

Good Connection

Already the third Sprimag machine for powder coating of connector housings has been installed at HARTING Technology Group

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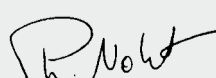
Philippe Nollet, Michael Anger, Managing Directors Sprimag

Dear Reader,

"The economic recovery will come", such statements recently are in circulation in the media more often. But however, the industry is still not feeling much of the effect. Especially in these times, the competition and price-fight in the market is very strong. We are convinced that Sprimag will continue to compete on the market, with its high quality coating machines, as well as with the own, optimal balanced application technology such as by our wide service. To support our customers in future even better, we are currently extending our service features. Not only with new investments, but also with modifications we would like to be the first contact person. Also this year we have already realized several modifications with customers, thus considerable operation costs can be saved in future.

At Sprimag the trust of our customers is paramount. Our SPRIMAGazine is an important medium for us to stay in touch with you regularly. Therefore after 15 successful issues we have decided to create a new fresh design. For your loyal readership we would like to thank you and wish you continuing good entertainment with the new SPRIMAGazine. We would be happy about any suggestions you may have, to further improve the performance of our offer.


Michael Anger


Philippe Nollet

Ordering Sprimag spare parts is quite simple

Complete Application Technology available online

In our opinion, appealing products and exceptional service belong together. Therefore we will improve the order transaction for our application technology products and spare parts. For several months Sprimag spray guns, nozzle sets, spare parts, etc. can be inquired online on our website. Under www.sprimag.com/application-technology our standard product program of application technology can be found. Spare part catalogues can conveniently be compiled on the personal computer and requested online. Via the drop-down menu you can select the desired parameter and the proper product will result. To inquire this product, just click on the cart symbol and the product will be added to your shopping cart. You can edit and send the shopping cart on the right. As Sprimag disposes of a large range of spare parts, only standard parts are listed. By all means you can also use the contact form for special versions, which are not available on the website. Also available online is our new brochure 'application Technology', which can directly be downloaded. The brochure also includes all Sprimag application technology products avail-

able online, from nozzle sets, spray guns, up to the new material pressure regulator. Therefore the brochure is an optimal completion to our online shop. You are welcome to request the brochure or save yourself a specimen with your next visit with Sprimag or at a tradeshow. Go online and explore the shop: www.sprimag.com/application-technology.



Sprimag Application Technology now available online and in new brochure.

NEWS + FACTS

Investment

To further improve the spare part service and reduce delivery times, Sprimag has invested in a new CNC lathe of Gildemeister. On this new machine the most different parts of our application technology can be manufactured completely in one clamping directly from the bar. The better performance enables us to manufacture a wider range of application with turned-milled-parts on one machine.

» Jochen.Quattlander@sprimag.de



Sprimag assembly invested in a new CNC lathe.

New Control Unit

The older generations of the Sprimag HIL-machines for internal coating of tubes and cans are often equipped with the Fortron Spray Control Unit. Because this control unit is not longer available and repairs are not possible any more, Sprimag has developed a solution for its customers: The new Fortron Spray Control Unit FO-ERS. The installation is very easy, because everything is pluggable. All spare parts are in stock at Sprimag and available for immediate delivery.

» Ulrich.Schiedl,service@sprimag.de

Tradeshows Review

From Chicago over Mexico, São Paulo, Hanover, Lyon to Moscow – Sprimag was present at world-wide tradeshows in the first half of 2009. Even when the number of visitors at some tradeshows where declining, for Sprimag it was important to be continuously present at the market. Whether at the Surface Technology at the Hannover Messe or at NPE, the largest plastic tradeshow in the USA, Sprimag could initiate interesting new contacts and establish existing contacts.



Sprimag at the BrasilPlast in São Paulo, Brazil

FEATURES OF THE NEW MATERIAL PRESSURE REGULATOR

- » All parts in contact with fluids are stainless steel
- » Set point setting via pressure air, to preserve the diaphragm surface
- » Flow or return regulators share the largest possible number of common parts
- » Easy separation for maintenance/cleaning (using standard tools)
- » Several mounting possibilities for optimal arrangement in the system
- » Maximum inlet pressure flow-regulator up to 16 bar
- » Maximum inlet pressure fly-back control up to 6 bar
- » Different pressure regulation ranges available
- » Discharge up to about 10 liter/minimum Ex II 2G c T4
- » Precise regulation through large diaphragm and low friction valves
- » Rinsing optimized internal cavities with minimal dead spots

» Integrated connection for dead spot free pressure control

Sprimag under pressure

An own Pressure Regulator completes the range of application technology

To complete the range of application technology, Sprimag has developed an own material pressure regulator.

