

LAYER

2/2009 The Magazine of Sulzer Metaplas GmbH



**Attack
Powerfully**
Moving Ahead with
Combined Strengths

**Altogether Two Centuries of Know-how:
Intensive Dialogue with Customers at
Anniversary Event**

**Unique in Europe:
System Technology for
Long Parts and Big Parts**

Demonstrating Strength

When Others Falter



Valentin Bühler
Managing Director

Dear business partner,

“Rely on your strength rather than on luck”, the Roman poet Publilius Syrus wrote. Your own strength is the basis for success. We from Sulzer Metaplas are applying our strength even now – when others are relying on nothing but luck and hope.

We are capitalising on our very own virtues: The intensive research und development work forging high-quality technology and the expertise are the basis for reliable coating services and innovative system concepts. Continual exchange with you, dear partner, gives us decisive input rooted in practical expertise. In this way, we are not only bearing up and swimming against the stream; rather, we are moving ahead into the future – together with you.

We made use of the events on the occasion of the 175th anniversary of the Sulzer Corporation and the 25th anniversary of

Sulzer Metaplas (see page 3) to jointly discuss upcoming technological developments. In particular, we focussed on our PVD systems for coating long parts and big parts. Read on these unique PVD coating capacities in Europe on pages 6 and 7. Find out more about the beneficial implications this special system technology has for everyday operations in plastics processing in the customer portrait on page 5.

Against the general trend, we have extended our service network. Page 8 describes the team at the Altbach location, the new production site in southern Germany. In the interview that follows, Anthony Herbert, Sulzer Metco’s new General Manager at the Shanghai location, talks about his goals for the Chinese market (page 9).

Let us rise to the coming challenges together!

Your **Valentin Bühler**
Managing Director

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of Know-how

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Altogether Two Centuries of Know-how

Intensive Dialogue with Customers at Anniversary Event

175

years

Experience Sulzer



The MS RheinEnergie provided a suitable framework for the anniversary event and the technology forum.

“Experience Sulzer” – this is what more than 100 customers from 14 countries did at the anniversary event of the now 175-year old Sulzer Corporation as well as the 25-year old Sulzer Metaplas GmbH. Sulzer had invited the guests to the Rhineland in western Germany for a constructive exchange on the occasion of the anniversaries. The event on 8 and 9 June consisted of a technology forum on a Rhine ship as well as a visit to the Sulzer Metaplas location in Bergisch Gladbach near Cologne. During the technology forum, the development of

Sulzer’s main markets as well as the application areas of thermal spray, thin film and low friction coatings were discussed together with the customers.

Experts from Sulzer Metco presented and discussed with the guests a range of topics, whose variety mapped out the company’s broad technological basis. One of the issues looked at was the role of surface technology in energy production – is it merely a short-term solution or indispensable in terms of cost

reduction and performance increase? Further presentations addressed the special needs of the automotive industry: solutions for cylinder coating and low friction surfaces in combustion engines as well as friction lining, anti-slide and wear protection layers for transmission parts. The technology forum also focussed on forming and cutting, where the issue was mainly one of productivity increases. →

“Expert discussions on a range of topics”



The presentations on the various technologies and application areas...



... laid the basis for intensive talks during the boat trip.

Continued

Altogether Two Centuries of Know-how

175
years
Experience Sulzer


At the Bergisch Gladbach location, Sulzer Metaplas staff described in several stations ...



... the systems technology and coating solutions offered by the company.



The concluding joint meal provided the opportunity for reflecting on the issues of the past two days.

Additional focal elements of the discussions were efficient solutions for the aerospace, steel and textile industries, for the paper and pulp industry and for heavy construction machines as well as medical technology. The presentation on "Exciting Developments in the Technology Pipeline" provided an overview of future trends.

During the visit to the location at Bergisch Gladbach, the guests were introduced to Sulzer Metaplas' technologies and services at several stations. Bernd Zorn, proprietor and Managing Director of Sazoor-Wälztechnik Zorn GmbH & Co. KG, described the talks: "I was particularly impressed with how the team presented the company on location: Competent and substantiated. And one could feel the commitment and enthusiasm staff had for the issues." Personnel from research and development, systems

engineering as well as coating services entered into discussions with customers.

