



New Internal Coating Machine HIL-05

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Brazil in the field of view

Sprimag Brasil Ltda. expands and invested in a new coating line

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Joachim Baumann und Philippe Nollet, Managing Directors of Sprimag

Dear Readers,

“Jeito Brasileiro” – The Brazilian Way”; that is the name of the cover story for our spring issue of Sprimagazine. On Page 3, you can read how this “way” of our Brazilian subsidiary has proceeded for the last fifteen years up until today. Ever since Sprimag Brasil Ltda was launched in 1998 in São Paulo, the company has recorded steady growth with its coating services. This year, it will expand further and relocate its entire site to a larger site. Investments will also be made in installation technology. “Big Chain”, a new, fully automated coating machine, has already been delivered by Sprimag in Kirchheim-Teck and will go into production during the upcoming months.

Our economic development is positive not only in Brazil but also in Germany: We in Kirchheim-Teck are benefiting from the global

market situation. Right at the beginning of the year, Sprimag received a major order from the surface coating industry.

For the packaging industry, Sprimag developed a new internal coating machine with the designation HIL-05 for aluminum beverage cans and bottles. The first machines have already been delivered to customers. The new HIL-05 can coat the insides of up to 350 cans and bottles per minute, and bottles with large trimmed can heights are no problem for this machine type. More details can be found on Page 2.

We hope you will enjoy reading the latest issue of Sprimagazine!

Joachim Baumann *Philippe Nollet*
Joachim Baumann Philippe Nollet

Anti-friction coatings in trend

Sprimag reported an increased demand for Anti-friction projects

For years Sprimag is active in the anti-friction business. In the recent months it appears to emerge an increasing trend for anti-friction projects. In particular, there are two key factors influencing the strong demand for anti-friction coatings: The constant improvement of the lubricants and the extension to apply the anti-friction coatings to new areas.

Anti-friction coatings are similar in construction to the usual industrial coatings. They contain solid lubricants as pigments, resins as binders as well as organic solvents or water.

As solids (pigments), primarily molybdenum disulfide (MoS₂), PTFE and other structurally effective substances are used. The solid lubricant which usually cures by heating into a very durable, maintenance-free, anti-friction coating can now, for example, replace oil or grease lubrication.

As high performance lubricants, anti-friction coatings frequently offer maintenance-free permanent lubrication and fulfill extreme requirements that can not be realized with conventional lubricants.

Compared to oil or grease lubrication, anti-friction coatings provide the following benefits: for the separation of

Features of anti-friction coatings

- Reduction of friction and wear
- Constant friction coefficients with very little scatter
- Can be used under extreme conditions
- In many cases, lubrication for the entire service life without oil and grease
- Very good corrosion protection
- Long storage times without aging effects
- Improvement of installation options for machine elements
- Minimizes the amount of maintenance required

contact surfaces, only a single application of an anti-friction layer is necessary; in addition, the dry and clean lubricating film of anti-friction coatings eliminates unwanted and troublesome impurities.

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A typical application of anti-friction coating are gears, among other.

NEWS + FACTS



Robust pressure regulator with carbide seal set for abrasive media

Optimized pressure regulator

Pressure regulators from Sprimag have been available on the market since January, 2010. The more than 700 regulators that have been produced account for the success of the pressure regulators. Since the beginning of this year, Sprimag has been offering an additional version of the flow regulator. This new regulator is equipped with a carbide seal set (ball, seat, plunger) and, as a result, is extremely resistant to wear and is therefore also suitable for use with abrasive materials, such as zinc dust paint.

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Successful Aerosol Forum

From February 6th to 7th, more than 3,000 participants from 56 countries visited the Aerosol & Dispensing Forum in Paris. Sprimag was also represented with a booth and was able to establish exciting contacts in the packaging industry. At the Aerosol Forum, the first customers were exclusively informed about a new high-speed internal coating machine, the HIL-05, for aluminum beverage cans and bottles and the derived variants for aerosol cans. For Sprimag, the industry meeting was a successful event.

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Students learned about the training at Sprimag

Career Information Fair

On February 5, 2013, the Youth Agency organized a career information fair in the town hall in Kirchheim unter Teck. Sprimag was also present with a booth to inform students from schools in the surrounding area about apprenticeships that are available with the descriptions "Electronic technician for automation technology" and "Industrial mechanic specializing in machine and system technology." Each year, Sprimag trains two apprentices in these specialties.