From the own spray gun up to the diaphragm pump and a complete 2K-/3K-mixing unit, over the years Sprimag has developed its own application technology, which is perfectly matched to our machines. To further extend the range of products, Sprimag has decided to develop an own material pressure regulator. The aim of the design was to intransigently connect the different points of view like function, maintenance and flexibility.

An essential weak point of all pressure regulators on the market available is either the poor cleanability, too big dead spots or volumes in the diaphragm room, lack of maintainability or sporadic leakages of the seal seat. During its development of the Sprimag material pressure regulator it was the goal to optimize these weak

points. The pressure regulator is suitable for the application in a single or multi-component paint system. With the use in a 2K-/3K-mixing unit, the pressure regulator regulates the volume of the material flow by the application system. At this, the pressure regulator is installed as near as possible at the spray gun to obtain the greatest accuracy. For some applications at one mixing unit several application equipments with assigned material pressure regulator can be

of the pressure regulator is done pneumatically. With automated machines a proportional valve will be used. With simpler applications, for example circulation systems, this will be enabled through a manual precision pressure regulator.

To discover potential operational faults at the pressure regulator, respectively at the entire system, the actual pressure is measured via pressure sensor and compared with the reference input. The check of the

Function, maintenance and flexibility feature the new material pressure regulator

operated separately. A further field of application of the material pressure regulator is the installation in front of the metering cell's entrance. At this, the pressure regulator ensures a constant pre-pressure of the main paint and the curing. The activation

pressure is an important step, which can prevent serious errors and operational failures. Of course, the pressure regulator can also be used with simple circulation systems without pressure sensor.

» Mathias.Epple,service@sprimag.de

Small paint robot with big capabilities

A robot is extending the possibilities for coating trials in the applications center

Flexible, multifunctional and precise. These attributes characterize the preferences of the new installed paint robot at Sprimag. Since summer this year a compact PaintMate-Robot of Fanuc is the basis of a new set up painting cell in the company's own applications center. With this, Sprimag is one of the first companies in Europe who has implemented this new system in practical environment.

The six-axis mini-robot was complemented with a further axis. Different

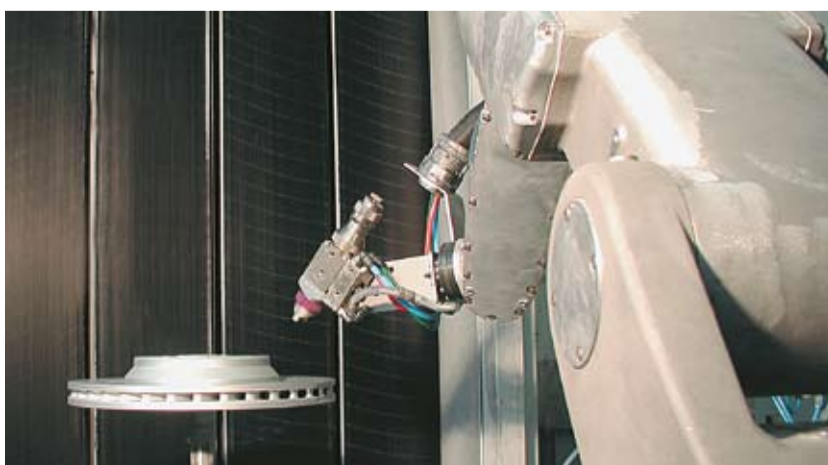
software configurations tailored to the applications and multifaceted assembling options cover the comprehensive paint specific requests for significant paint coatings, without limiting the easy handling of the whole system.

The application technology in the cell is primarily from Sprimag. According to the coating problem, different spray and centrifugal guns are used. This variety enables a target-orientated search for an appropriate process for a coating task.