The technology for coating big parts and long parts was particularly interesting for representatives of the plastics industry (see the story on pages 5 to 7). Technologies such as PVD coating, plasma heat treatment and the combination of plasma nitriding and PVD as well as quality assurance were explained and discussed. The presentations and talks showed the way Sulzer Metaplas looks at customer concerns. Staff talked about numerous day-to-day problems the industries face and pointed to appropriate solutions, the day in Bergisch Gladbach can be summed up.

Both days clearly revealed how important the exchange with customers is. The dialogue enabled all participants to gain

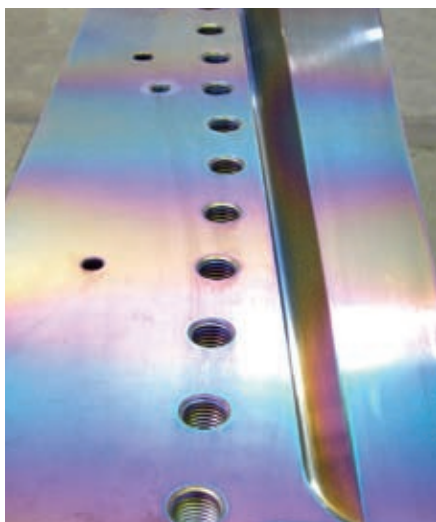
valuable insights for their work. The talks showed that turbulent times call for close collaboration aimed at further strengthening joint standing. ■

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“Productivity Increases and Competitive Advantages”

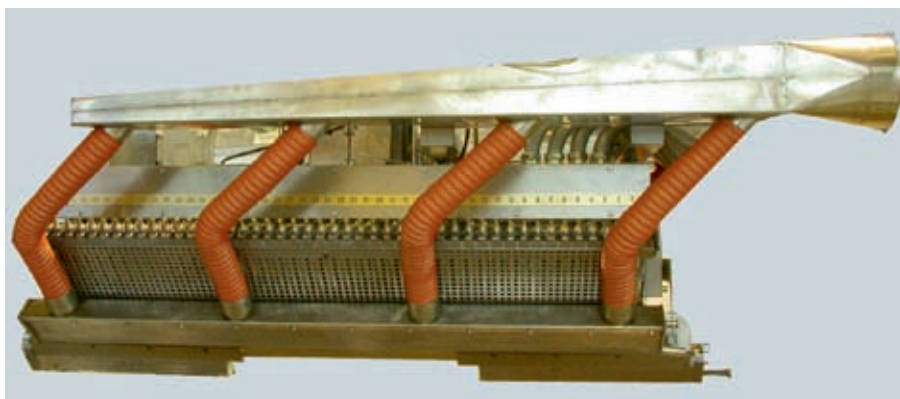
Interview with Andreas Kandt of Er-We-Pa Davis-Standard

LAYER talked to Mr. Andreas Kandt, Technical Director of Er-We-Pa Davis-Standard GmbH, about his collaboration with Sulzer Metaplas and the added value of PVD coating with regard to big extrusion tools.



Er-We-Pa Davis-Standard's component, refined with PVD technology

Er-We-Pa Davis-Standard's components have to be “treated with requisite expertise” (picture shows a coating head).



LAYER: Please briefly describe the working areas of your company. What kind of products and services do you offer and what are your target markets?

Er-We-Pa Davis-Standard develops, produces and markets, amongst other things, extrusion and liquid coating systems as well as film lines for the packaging industry. Our main markets are Europe, Australia as well as parts of Africa and Asia. We work together with the big global companies of the packaging industry.

LAYER: Due to their size and complexity, the parts are very expensive to produce. What do you have to pay attention to when handling these parts and why can you place these expensive parts in the hands of Sulzer Metaplas in good conscience?

Due to the demands on precision, material and the availability of systems, our parts have to be treated and processed with exceptional care and requisite expertise. Coating results have to be consistent and – of particular importance – have to be of highest possible quality. In the course of our now six-year-long partnership, this has always been the case. Collaboration with Sulzer Metaplas is characterised by joint developments in the area of coating technology. We consider Sulzer Metaplas to be a reliable, competent and valuable partner in the processing of our key parts.



Andreas Kandt,
Technical Director of
Er-We-Pa Davis-Standard

LAYER: What advantages does PVD coating have specifically for your applications?