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Product range expanded with an important machine

Sprimag develops a new internal coating machine, the HIL-05.

As a specialist for the internal coating of aluminum tubes and beverage bottles, aerosol cans as well as beverage cans from aluminum and steel, Sprimag has expanded its product portfolio with a new market-winning machine and has thus closed an additional gap in the market.

The matter-of-fact designation of HIL-05 represents a new internal coating machine, whose first version was specifically designed for the internal coating of beverage cans and bottles that have a large trimmed can height relative to the diameter.

In the beverage can and bottle market segment, the application

of coatings using fixed, non-moving spray guns has been common up to now. The main advantages of this method were the high machine cycle rates. However, this method meets its limits for correspondingly large trimmed can heights, such as those for slender bottles.

With the HIL-05, Sprimag has developed a machine for this product segment that ensures high cycle rates while, at the same time, ensuring excellent coating quality.

In the new method, the products to be coated are provided through an infeed

starwheel of the machine. A nine unit vacuum plate fixes the separated bottle or can in place. During the rotation of the vacuum plate, the nine rotating spray guns plunge down into the hollow body and thus guarantee a uniform, high quality coating of the base and the side walls. The cans are removed at high speed via an outfeed starwheel. A technically sophisticated rotary joint supplies the nine spray guns.

This machine, which is specifically designed for the requirements of the beverage packaging industry, is extremely robust, provides high availability, and fulfills the highest standards of hygiene and ease of cleaning through paneling that is largely of stainless steel.

A machine with such high capacity is unprecedented until now and is of correspondingly great interest to well-

known customers. The first machines have already been delivered to a major customer that wants to combine several HIL-05 machines into a bank to build a production facility where the number of cycles is in the four-digit range.

During the upcoming CANNEX trade fair that will take place in May in Atlanta (USA), the machine concept will be presented to a wide audience of professionals. It is expected that further orders will be placed as a result of the trade fair.

With the HIL-05, Sprimag not only expands its product portfolio and fills a gap in the market. Now, with twelve different types of machines for the internal coating of tubes, cans and bottles, Sprimag makes clear that, especially in the internal coating sector, customized solutions for different speeds, formats, and application techniques are required and therefore must be offered.

To further extend its market position in the field of internal coating, Sprimag is planning another clear expansion of the product segment for 2013 and 2014, in addition to a variant derived from the HIL-05 for aluminum aerosol cans.

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HIL-05: High cycle rates and excellent coating quality, even with large trimmed can heights

Facts and figures about the HIL-05:

- Product range: beverage cans and bottles
- Product diameter: max. 66 mm
- Trimmed can height: max. 260 mm
- Individual machine speed: 350 cpm
- Processing of solvent-based or water-based coatings
- Air atomizing spray equipment or airless spray equipment

Sprimag Application Technology – The Key to Success

A high-tech coating facility for our customer High Tech Coatings.

In the middle of last year, High Tech Coatings (HTC), which belongs to the Miba Group, is located in the town of Vorchdorf in Austria. HTC assigned us with the task of setting up a facility for the application of anti-friction coatings on engine components for the automotive industry. These types of coatings place the greatest demands on quality.

Besides the compact facility layout, HTC was particularly impressed by the application technology from Sprimag. In particular, the functional nozzles for internal coating provide an outstanding advantage over the application technology of the competitors.

Even long before the awarding of the contract, Sprimag dealt with the specific requirements of the customer and, because of its many years of experience in the area of anti-friction coatings, could offer HTC a facility design that was optimally tailored to the requirements. In January 2013, the high-tech coating facility was set up by our mechanics and service technicians at the customer's site.

The facility carries out the coating of parts in three steps: the engine components to be coated are preheated, coated

» Two different coating systems could be used in the coating machine without major modification work. «

Michael Blankenhorn

pass, the engine components on the loading and unloading location are placed manually on the rotary indexing table of the coating facility. The loading and unloading process has been automated and can be upgraded at a later date.

During the loading and unloading process, the parts without a coating are preheated in the in-

termediate dryer. If the unloading and loading process is finished, then the parts at the spraying site are coated either inside or outside and then pass through the dryer for intermediate drying. This process can be repeated several times.