This special advantage of Sprimag appears for example with the corrosion protection coating of brake discs. Complicated component geometries, exactly defined coating areas and often paints that are difficult to process, require very fine balanced application packages. The experiences so far, indicate that the new mini-paint robot is thereby an important tool for the fast development of optimal solutions.

Along with the other equipment in the applications center, Sprimag offers with the new paint robot optimal possibilities to meet the individual customer requirements. The "mini" helps to offer field-tested and economic efficient solutions to our customers.

» info@sprimag.de



The Fanuc robot "Paint Mate 200 iA", impresses with his compact design.

High expectations

Coating machine installed at Bolta

The coating machine that was delivered to the company Bolta in April has been set into operation successfully. On the delivered machine radiator grills for AUDI are coated in stone gray and piano black. But the paint supply was also designed to supply further paint systems. A total of three different paints and curing agents can be processed customer-related, whereas a later extension is possible any time. 'It was a special challenge to meet the very high quality requirements of AUDI, concerning the coating thickness related to the degree of gloss and the concur-

rently avoidance of dust' so sales and project engineer Uwe Ginnow. An essential advantage of this compact installation is the flexibility on the usage of two Fanuc-P200 paint-robots. At this the first robot is used for the pre-treatment of the parts via CO₂, the second robot is used for coating. Through the realization of this project Bolta are now equipped to handle not only today's customer demands, but also those of the future, delivering product coatings to the highest standards, whilst still being competitive.

» Uwe.Ginnow@sprimag.de



The new machine is coating radiator grills for AUDI.



Connector housings of different sizes may be powder coated with this machine.

Ideal powdering of connector housings

Inside the powder coating unit a Round Table Coating Machine and a Chain-type Coating Machine are engaging seamlessly

Already in 1991 Sprimag supplied the first automatic powder coating machine to HARTING Technology Group in Espelkamp, Germany. In the course of the following years further machines were sold. In 2009 a third Sprimag line has been put into operation by HARTING to increase capacity. The HARTING Technology Group is a worldwide leading manufacturer of high quality switching connectors. With the Sprimag machine metal housings for industrial connectors are coated with powder. „We have been convinced by the technology and the reliability of the Sprimag unit“, said Hans Peter Dähn, Industrial Engineering. Therefore HARTING also decided to buy a Sprimag unit when thinking over purchasing a third machine.

The supplied technology includes an automatic powder coating machine which is equipped with a throughput drier, a cooling zone, as well as an automatic feed, transfer and discharge. By taking advantage of HARTING's

experiences with two Sprimag units the third unit could be customized and further developed accordingly. Thus with each supplied unit the process was more and more improved. Already during the phase of project-

ing requests for improvements of HARTING have been noticed and realized by our technicians and engineers. By a perfect cooperation of design, manufacturing, installation and commissioning the supplied equipment could completely meet customer's requirements. With the delivered ma-

chine a special design with two conveying systems were realized. Hereby essential advantages for cleaning the chucks could be reached (further information please see in the show case at the right side).

The connector housings to be coated are charged manually in correct position in one or two rows onto a cycled conveyor belt. By means of this conveyor belt parts are transported to the transfer place inside the machine.

There they are taken over by a gripper unit of a handling device and placed onto the parts' chucks of the Round Table Machine. Inside the Round Table Machine a powder station with two powder pistons is installed where metal housings are coated continuously with a powder cloud. In case there are no parts conveyed to the powder station an automatic powder switch off avoids that powder is supplied needlessly into the circuit. In order to grant for constant powdering starting with the very first part, the powder station is switched on several cycles before. At the powder station metal parts situated on spindles are put into rotation in order to grant an even coating by powder.

Following the powdered parts are transferred to an automatic transfer from the Round Table Coating Machine to the chain conveyor. The automatic transfer unit takes over the

powdered parts at the interior of the parts as there no powder layer could be destroyed. Then, the powdered parts are placed onto the chucks of the Chain-type Coating Machine.

The Chain-type Coating Machine

works in cycles synchronously to the Round Table Unit. There the powdered parts are conveyed into an infrared drier. The infrared drier carries out a quick heating of the parts and thus a quick coagulation of the loose, adhesive powder. After coagulation inside the infrared drier the metal parts enter the circulation drier. There the actual annealing process is carried out. The temperature of the circulation air drier might be regulated up to 240°C.

