space paint spraying**

Calder Stewart in **New Zealand** designs and builds large and complex commercial, industrial and agricultural buildings. We were happy to set out for New Zealand to install a **combined blast and zinc spraying room** there.

"It was an exciting project which we were able to complete very successfully together with the customer. Despite the great distance, I could always count on my team in Emsdetten", reports Klaus-Uwe Schäfer, the responsible fitter on site.

In order to optimally roughen the work pieces made of steel for the subsequent zinc spraying process, they are manually



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swers: "It's the optimum system concept in terms of quality, functionality and **optimized operating costs** that convinced me". For him it is also very important to have a technically competent partner like **SLF** at his side in all questions concerning the surface, he says.

system with moveable telescopic dryer installed by us. Especially for the classical steel construction, this plant concept has proven itself by its efficient use of space, a significant increase in throughput and a considerable reduction of operating costs due to the sectional air flow.

blasted in the blastroom. "The advantages of this system are a fast and more comfortable return transport of the blast media, a full-floor media recovery system and the possibility to **blast and zinc in the same room**", reports Stefan Thröner, project manager of this system.

First reference plant in Algeria

Parlez vous français? That's how the first contact began with company **LD AZOUAOU**, a large importer of Indian tractors, from Algeria. We answered with a clear: "Bien sur!"

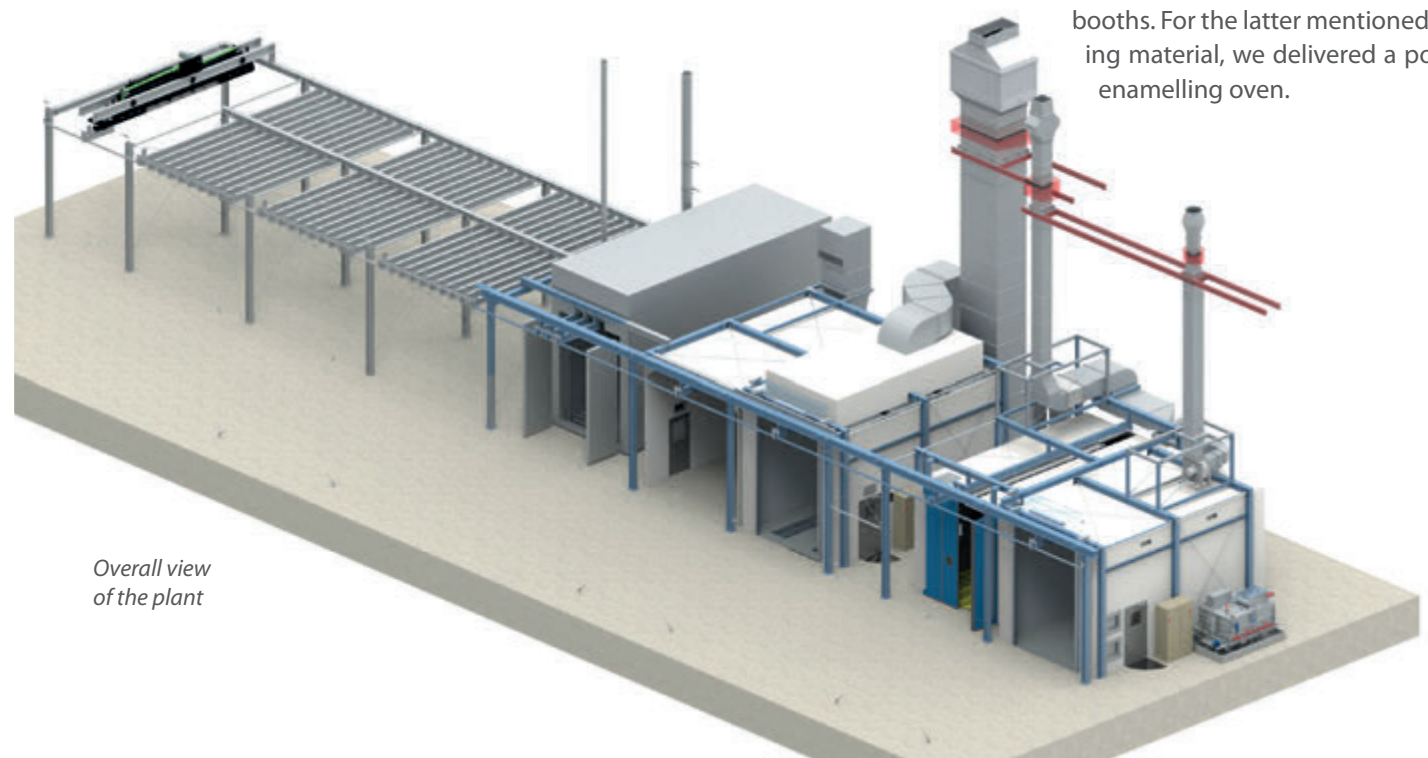
For the business objective of being able to manufacture its own tractors with components from India in future, a **surface**