After coating, the parts are again removed manually at the loading and unloading site.

At the coating facility, two different paint systems can be used alternately without major upgrading. The spray guns are fixed in place in the facility by means of a quick release system, so that any readjustment after a spray gun replacement is not necessary.

The change from internal to external coatings can therefore be performed in the shortest time.

All relevant process parameters are stored in the control system and controlled ac-



Thanks to the quick-release system readjustment of the spray guns is unnecessary

ording to the parts being processed. Depending upon the part size, the facility can be operated at 1x, 2x and 4x the normal speed. As a result, greater productivity is achieved for smaller parts.

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Dryer with air nozzles for uniform drying of the internal coating



On the compact Round Table Machine engine components are automatically coated with anti-friction paint

Door handles in a variety of colors are coated with Sprimag machines.

“Jeito brasileiro” – the Brazilian way

Sprimag customers worldwide benefit from the experience of the producing Sprimag coating machines on the Brazilian site.

In 1998 Sprimag took a decision in Germany to extend its worldwide activities in the area of coating machines and set up two subsidiaries, one in Cincinnati (Ohio), USA, and the other in São Paulo, Brazil. The Brazilian sales subsidiary opened in January 1999. At that time there was no way of knowing how the company would develop during the next fifteen years.

The showroom in São Paulo had originally been designed to demonstrate "state-of-the-art" coating technology. The objective was to show potential Brazilian customers from the automotive, tier 1 and automotive component supply industries how to attain high-quality coatings of series parts automatically and repeatedly.

Brazilian improvisation talent

Antonio Donnianni, General Manager of Sprimag Brasil right from the very first day, remembers the beginnings with a grin: "At that time the Brazilian real was devalued considerably against the American dollar. It lost half of its purchasing power almost overnight. The two currencies were equal before. I thought back then that we would fail, that we would not be able to sell German products in Brazil, and that it would be too expensive." Since the estimated investment costs for an automatic coating machine were around two to three million dollars, we had already set the anticipated sales figures at a very low level. However, even this target seemed to be out of reach on account of the downward spiral of the Brazilian currency.



Antonio Donnianni, General Manager of Sprimag Brasil right from the very first day



The new premises of Sprimag Brasil is significantly larger than the previous Building pictured here.

Less intrepid entrepreneurs would have long given up at this point and packed their bags. But this here was Brazil. And Brazilians are well-known for their improvisation talent – we chose the "Jeito brasileiro", the Brazilian way.

Sprimag decided to stay and carry on coating. Donnianni: "It was our only chance. We coated parts for our customers. We had state-of-the-art equipment, the technology and the know-how. Instead of selling machines to customers, we sold our services."

From a machine manufacturer to a service provider

Sprimag Brasil's first customer was TRW, a well-known manufacturer of automotive parts. Vehicle interior parts were coated using the dual-coating process and then lasered for this customer. The good business relations led to further orders for Sprimag Brasil.

This success made an impression in Germany. It has been unique in this form in the Sprimag Group right up to the present day. The shareholders of Sprimag were convinced and gave the Brazilian subsidiary the go-ahead to continue with its successful concept.

Sprimag Brasil now has a local workforce of around 320 employees. On average, around 60,000 coated parts are delivered every day for more than 15 different Tier 1 automotive clients. Although the first important customers came from the automobile industry, the major breakthrough occurred in 2002 when Sprimag Brasil

became the sole supplier of contract-coated parts for cellphone cases for Motorola Brasil. Around 14,300,000 cellphone cases were coated for the company between 2002 and 2006. Sprimag withdrew from the cellphone business in 2006. It is now no longer active in the telecommunications sector, but again concentrates primarily on the automobile market.

Everyone must find their niche

In the automobile industry Sprimag Brasil specializes in the coating of small plastic parts such as door handles, exterior mirror casings, vehicle interior parts, including laser inscription, and anti-fog coating of headlamp lenses. Automotive parts currently account for 100 percent of sales. In order to satisfy the high demands of end customers such as Ford, VW, GM



Over 16 million parts are coated by Sprimag Brasil annually, this provides an ideal test field for new developments in continuous use.