Inside the following cooling zone parts are cooled down from 240°C to approx. 35°C with a cooling temperature of 25°C as well as to approx. 10°C above cooling air suction temperature. The finally coated connector housings are discharged by an automatic handling unit with a gripper unit of the conveying spindle and placed on an evacuation belt. From this place the metal parts are conveyed to the discharging zone over a monitoring system available on site.

In order to meet the valid standards for powder units a combustion recognition has been integrated into the application zone for object protection purposes. This combustion recognition has been installed inside a separate control cabinet at the machine and consists of deception secure flame sensors inside the powdering station, an audible and a warning device at the unit as well as a fire extinguishing unit.

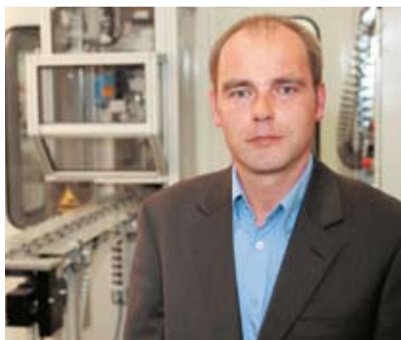
» Dieter.Kouba@sprimag.de

» We have been convinced by the technology and the reliability of the Sprimag unit «

A CLEAN SOLUTION



The supplied machine design combines **two standard conveying systems** of Sprimag, the Round Table Coating Machine and a Chain-type Coating Machine. The **Round Table Coating Machine** is equipped with a powder station, where metal housings are coated. Afterwards the parts are placed onto a conveyor chain, which leads into different driers. This design offers a decisive advantage: Chucks of the **conveyor chain** of the Chain-type Coating Machine will not be contaminated, therefore the **adhesive powder** at the chucks of the Round Table Coating Machine is not annealed. By this system it is possible that the chucks of the Round Table Coating Machines are cleaned through several air nozzles.



Top left: Hans Peter Dähn, Industrial Engineer HARTING, is convinced by the Sprimag technology. Top right: The infrared drier is responsible for a quick coagulation of the powder. Below: Powder station inside the Round Table Coating Machine.

INTERVIEW

Powder on advance

There is supposed to be a new trend for internal coating of tubes and cans by powder

In economically hard times most of all the development department is requested to set impulses for the market. How do you face up to these requirements?

In a market that is highly competitive we not only may sustain our position by means of the price. Therefore technical innovations are intensified by our development department, new machine designs required by the market are focussed and customized solutions are offered. Finally we would like to offer the best possible design and application solution to our customers. Beside the new designs we furthermore carry out improvements and developments at our well proven own systems and try to optimize external products. In the course of this year we have developed an own material pressure regulator, increasing our offer of application technology. Just in the

aerosol cans and aluminum tubes in future?

Internal powder coating of tubes and cans has got a long lasting significance for us. Already in the year 1993 we dealt with this subject, in 1995 considerable test series were carried out at Sprimag. Feasibility failed mainly because of missing suitable powders. Therefore this subject has been postponed again and again. As customers, too, continued to push this subject, paint suppliers were required to develop a suitable powder. According to our expertises these powders are now available. Therefore Sprimag is currently developing a machine, being capable to coat internally tubes and cans with wet as well as powder paints at current manufacturing speeds. This machine will make possible a quick retrofit of paint agents. Subject to the request as well as ac-

ceptance of bottlers to use the advantages powder coating, we believe that this process may be a great chance at least for a part of the numerous packaging products.

Which is the most important advantage of powder compared to conventional wet coating?

VOC-emissions and overspray occurring during wet coating may be prevented completely when powder coating. Therefore costs for investments and energy for exhaust air handling as well as disposal costs could be avoided.

When do you expect the market launch of a machine ready for serial manufacturing?

We are working with high pressure to have available for our customers a machine ready for serial manufacturing beginning 2010.

Is Sprimag's focus only

to offer this technology for new machines or are old machines supposed to be re-fit as well?