treatment centre should be erected at a new company location in Tizi Ouzou.

Pursuant to this aim, we planned and delivered an ensemble of different treatment booths tailored to these work pieces and according to European standards, thus having created **one of the most modern and flexible plants in the country**.

The centre comprises the **entire scope of surface technology**. Initially, the various types of work pieces are cleaned in a wet-chemical way ensuring that the components are ideally degreased.

Afterwards, the surface is manually derusted and roughened in a blastroom. Coating is realised as required with wet paint or powder coat in separate booths. For the latter mentioned coating material, we delivered a powder enamelling oven.



Overall view of the plant

30 YEARS SLF IT'S OUR BIRTHDAY!

A big birthday is always a reason to look back on the beginnings and the past years. The beginning of **SLF** is inevitably linked to the **reunification** of the two German states in **1989**.

The emerging demand for **modernization of industrial plants** in the factories of the former GDR resp. the new states of Germany, as they were later called, led us, the then owners of the Schlick Group, to found a sales office in Saxony, which has always been an industrial region.

The spirit of a new era makes the impossible happen

In **1990** – that is 30 years ago – together with two engineers from **Chemnitz** we founded a company called **Schlick Chemnitz Engineering GmbH**.

The beginnings reminded of the pioneer spirit of earlier years. Many things were initially lacking. The first office of the new company could be rent in the old Chemnitz steelworks, which was the former employer of the two company partners. The office furniture came from the stock of the companies of the Schlick Group. This small basic equipment of office furniture was transported to Chemnitz over the bumpy track of the A4 motorway in a Renault Espace, remember the two senior partners Horst-Dieter Schlick and Fritz Gaidies.

Communicating by telephone was extremely difficult at that time, which can hardly be imagined today, where there are only a few dead spots in Germany. Car phones as big as shoeboxes worked best on a hill, which considerably complicated sales activities.



H.-D. Schlick during the opening speech in 1993

New building attracts prominent visitor

What started as a business in a rented sales office, in the following years led to the erection of a **new factory building** on a newly acquired plot in **Mühlau** (near Chemnitz, Leipzig and Dresden), which was inaugurated on **1 October 1993** in the presence of the then Economics Minister Jürgen Möllemann. At first it was intended to be used as presentation centre. Meanwhile it has become a **corrosion protection centre** that is known far beyond the bor-



1993: Prominent visitor during the opening of the factory Schlick Chemnitz: Jürgen Möllemann

ders of Saxony and which currently provides a job for around 30 employees.

And we keep on growing...

The high demand for **surface treatments** led us to various plant extensions over the years such that we are currently able to carry out blasting and coating work on an area of approx. 5,000 m² according to the latest state of the art.

Our centre is equipped with efficient **shot blast machines**. In the big passage-type blasting system work pieces with dimensions of up to 1,200 x 2,800 mm (HxW) can be blasted automatically by 8 turbines. **Manual blasting** is carried out in a **spacious blastroom**. Large hall areas are available to coat different work pieces. Of course, these coating areas are equipped with the **long-range nozzles** developed by us. Thanks to crane systems with a carrying capacity of up to 10 t also big work pieces can be treated. Outdoor crane systems ensure an efficient and quick transport logistics.

Corrosion protection worldwide in demand

Well-known companies from industry sectors such as the vehicle and pipe construction, the power engineering and power plant construction, the bridge and architectural steel construction are amongst our customers. The steel construction and system components blasted and coated by us can be found in many parts of the world. Thus, our **corrosion protection centre in Mühlau** with its dedicated employees also makes a contribution to the demands of an internationally acting company.

SLF – The name reflects the product range

SLF's 30-year history is not only limited to the **location in Mühlau** with its corrosion protection centre.