Fiat, Honda, PSA, Renault and MAN, Sprimag Brasil set up its own laboratory for continuous quality controls and installed special coating machines for initial sampling.

"There was a gap in the market when Sprimag Brasil started", said Donnianni.

"There was a large number of small suppliers who coated very small unit numbers. And there were larger companies who had specialized in coating large parts such as shock absorbers. These companies did not have the machine technology to coat small plastic parts such as door handles or mirror casings. We concentrated on these parts."

New investments

Sprimag Brasil had actually found its niche and was therefore able to expand enormously in a very short space of time. The total annual production of coated parts has increased dramatically in the last twelve years: 1.3 million parts in 2000, 5 million in 2004, and 14 million in 2005 (on account of cellphone cases). The company coated 14 million parts in 2010, without cell phone cases, the corresponding figure in 2012 was 16 million. This spectacular growth led to the recent investments. Sprimag Holding decided to significantly enlarge the Sprimag Brasil plant. In addition to the move to new company premises, the capacity will be mainly extended through a new coating line.

For this purpose, Sprimag Spritzmaschinen GmbH & Co. KG will deliver the machine and system components to Brazil over the course of the year. The line concept was formulated in close cooperation with the operator Sprimag Brasil. The new line will firstly enable Sprimag Brasil to supply a large number of the currently coated products and secondly offer larger vehicle add-on

company building with an area of 15,879 square meters was bought and it's on retrofit phase, on a site covering a total area of 27,879 square meters. Thanks to the increased size, the new plant will accommodate all the automatic coating machines of Sprimag along with the new line.

After the new line comes on stream, the existing coating machines will be gradually relocated. The objective is to have all coating machines located at the new plant in 2014.



The first customer of Sprimag Brasil had an interest in lasered day and night-plastic parts.

Donnianni sees a positive future for the company: "We are ideally prepared to cope with the increasing demands of the Brazilian automobile market that will soon reach a volume of between 5 and 6 million automobiles per year."

The next issue of the Magazine will contain an extensive article on the new production plant at Sprimag Brasil. It promises to be very interesting.

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INTERVIEW

“The forecast is calling for sunshine and rain all at the same time.”

Joseph Vanden-Eynden, Managing Director Sprimag Inc., USA

The global downturn particularly affected the American economy. How do you assess the situation today, did the economy recover?

The U.S. economy has rebounded quite well after the global downturn, and we are seeing a lot of companies that had been sitting on the sidelines the past two years now coming to the market with a strong demand for new machinery. I believe it is due to the coordinated timing of several factors, including; new strategic product launches, a slow change in exchange rates that are becoming more favorable to U.S. companies, manufacturing companies having cash reserves, and a general increase in consumer confidence.

Most of the OEM companies have a healthy backlog and their lead times on custom equipment are growing. And despite all of the headlines of high unemployment, there is still a short supply of skilled workers and qualified engineers.

How does the forecast look for the future situation in the U.S. ?

In a word, it is “uncertainty”. While the current mood is growing more positive and orders are increasing, there is never a guarantee how long the situation will last. The shadow hanging over the USA due to the government’s debt, the possible changes to corporate tax laws, and lack of legislative cooperation keeps a damper on the business forecasts. I have never seen a business climate as we have now... where the forecast is calling for sunshine and rain all at the same time. So while the lending markets become more open and the stock market hits new record highs, we take the good while we can and hope that things continue on the current upward path.

What do you think are the main challenges in the U.S. market?

One of our most unique challenges, which is now becoming a strength, is that in the U.S. we have to be everything to everyone. The U.S. is still a commercial melting pot. We have to sell and service to a lot of different cultures within North America, and respect the business mentality of each culture. It gets interesting having American sales people selling German-built equipment to Japanese transplant companies, for example.

The other challenges we face is, of course, commercial. Customers are continually under pressure to lower the price of the goods they produce, which puts pressure on the price they are able to pay for their production machines. That generally means they have to do-more-with-less, and we as a manufacturer need to find new efficiencies in the way we engineer and manufacture our machines. Couple all that with the pressure of fluctuating exchange rates, and it makes life interesting. But we have learned to manage all of these situations quite well.

Sprimag Inc. has been active in the United States for almost fifteen years. How has the painting industry developed since then?