Currently we concentrate on the new machine business. Up to my opinion, in most cases the modification of older machines is to accept compromises. Modification would lead to essential restriction of flexibility and adjustability of the processes. A further problem will be working safety. In case the machine should come up with valid explosion regulations and EU-directives, the investment will be much higher and not that cost-effective than buy-

ing a new machine. Nevertheless we would like to be of assistance to our customers by offering consulting service in case inquiries for modifications are submitted.

Which kind of activities are carried out by Sprimag, in order to meet the permanently increasing new environmental requirements?

Very important projects we worked out in the recent past for example energy optimizing when running drier and spray cabins. This has been effected by intelligent adjustment of the required exhaust taking into consideration the respective operating conditions. Furthermore within the last few months we carried out considerable trials with UV systems low in or free of solvents: for example PVD applications. With our own application technology we realized many projects free of or low in overspray in the past. Furthermore in the field of centrifuge as well as exact and precise coating with special HVLP-spray guns the use of masking device like we used it formerly became redundant.

Now you are active for Sprimag for more than 20 years – which project was your personal highlight?

For me there are several highlights. Highlights which have been informative or technically demanding. One of my very individual highlight was the SIGG project for the external powder coating of beverage bottles. This was definitely a project from which I learnt most. It has been a very interesting project, although we had to do many night shifts in order to opti-



Rainer Mendl, manager engineering and responsible for the development of new machine designs.

mize the machine. The technically most interesting project was a coating machine for aluminum wheels. A 9-million-dollar-project we realized together with Sprimag Inc.

Finally we would like to pose a very personal question: You are known as workaholic, nevertheless the members of your staff and colleagues appreciate your balance and aplomb – do you like to give us your recipe?

Well, workaholic is correct. You ask for the recipe: Probably this will be a proof of the cliché of an understanding wife at home. Furthermore I follow the principle: as soon as I am at home, I am at home. Then I take my time for my family and for example do sports – and thus probably some annoyance with customers or colleagues led to personal “peak performance”.

« An important advantage of powder coating is the environmental-friendliness of this paint medium »

field of surface coating we compete with a full service. From a machine with respective application technology up to final service we offer everything from one source. In the field of packaging we intend to continue to expand our technology leadership.

With a powder coating machine for SIGG beverage bottles Sprimag has shown that there are alternatives for conventional wet coating in the field of packaging technology. What does this technology mean for mass articles like beverage cans,

CALENDER



Interplastica

Moscow, Russia
2010/01/26 – 2010/01/29



Interlakokraska

Moscow, Russia
2010/03/09 – 2010/10/12



SITS

Paris, France
2010/03/22 – 2010/03/26



Paint Expo

Karlsruhe, Germany
2010/04/13 – 2010/04/16



CANNEX

Las Vegas, USA
2010/04/27 – 2010/04/29



O&S

Stuttgart, Germany
2010/06/08 – 2010/06/10



Aerosol Congress

Rom, Italy
2010/10/21 – 2010/10/23



K

Düsseldorf, Germany
2010/10/27 – 2010/11/03

ANNIVERSARIES

10TH ANNIVERSARY

Sprimag Inc.
Stiefel, Aaron
» engineering manager

Sprimag Germany
Gotzmann, Mark
» foreman electrical department

Arndt, Günter
» purchaser
Quattlender, Jochen
» production manager
Schneider, Werner
» project manager PPS
Drobe, Andreas
» sprayer
Ramminger, Dietmar
» head of mechanical

design packaging
Bähnsch, Mathias
» electrical design
Roth, Helmut
» industrial mechanic
Koch, Ingrid
» technical draftswoman
Burkhardt, Peter
» mechanical fitter

25TH ANNIVERSARY

Sprimag Germany
Tausch, Markus » mechanic

40TH ANNIVERSARY

Sprimag Germany
Groth, Birgit
» sales clerk
Ruff, Klaus
» mechanical fitter
Schiedl, Ulrich
» customer service
Kauber, Karl
» warehouse and goods receipt staff

Sprimag would like to congratulate the jubilarians and thanks for their long solidarity to our company.



Birgit Groth



Klaus Ruff



Ulrich Schiedl

IMPRINT



sprimag
automated coating
systems

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