The PVD coating technology lends itself particularly well for processing the surfaces of our die tools. The layers provide for excellent and stable tear properties with minimal coating thicknesses of only 3 to 5 micrometres. The minimal radiuses that can thus be achieved at the trailing edge support our process engineering decisively during coating.

LAYER: How have the products' lifecycles, productivity and quality changed through coating? In what areas and with what applications is this added value particularly visible?

Coating has significantly extended cleaning intervals. This enables customers to produce in longer cycles. Moreover, we were able to increase the productivity of our coating lines – while ensuring highest possible quality of end products. The refinements play to their strength particularly well in the case of sophisticated plastics with different physical properties. These are important competitive advantages for us and the customers in various markets.

LAYER: Mr. Kandt, thank you for the interview. ■

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Unique in Europe

System Technology for Long Parts and Big Parts at Bergisch Gladbach Location

“Just imagine”, says Alexander Mohnfeld, Head of Sales Service PVD, in his conversation with the editorial staff of LAYER, “you want to go to the car wash site with your car. But you cannot find a service provider whose facility is big enough and adequate for cleaning your car properly.”

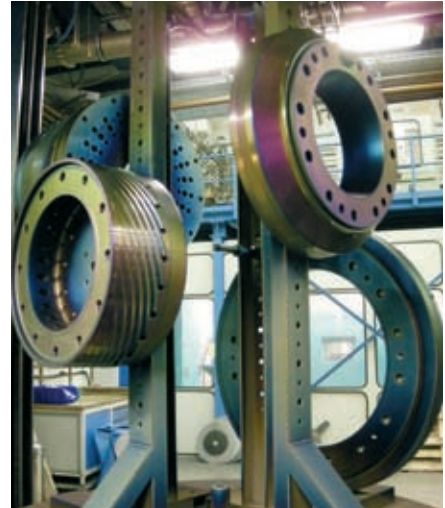
The situation is comparable for manufacturers and operators of parts that need to be coated but where these parts exceed the capacities of conventional PVD systems (see diagram). “But the consequence is not that you have to drive a

“Properties are improved in a targeted way”

dirty car”, Mohnfeld continues the comparison. Because Sulzer Metaplas offers precisely this PVD coating service for long and large-volume parts. The company is the only supplier in Europe that provides PVD coatings for such parts.

	Conventional PVD system	Sulzer Metaplas system for	
		Long parts	Big parts
Diameter	■ 550 mm	■ 600 mm	■ 1,500 mm
Height	■ 600 mm	■ 4,500 mm	■ 1,800 mm
Volume	■ 0.14 m ³	■ 1.27 m ³	■ 3.18 m ³

In contrast to PVD systems commonly available on the market, Sulzer Metaplas' systems are able to coat parts that are around twenty times (big parts) or ten times bigger (long parts).



This system technology allows the coating of parts with lengths up to 4,500 millimetres (left and above) and large-volume parts with diameters up to 1,500 millimetres and heights up to 1,800 millimetres (middle and right).

“Due to our many years of experience with coating and handling long and large-volume parts from various sectors (see box, editor’s note), we know the special demands that everyday practice exacts on the parts. This is what we take into consideration when we advise our customers on what coating is applied to what application, all in accordance with their specific situation”, Mohnfeld adds.

When applying a PVD coating a special – usually metallic – material, the so-called target, is vaporised in a vacuum chamber, ionised and applied to the surface of the part as a very thin protective layer together with other elements from the gas phase (e. g. nitrogen, carbon). In contrast to hard chrome layers, PVD layers are only a few micrometres thick and thus hardly influence the shape of the part. They protect against wear, abrasion, scuffing and adhesion. Moreover, PVD layers do not show micro cracks that do develop with hard chrome layers because of the embedding of hydrogen. “The coating decisively improves the properties of the long and large-volume parts. In short: What we see – depending upon the application – is a significant decrease of lifecycle costs and a longer

tool life respectively”, Mohnfeld summarises the advantages of the surface treatment (see box for an overview).