The market is still very similar to

where it was 15 years ago. While there has been some consolidation within the suppliers, and a few that have come and gone completely, most of the same players are still active. There is the same mix of suppliers who focus on standard industrial finishing equipment, and the other more specialized suppliers like us who focus on the high-volume / automated needs of the automotive and packaging markets. The main change within Sprimag Inc. over these past years is that our company has “matured”, and now is a widely recognized and respected supplier of coating machines in the United States.

Maybe you can also tell a few words about the evolution of Sprimag Inc. during these “maturing” years.

Our U.S. office was originally founded in 1998 to help Sprimag expand into the North American market. Our focus was to put a U.S. front end on German-built equipment, allowing us to provide the electrical controls while not losing any of the quality associated with the German “mechanical” equipment. We also needed to provide the English interface with our customers, to work to comply with their individual machine specifications, and to help Sprimag meet the various U.S. regulations.

Over time, we expanded our focus to providing robotic automation to complement our developed lineup of coating machines. We took on business development personnel to help enter the Japanese transplant markets. And recently, we have re-doubled our efforts to increase sales of our inside coating machines for the container and packaging markets here in the United States.

For many years, anti-friction coating has been an important field in the United States.

How is the current market situation?

A lot of the original research for anti-

friction coatings started in Europe more than 5 years ago, and it has now taken a strong foothold with the U.S. market suppliers. While the growth in the coating of engine bearings has been remarkable over the past two years, we are also seeing a resurgence in the demand for anti-friction coatings being applied to the skirts and pin bores of engine pistons. Engine builders are trying to keep pace with the commercial demands to extend gas mileage, to protect the smaller / high-torque engines from wear, and prepare for the introduction of start-stop engines in the U.S.

In 2012 Sprig Inc. received an order from ASAMA for a fully automated coating machine to coat brake discs with Geomet. What has been achieved?

The original project was a technical success for Sprimag and the customer has

met, and often exceeded, their goals for bringing coating in-house for the first time. There were some learning curves to settle when they started applying coatings for the first time in a production environment, but the customer has adapted very well. The first line is at maximum capacity and the need is there for more coating capacity in the near future.

What other markets or industries are the trend regarding coating technology in the U.S.?

Right now, anti-friction and anti-corrosion coatings are the big focus. Outside of those two areas, we are still keeping a pulse on the UV-based coatings market and the chrome reduction techniques offered by PVD. There is also the continuing work to develop more water based coatings, and in making the coating equipment itself more energy efficient. It takes a lot of energy to run a coating + curing operation, and reducing energy consumption lowers the operating costs for the customer and helps out our planet at the same time.



JOSEPH VANDEN-EYNDEN,
Managing Director Sprimag Inc.

How long ago did you join Sprimag?

This March marks my 13th year anniversary with Sprimag. I am a little superstitious, so hopefully I will enjoy this year as much as the 12 years before

So how did it happen that you came to Sprimag?

I was looking for new challenges and came across a small advertisement in the local newspaper. I knew the industry pretty well from the engineering and application side, and decided to take a chance, and try technical sales. There have been no regrets ever since.

What do you like about the daily work at Sprimag?

The staff I get to work with is fantastic. We are a small subsidiary, and that means everyone gets to wear many hats. Each day is something different, and that keeps the job interesting for all of us.

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CALENDAR 2013

AUTOMECE

International Trade Fair
for the Automotive Industry

Anhembi, São Paulo, Brazil
April 16 – 20, 2013
Sprimag booth: F08
www.automecefeira.com.br



CANEX

The World Canmaking Congress

Atlanta, Georgia, USA
Mai 01 – 03, 2013
Sprimag booth: 143
www.spgevents.com



Feiplastic

International plastic trade fair

Anhembi, São Paulo, Brazil
Mai, 20 – 24, 2013
Sprimag booth: I93
www.feiplastic.com.br/en/



Aerosol Congress

FEA International Aerosol
Congress and Exhibition

Madrid, Spain
September 24 – 26, 2013
Sprimag booth: 117
www.aerosolmadrid2013.com



K 2013

International Trade Fair
for Plastic and Rubber

Düsseldorf, Germany
Oktober 16 – 23, 2013
Sprimag booth: hall 4, A35
www.k-online.de



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