The **decisive expansion** of the company took place in the early 2000s by getting into the business of plant and machine engineering with the **development and manufacture of**



Today's corrosion protection centre in SLF's factory in Mühlau

Timeline

1990

Foundation of the company as a sales subsidiary for former Schlick Group under the name of Schlick Chemnitz Engineering GmbH

1993

Construction and opening of a centre for contract blasting and coating services in Mühlau

2000

Renaming of the company to **SLF Oberflächentechnik GmbH**, 30 employees

2003

Foundation of the branch in Emsdetten

2006

Relocation to Greven-Reckenfeld, 50 employees

2008

First order from South America, 75 employees

2009

First order from China, plant expansion at Mühlau site

2010

Market introduction of the media blast robot "ReCo-Blaster®", 20th anniversary



2014: Employees of SLF Mühlau



Our employees at SLF in 2017



Our headquarters in Emsdetten since 2016

blasting and paint spraying systems. In order to express our autonomy and **dissociation from the Schlick Group** we renamed as **SLF Oberflächentechnik GmbH**. Due to the terms "blasting", "painting", "conveying" (in German **Strahlen, Lackieren, Fördern**) as activities of the surface treatment, the name reflects the range of products.

The expansion and entry into the production of plants and machines was initially realized with few employees in **Emsdetten** in Westphalia, at first in the rooms of our sister company **AGTOS**, the manufacturer of shot blast machines, which was newly founded at that time.

With qualified and highly motivated employees into the future

The experience of the founding partners of the Schlick Group in surface treatment technology gained over many years formed the basis for a **successful start in the productive activity**.

This new start did not remain undetected, so very quickly qualified and highly motivated employees, also from the former companies of the Schlick Group, increased our workforce at their own request.



2006: Move of SLF's location from Emsdetten to the Schlick building in Greven-Reckenfeld

Mr. Bahlinghorst, one of the employees from the very start and nowadays co-partner and technical managing director remembers: "Back then I would never have imagined the development that we have reached until today."

Expansion requires space!

The increasing space requirement resulting from the dynamic development and the associated **increasing number of employees** required the relocation into a new domicile.

"Back then I would never have imagined the development that we have reached until today."

(M. Bahlinghorst)

In **2006** we moved into the former Schlick factory building in **Greven-Reckenfeld**, only a few hundred meters away from the previous location in Emsdetten.

However, already after 10 years this location proved to be too small. In **2016**, after a construction phase of two years, we therefore moved to our today's **factory in Emsdetten** together with the workforce, which has meanwhile grown to around 90 employees (just in the West).

Our product range is well received

During the past two decades we have developed with our employees to an internationally acting manufacturer of surface treatment systems that is acknowledged in its line of business. **SLF** is not only well-known for innovative plant and machine construction in Germany, but also in Europe and many countries in the world.

Whether in the rail vehicle construction, in the wind power industry, in the machine, steel or bridge construction or in the automotive or the aviation industry – many renowned companies of different industry sectors have invested in **SLF** systems.

Our answers to the demand for automation

With our product developments of the media blast robot "ReCo-Blaster®" and the paint spraying machine "ReCo-Painter®" we have demonstrated our innovative power. Thanks to these systems we could successfully reach the entry into the automation of surface treatment during the past years.



2010: Fritz Gaidies, Horst-Dieter Schlick, Elsbeth Schlick and Heinz-Georg Vollmer with the new "ReCo-Blaster®"



Automatic painting with our "ReCo-Painter®"

Timeline

2012

Michael Bahlinghorst becomes managing partner and managing director, expansion of logistics space in Greven

2013

Second plant expansion at Mühlau site, the 100th employee is hired

2014

Groundbreaking ceremony for the new headquarters in Emsdetten consisting of a production hall and an office wing

2015

25th anniversary

2016

Relocation to new headquarters Emsdetten

2018

Christian Gaidies becomes managing partner and managing director

2020

30th anniversary

Our range of products:

- Blasting and pre-treatment systems
- Paint spraying systems
- Conveying technique
- Service and spare parts

For more information please visit our website www.slf.eu.

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Fritz Gaidies, Michael Bahlinghorst and Christian Gaidies open up the new location in 2016

We are ready for the future!

In the meantime, management of the company has been passed from the founding partners to the second generation.

The two managing partners, Christian Gaidies and Michael Bahlinghorst, are ready to safely lead the company to the next decades together with our team of employees.

2025
 2030
 2035
 2040
 2045 ...