Handling is not only about coating but also requires dealing with the parts reliably throughout the whole process chain. This includes pre-treatment, cleaning, the actual coating process and the surface finish, or, in other words, the finishing treatment. The result is a full service that lays the basis for an optimally adjusted interplay between the part and the coating. ■

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**Productivity increases/
tool life increases for the
following sectors:**

Paper Industry

- Colour drums
- Paper drums

Forming

- Forming for metal sheets
- Hydroforming tools

Plastics Processing

- Extruder screws
- Sheet extrusion dies

Cutting

- Broaches
- Band saw blades

**Depending on the application areas,
the following advantages ensue:**

- Reduction of wear
- Reduced adhesion (plastics industry)
- Processing of various materials (milling)

Expanding Against the Trend

The Team at the New Location near Stuttgart Guarantees Service in Southern Germany

Borris Gusel is satisfied: "This team and our excellent equipment provide the ideal basis for this new location and its future development. Previously, we were only able to serve customers from the region via other Sulzer Metaplas locations using a pick-up and delivery service." Gusel has worked for Sulzer Metaplas since 2004 and was previously responsible for quality assurance in PVD coating services at the Bergisch Gladbach location. He now manages the new coating centre in Altbach near Stuttgart. With this location, Sulzer Metaplas can provide customers in the neighbouring industrial regions with even quicker solutions in the area of wear protection and corrosion protection. In Altbach, tools and parts are PVD coated or plasma heat treated under one roof. "This close interaction of different technologies makes for short delivery times. Besides high delivery reliability and best product quality, the time factor is a core aspect of the customer's cost optimising efforts. Moreover, cost-intensive and time-consuming shipping services are thus eliminated", Gusel adds.

Gusel heads a small and highly motivated team. One of the team members is Claudia Mahle. She has been working for Sulzer Metaplas since the beginning of this year. In Altbach, she is responsible for the Inside Sales Office. She coordinates all important information and contacts for the sales team. Her commercial

training topped by additional technical training in mechanical and systems engineering qualify her for this position.

Jürgen Müller is the contact person for customers in the field. He has been responsible for Sulzer Metaplas' technical sales for eight years. These years of experience give Müller – who received training in precision engineering, is a certified biological-technical assistant and application engineer for cutting and forming – the requisite expertise for dealing with customers' demands and requirements.

Borris Gusel summarises the advantages of the Altbach team: "We have a good mixture of experienced and young staff members here. This means existing and potential customers in the southern German region can count on friendly, qualified and motivated in-system and field service. Particularly in times like these it is important for us to work even more closely with our partners."

The location is set to be extended further. The technical and structural preconditions for adding further surface treatment systems as well as additional jobs have already been established. ■

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Borris Gusel, Site Manager



Claudia Mahle, Inside Sales Office



Jürgen Müller, Regional Sales Manager



Metaplas locations in Germany

Solutions Tailored to the Chinese Market

Layer talked to Anthony Herbert, Sulzer Metco's new Shanghai production site manager

Mr. Herbert, you have contributed to the global success of Sulzer Metco for over 24 years and have now recently begun your new job in Shanghai. What are your goals and how do you see the development potential of the Shanghai site in the face of China's economic development?

It will be crucial to meet the demands of our customers and, wherever possible, to outperform with customised solutions. At the same time, we work on optimising our already high quality standards on a day-to-day basis and continue to guarantee absolute delivery reliability. China's growth remains around eight percent in 2009. This is especially so for the domestic automotive market where government intervention has had a very positive impact on new car sales. Sulzer Metco has been successful at attaining a leading position in a number of technologies and applications. These are specifically related to the automotive industry with our IONIT OX and Friction Systems services. Also, we recognise a growing demand for PVD coatings, both for systems and service. Maintaining this broad platform and continuing to deliver service excellence to customers will facilitate not only growth in these areas but

also enable expansion into new business areas and additional applications and services.

In China, there is a special competitive situation. What are the advantages that set you apart from competitors?

The factors that differentiate Sulzer Metco include our product and process capabilities, knowledge and experience as well as extremely strong quality assurance. Quality and delivery performance are critical success factors and we pride ourselves with the high levels of service that we consistently deliver from Shanghai.

What is your vision and what are your goals for the location?

We are currently expanding our systems capacity in the wake of high demand. Further investments are planned. With increasing demand from China's central and north east regions, we will also be thinking about new plant locations in order to further improve service to customers in these regions.

Thank you for the interview. ■



Anthony Herbert took over the management of the Shanghai location in June 2009. The Welshman and his family like their new home. In his leisure time Anthony Herbert loves to ride around on his Ducati.

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Overview of Midyear Results

Find out about midyear results for 2009 on the Internet at

www.sulzer.com

in the section "Investor Relations"



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